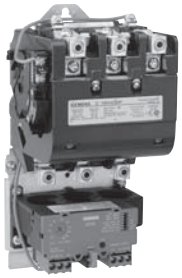
Class 14



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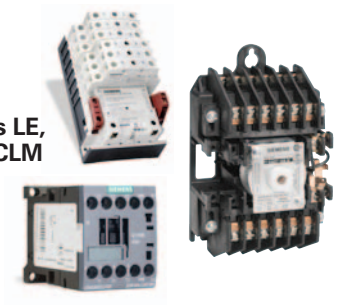

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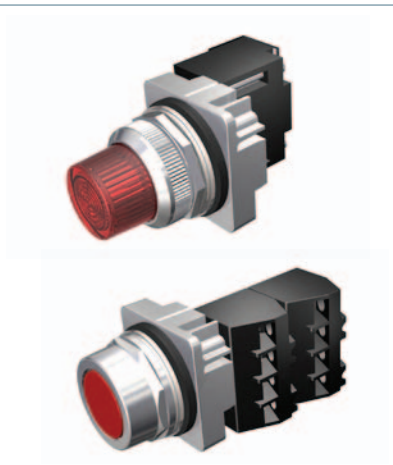

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Break Glass

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Starters at the speed you need

Siemens NEMA starters, pump panels and lighting contactors are known for their dependability and ruggedness, and now they are delivered faster than ever before through Controls Express.

Controls Express puts our most popular products in your hands faster, because we stock more products across our entire product line. Our Class 14 NEMA starters, Class 87 pump panels, and LC & LE lighting contactors are now available in stock for immediate or next day shipping. In addition, thousands of our open and enclosed starters can now be built-to-order and shipped in 1-3 days through Controls Express.

Siemens is committed to making your job easier by stocking more products, offering more configurations, expediting factory modifications, and delivering industry leading turnaround times on our most requested control products.

To quickly identify products that are part of Controls Express and therefore available in 3 days or less, applicable catalog numbers have a light blue background. See the appropriate selection pages listed below.

Class 14 NEMA Starters see pages 17-15 & 17-16

Class 17 NEMA Combination Starters see pages 17-18 & 17-20. For quick ship versions with factory modifications see on-line at www.usa.siemens.com/controls-express

Class 18 NEMA Combination Starters see page 17-22.

Class 40 NEMA Contactors see page 17-51

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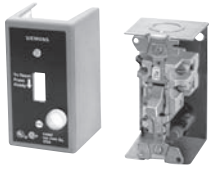
Controls Express lead times apply to orders of up to 6 units of the Class 14, Class 87, LC, or LE. Please contact customer service at 1-866-663-7324 for lead times of larger order volumes.

For more information on Controls Express and a complete list of available products, please visit our website at www.usa.siemens.com/controls-express



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Manual Starters
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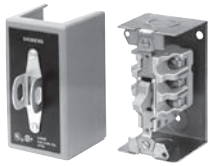

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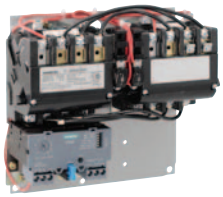

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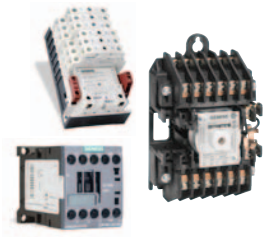

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3RE4 Enclosed IEC
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Class SMF

Class SMF fractional horsepower starters provide overload protection as well as manual on-off control for small horsepower motors in a variety of industrial and commercial applications. Available in one or two pole versions, these devices are suitable for use with AC single phase motors up to 1 HP. Two pole starters can also be used with DC motors up to ¾ HP. Typical applications include fans, conveyors, pumps, and small machine tools.

Continuous Current Rating

16 amperes.

Overload Trip Assembly

Motor protection is provided by a Class SMFH heater element which must be installed before the starter will operate.

Two Speed Starters

Two speed manual starters are designed for control of small single phase AC motors having separate windings for high and low speed operation. Two toggle operated starters are used, with overload protection included for each motor winding. Surface mounting devices, and those with a gray flush plate, utilize a mechanical interlock which allows direct control of the motor by means of the toggle operators.

Enclosures

Class SMF, NEMA Type 1 surface mounting enclosures are sheet steel with a thermo-plastic wrap-around cover for convenience in wiring. The NEMA Type 1 enclosure is also available in an oversized version which allows more wiring space. A zinc alloy die casting is used for NEMA Type 4 enclosures.

Pilot Lights

Red or green neon pilot light units are available for flush mounting plates, NEMA Type 1 enclosures, and NEMA Type 4 enclosures. Pilot lights may be either factory or field installed. (For starters that contain a pilot light, a Red light is standard. For a Green pilot light add "G" to the end of the catalog number.)

Terminals

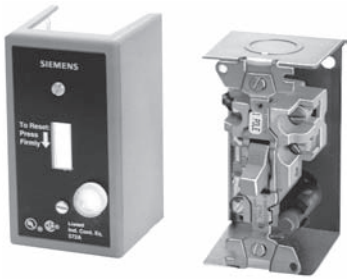
Binding head screw type terminals are suitable for #10 or smaller copper wire, and are accessible from the front. All terminals are clearly marked.

Mounting

Open types without a pilot light fit standard single gang switch boxes, and can be used with any cover plate having a standard toggle cutout. Single-unit flush mounting types, including those with pilot lights, are suitable for wall mounting in a standard switch box or for machine cavity mounting without a box.

Operation

Available with toggle handle or with removable key type operator to discourage unauthorized operation.



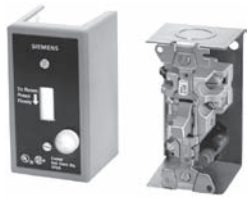
Class SMF Starter in a NEMA Type 1 Enclosure with Pilot Light

Emergency Off Actuator

A toggle operator extender is available for Class SMF, NEMA Type 1 surface mounted units. The extender has a red vinyl button that provides a fast and easy method for locating and switching the device's toggle operator into the OFF position. The Emergency Off Actuator is available in kit form only for field installation.

Handle Guard/Lock-Off

An optional handle guard on Class SMF, NEMA Type 1 enclosed starters prevents accidental operation of the toggle operator and also allows the toggle operator to be padlocked in either the "ON" or "OFF" position. This handle guard can be factory installed on NEMA Type 1 enclosed starters and is also available in kit form for field installation on NEMA Type 1 surface and flush mounting enclosures. Standard NEMA Type 4 metallic enclosures include provisions for padlocking the device in the OFF position.



Class SMF Starter in a NEMA Type 1 Enclosure with Pilot Light

Ordering Information

- ► Heater Elements see page 17-119.
- ► Field Modification Kits see page 17-100.
- ► Dimensions see page 17-126.
- ► Wiring Diagrams see page 17-155.

Horsepower Ratings

Volts	Maximum Horsepower		
	AC Single Phase		DC
	1-Pole	2-Pole	2-Pole
115	1	1	¾
230	1	2	¾
277	1	1	—

Starter—Class SMF, Single Phase①

Type of Operator	No. of Poles	Starter Features⑤	Open Type		General Purpose Flush Mounting Open Starter with Flush Plate (No Enclosure Provided)						NEMA Type 1 General Purpose Enclosure, Surface Mounting				NEMA Type 3R, 4 & 12 Watertight, Dust-tight Metallic Enclosure with Clear Cover		NEMA Type 4 Watertight, Dust-tight Metallic Enclosure		NEMA Type 3R, 7 & 9 Div 1 and Div 2 Class I Groups B, C, D & Class II Groups E, F, G Enclosures	
					Gray Flush Plate		Standard Stainless Steel Flush Plate		Jumbo Stainless Steel Flush Plate		Standard		Oversized							
			Catalog Number	List Price$	Catalog Number	List Price$	Catalog Number	List Price$	Catalog Number	List Price$	Catalog Number	List Price$	Catalog Number	List Price$	Catalog Number	List Price$	Catalog Number	List Price$	Catalog Number	List Price$
Toggle	1	Standard	SMFF01		SMFFF1		SMFFS1		—	—	SMFFG1		—	—	SMFFWN1		—	—	—	—
		Red Pilot Light	SMFF01P		SMFFF1P		SMFFS1P		SMFFSJ1P		SMFFG1P		—	—	—	—	—	—	—	—
	2	Standard	SMFF02		SMFFF2		SMFFS2		—	—	SMFFG2		—	—	SMFFWN2		—	—	—	—
		Red Pilot Light	SMFF02P		SMFFF2P		SMFFS2P		SMFFSJ2P		SMFFG2P		SMFFGJ2P		—	—	—	—	—	—
Key	1	Standard	SMFF03		—	—	—	—	—	—	—	—	SMFFGJ3		SMFFWN3		—	—	—	—
		Red Pilot Light	SMFF03P		SMFFF3P		SMFFS3P		SMFFSJ3P		SMFFG3P		SMFFGJ3P		—	—	—	—	—	—
	2	Standard	SMFF04		—	—	SMFFS4		—	—	—	—	SMFFGJ4		SMFFWN4		—	—	—	—
		Red Pilot Light	—	—	SMFFF4P		SMFFS4P		SMFFSJ4P		—	—	SMFFGJ4P		—	—	—	—	—	—

Starter With Handle Guard/Lock-Off—Class SMF, Single Phase①

Toggle	1	Standard	—	—	④	—	④	—	④	—	SMFFG5		SMFFGJ5		—	—	SMFFW1②		SMFFR1②	
		Red Pilot Light	—	—	④	—	④	—	④	—	SMFFG5P		SMFFGJ5P		—	—	SMFFW1P②		—	—
		(2) ¾" NPT Outlets	—	—	④	—	④	—	④	—	—	—	—	—	—	—	SMFFW1H		SMFFR1H	
		(2) ¾" NPT Outlets and Red Pilot Light	—	—	④	—	④	—	④	—	—	—	—	—	—	—	SMFFW1PH		—	—
	2	Standard	—	—	④	—	④	—	④	—	SMFFG6		SMFFGJ6		—	—	SMFFW2②		—	—
		Red Pilot Light	—	—	④	—	④	—	④	—	SMFFG6P		—	—	—	—	SMFFW2P②		—	—
		(2) ¾" NPT Outlets	—	—	④	—	④	—	④	—	—	—	—	—	—	—	—	—	SMFFR2H	
		(2) ¾" NPT Outlets and Red Pilot Light	—	—	④	—	④	—	④	—	—	—	—	—	—	—	SMFFW2PH		—	—

One Starter in Duplex Enclosure—Class SMF, Single Phase①

Type of Operator	Number of Poles	Starter Features⑤	General Purpose Flush Mounting Open Starter with Flush Plate - (No Enclosure Provided)				NEMA Type 1 General Purpose Enclosure Surface Mounting		Replacement Starters	
			Gray Flush Plate For Wall or Cavity Mounting		Stainless Steel Flush Plate for Wall or Cavity Mounting					
			Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
Toggle	2	Standard	—	—	—	—	SMFFG02		—	—
		Red Pilot Light	—	—	—	—	—	—	—	—
Key	2	Red Pilot Light	—	—	—	—	SMFFG04P		—	—

Two Starters In Duplex Enclosure—Class SMF, Single Phase③

Toggle	2 Per Starter	Standard	SMFFF222		—	—	SMFFG222		—	—
		Red Pilot Light on Each Starter	SMFFF222P		—	—	—	—	—	—
Key	2 Per Starter	Red Pilot Light on Each Starter	SMFFF44P		SMFFS44P		SMFFG44P		—	—

Starter And "Auto-Off-Hand" SPDT Selector Switch (AC Only)—Class SMF, Single Phase①

Toggle	1	Standard	—	—	—	—	—	—	—	—
		Red Pilot Light	SMFFF71P		SMFFS71P		SMFFG71P		—	—
	2	Standard	—	—	—	—	SMFFG72		—	—
		Red Pilot Light	SMFFF72P		SMFFS72P		SMFFG72P		—	—
Key	2	Red Pilot Light	SMFFF74P		SMFFS74P		SMFFG74P		—	—

Two Speed Starters (AC Only)—Class SMF, Single Phase③

Toggle	1	Mechanical Interlock	SMFFF11		—	—	—	—	SMFF01T	
		Mechanical Interlock and (2) Red Pilot Lights	SMFFF11P		—	—	—	—	—	—
		Mechanical Interlock, HIGH-OFF-LOW Selector Switch and (2) Red Pilot Lights	—	—	—	—	—	—	—	—
	2	Mechanical Interlock	SMFFF22		—	—	SMFFG22		—	—
		Mechanical Interlock and (2) Red Pilot Lights	SMFFF22P		—	—	SMFFG22P		SMFF02PT	
		Mechanical Interlock, HIGH-OFF-LOW Selector Switch and (2) Red Pilot Lights	—	—	SMFFS202P		—	—	SMFF02PT	

① One heater element required.
② Furnished with (1) ¾" NPT Outlet in bottom (reversible for top feed).
③ Two heater elements required.
④ Order Open Type starter plus separate handle guard kit.
⑤ For starters that contain a pilot light, a Red light is standard. For a Green pilot light add "G" to the end of the catalog number.

Class MMS, MRS

Class MMS and MRS motor starting switches provide manual "ON-OFF" control of single or three phase AC motors where overload protection is not required or is provided separately. Compact construction and a 600 volt rating make these switches suitable for a wide range of industrial and commercial uses. Typical applications include small machine tools, pumps, fans, conveyors and many other types of electrical machinery. They can also be used on non-motor loads such as resistance heating applications.

Continuous Current Rating

MMS & MRS: 30 amperes at 250 volts max, 26.4 amperes at 277 volts, 20 amperes at 600 volts max, 30 amperes resistive at 600 volts max.

Two Speed—Class MRS

Two speed manual switches may be used with separate winding three phase or single phase AC motors where overload protection is not required or is provided separately. Two switches are employed to give "ON-OFF" control in each speed.

Reversing—Class MRS

Reversing manual switches provide a compact means of starting, stopping and reversing AC motors where overload protection is not required or is provided separately. They are suitable for use with three phase squirrel cage motors and for single phase motors which can be reversed by reconnecting motor leads. Two switches are used, one to connect the motor forward rotation and one for reverse.

Enclosures

Class MMS, MRS, NEMA Type 1 surface mounting enclosures are sheet steel with a thermo-plastic wrap-around cover for convenience in wiring. The NEMA Type 1 enclosure is also available in an oversized version which allows more wiring space. A zinc alloy die casting is used for NEMA Type 4 enclosures.

Pilot Lights

Red or green neon pilot light units are available for flush mounting plates, NEMA Type 1 enclosures, and NEMA Type 4 enclosures. Pilot lights may be either factory or field installed. (For switches that contain a pilot light, a Red light is standard. For a Green pilot light add "G" to the end of the catalog number.)

Terminals

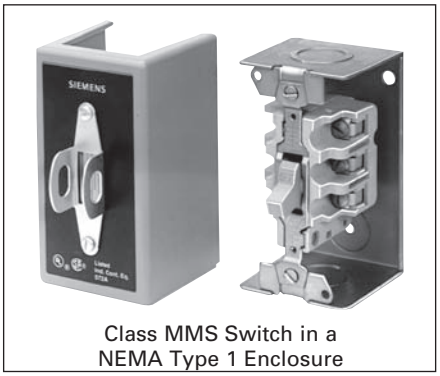
Binding head screw type terminals are suitable for #10 or smaller copper wire, and are accessible from the front. All terminals are clearly marked.

Mounting

Open types without a pilot light fit standard single gang switch boxes, and can be used with any cover plate having a standard toggle cutout. Single-unit flush mounting types, including those with pilot lights, are suitable for wall mounting in a standard switch box or for machine cavity mounting without a box.

Operation

Available with toggle handle or with removable key type operator to discourage unauthorized operation.



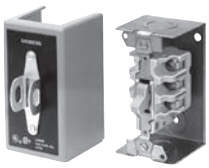
Class MMS Switch in a NEMA Type 1 Enclosure

Emergency Off Actuator

A toggle operator extender is available for Class MMS, MRS, NEMA Type 1 surface mounted units. The extender has a red vinyl button that provides a fast and easy method for locating and switching the device's toggle operator into the OFF position. The Emergency Off Actuator is available in kit form only for field installation.

Handle Guard/Lock-Off

An optional handle guard on Class MMS, MRS, NEMA Type 1 enclosed switches prevents accidental operation of the toggle operator and also allows the toggle operator to be padlocked in either the "ON" or "OFF" position. This handle guard is available in kit form for field installation on NEMA Type 1 surface and flush mounting enclosures. Standard NEMA Type 4 metallic enclosures include provisions for padlocking the device in the OFF position.



Class MMS Switch in a NEMA Type 1 Enclosure

Ordering Information

- Heater Elements not Required.
- Field Modification Kits see page 17-100.
- Dimensions see page 17-126.
- Wiring Diagrams see page 17-155.

Horsepower Ratings

Device	No of Poles	Motor Type AC	Maximum HP 115V	230V	450–575V	DC Ratings 90V	115V	230V
Class MMS	2	Single Phase	2	2	3	1	2	1½
	3	3-Phase	2	7½	10	1	2	1½
Class MRS Reversing	2	Single Phase	2	2	3	1	2	1½
	3	3-Phase	2	7½	10	1	2	1½
Class MMS Two Speed	2	Single Phase	2	2	3	1	2	1½
	3	3-Phase, Constant or Variable Torque	2	7½	10	1	2	1½
	3	3-Phase, Constant Horsepower	2	7½	10	1	2	1½

Switch—Class MMS, Single Phase and 3-Phase

Type of Operator	No of Poles	Switch Features④	Open Type		General Purpose Flush Mounting Open Switch with Flush Plate (No Enclosure Provided) Gray Flush Plate		Standard Stainless Steel Flush Plate		Jumbo Stainless Steel Flush Plate		NEMA Type 1 General Purpose Enclosure Surface Mounting Standard		Oversized		NEMA Type 3R, 4 & 12 Watertight, Dust-tight Metallic Enclosurer with Clear Cover		NEMA Type 4② Watertight, Dust-tight Metallic Enclosure		NEMA Type 7 & 9② Class I Groups B, C & D & Class II Groups E, F, G Enclosures	
			Catalog Number	List Price$	Catalog Number	List Price$	Catalog Number	List Price$	Catalog Number	List Price$	Catalog Number	List Price$	Catalog Number	List Price$	Catalog Number	List Price$	Catalog Number	List Price$	Catalog Number	List Price$
Toggle	2	Standard	MMSK01		MMSKF1		MMSKS1		—		MMSKG1		—		MMSKWN1		MMSKW1		MMSKR1	
		Red Pilot Light 115V AC	MMSK01A③		MMSKF1A		MMSKS1A		—		MMSKG1A		MMSKGJ1A		—		MMSKW1A		—	
		Red Pilot Light 230V AC	MMSK01B③		MMSKF1B		—		MMSKSJ1B		MMSKG1B		—		—		MMSKW1B		—	
	3	Standard	MMSK02		MMSKF2		MMSKS2		—		MMSKG2		MMSKGJ2		MMSKWN2		MMSKW2		—	
		Red Pilot Light 208-240V AC	MMSK02B③		MMSKF2B		MMSKS2B		—		MMSKG2B		—		—		—		—	
		Red Pilot Light 440-600V AC	—		—		MMSKS2C		MMSKSJ2C		MMSKG2C		—		—		MMSKW2C		—	
Key	2	Standard	MMSK03		MMSKF3		MMSKS3		—		MMSKG3		MMSKGJ3		MMSKWN3		—		—	
		Red Pilot Light 115V AC	—		MMSKF3A		MMSKS3A		MMSKSJ3A		MMSKG3A		MMSKGJ3A		—		—		—	
		Red Pilot Light 230V AC	MMSK03B		MMSKF3B		MMSKS3B		MMSKSJ3B		MMSKG3B		—		—		—		—	
	3	Standard	MMSK04		MMSKF4		MMSKS4		—		MMSKG4		MMSKGJ4		MMSKWN4		—		—	
		Red Pilot Light 208–240V AC	MMSK04B		MMSKF4B		MMSKS4B		MMSKSJ4B		MMSKG4B		MMSKGJ4B		—		—		—	
		Red Pilot Light 440–600V AC	MMSK04C		MMSKF4C		MMSKS4C		MMSKSJ4C		MMSKG4C		—		—		—		—	

Reversing Switch—Class MRS, Single Phase and 3-Phase

Type of Operator	Number of Poles	Suitable Motor Types	Switch Features④ (Including Mechanical Interlock)	General Purpose Flush Mounting Open Switch with Flush Plate (No Enclosure Provided) Catalog Number	List Price $	NEMA Type 1 General Purpose Enclosure Surface Mounting Catalog Number	List Price $	Replacement Switch Class MRS Catalog Number	List Price $
Toggle	2	Single Phase 3-Lead Repulsion-Induction	Standard	MRSKF11		—		MRSK01T	
			Red Pilot Device—115V AC	MRSKF11A		—		MRSK01AT	
			Red Pilot Device— 230V AC	MRSKF11B		MRSKG11B		MRSK01BT	
	3	3-Phase; Also Single Phase Capacitor, Split Phase, or 4-Lead Repulsion-Induction	Standard	MRSKF22		MRSKG22		—	
			Red Pilot Light—110–120V AC	MRSKF22A		MRSKG22A		MRSK02AT	
			Red Pilot Light—208–220V AC	MRSKF22B		—		MRSK02BT	
			Red Pilot Light—440–600V AC	MRSKF22C		—		MRSK02CT	

Two Speed Switch—Class MMS, Single Phase and 3-Phase

Type of Operator	Number of Poles	Suitable Motor Types	Switch Features④ (Including Mechanical Interlock)	General Purpose Flush Mounting Open Switch with Flush Plate (No Enclosure Provided) Catalog Number	List Price $	NEMA Type 1 General Purpose Enclosure Surface Mounting Catalog Number	List Price $	Replacement Switch Class MRS Catalog Number	List Price $
Toggle	2	Single Phase Two Winding (3-Lead)	Standard	MMSKF11		MMSKG11		MRSK01T	
			(2) Red Pilot Devices—115V AC	MMSKF11A		MMSKG11A		MRSK01AT	
			(2) Red Pilot Devices—230V AC	MMSKF11B		MMSKG11B		MRSK01BT	
	3	3-Phase Separate Winding (Wye-Connected)	Standard	MMSKF22		MMSKG22		MRSK02T	
			(2) Red Pilot Lights—208–240V AC	MMSKF22B		MMSKG22B		MRSK02BT	
			(2) Red Pilot Lights—440–600V AC	MMSKF22C		MMSKG22C		MRSK02CT	

① Manual switches do not include overloads.
② Furnished with (1) 3/4" NPT outlet in bottom (reversible for top feed). In order to obtain a ¾" NPT outlet in top and bottom, add suffix letter "H" to type number with List Price adder.
③ Do not use as replacement interiors for NEMA Type 4 metallic enclosures. For replacement unit, order Type MMSK01 or MMSK02 and separate pilot light kit.
④ For switches that contain a pilot light, a Red light is standard. For a Green pilot light add "G" to the end of the catalog number.

Now Available with the New 3RV2 Innovations MSP

Class 11 - 3RV

Class 11 across the line manual starters and switches provide control for machinery where remote start stop control is not required.

Class 11 - 3RV manual starters are used for single and poly-phase motors up to 20HP @ 575V. Starters have bimetallic heater elements to provide class 10 overcurrent protection. Each starter has a fourth bimetallic strip that reacts only to the ambient temperature inside the control panel. This ambient compensation helps prevent the starter from nuisance tripping when the panel temperature is higher than the ambient temperature of the motor.

A built-in differential trip bar causes the starter to trip faster on a phase loss condition to help reduce motor damage.

Magnetic trip elements in each starter take the device off line when it senses current of 13 times the maximum FLA dial setting.

Class 11 - 3RV switches provide control for inherently protected motors. Typical applications include metal and woodworking machinery, grinders, power saws, conveyors, fans, pumps, blowers, textile and packaging machinery, and paper cutters.

Each switch is provided with magnetic trip elements which take the device off line when it senses current of 13 times the maximum switch rating.

Class 11 - 3RV manual starters can be used as Type E self-protected manual combination starters (up to 22 amps) per UL508 or as components in Group Installation per NEC 430.53. When using the Class 11 - 3RV as a manual combination starter upstream protection is not required.

Class 11 - 3RV controllers are available with low voltage protection which will automatically open the power poles when the voltage drops or the power is interrupted.

Controllers with the LVP option provide the OSHA requirements for protecting personnel from potential injury caused by the automatic start-up of machinery following a voltage drop or power interruption when low voltage protection is specified.

Class 11 - 3RV is available as Open style, or in NEMA 1.

Standard Features include:

- ON/OFF rotary handle with lockout and visible trip indication
- Adjustment dial for setting to motor FLA (Starters only)
- Low Voltage Protection (LVP) Option
- Short Circuit trip at 13 times the maximum setting of the FLA dial or rated current
- Ambient compensated up to 140°F
- Phase loss sensitivity
- Test trip function
- LVP Option Meets OSHA Requirements
- UL Listed
- CSA Certified

OPEN TYPE
Starter

NEMA 1
General Purpose

Class 11 Manual Motor Starter

Ordering Information

- No heaters required.
- Field Modification Kits see page 17-100.
- Dimensions see page 17-128.
- Wiring Diagrams see page 17-155.
- For applications requiring a low voltage protection coil see table at right.

Low Voltage Protection Coil Table

60 Hz Voltage	Letter
120V	*F
208V	*D
240V	*G
460V	*H

*Add corresponding letter to end of base Class 11 catalog number for low voltage protection coil with List Price adder.

Note: The LVP option for Open type 3RV is available from the factory, please order separately from the field modification kits on page 17-101.

The coil voltage should correspond with the line voltage.

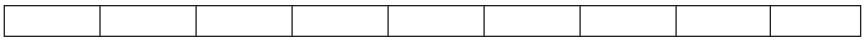
Manual Starter—Class 11 - 3RV

FLA Adjustment Range①	Max HP						Enclosure			
	Single Phase HP Ratings		3-Phase HP Ratings				Open Type		NEMA 1 General Purpose	
	115V	230V	200V	230V	460V	575V	Catalog No.	List Price $	Catalog No.	List Price $
0.11-0.16	—	—	—	—	—	—	3RV2011-0AA10②		11AD3B	
0.14-0.2	—	—	—	—	—	—	3RV2011-0BA10②		11BD3B	
0.18-0.25	—	—	—	—	—	—	3RV2011-0CA10②		11CD3B	
0.22-0.32	—	—	—	—	—	—	3RV2011-0DA10②		11DD3B	
0.28-0.4	—	—	—	—	—	—	3RV2011-0EA10②		11ED3B	
0.35-0.5	—	—	—	—	—	—	3RV2011-0FA10②		11FD3B	
0.45-0.63	—	—	—	—	—	—	3RV2021-0GA10②		11GD3B	
0.55-0.8	—	—	—	—	—	½	3RV2021-0HA10②		11HD3B	
0.7-1	—	—	—	—	½	½	3RV2021-0JA10②		11JD3B	
0.9-1.25	—	—	—	—	¾	¾	3RV2021-0KA10②		11KD3B	
1.1-1.6	—	1/10	—	—	¾	1	3RV2021-1AA10②		11LD3B	
1.4-2	—	⅛	—	—	1	1 ½	3RV2021-1BA10②		11MD3B	
1.8-2.5	—	⅙	½	½	1 ½	1 ½	3RV2021-1CA10②		11ND3B	
2.2-3.2	1/10	¼	¾	¾	1 ½	2	3RV2021-1DA10②		11PD3B	
2.8-4	⅛	⅓	¾	1	2	3	3RV2021-1EA10②		11QD3B	
3.5-5	⅙	½	1	1	3	3	3RV2021-1FA10②		11RD3B	
4.5-6.3	¼	¾	1 ½	1 ½	5	5	3RV2021-1GA10②		11SD3B	
5.5-8	⅓	1	2	2	5	5	3RV2021-1HA10②		11TD3B	
7-10	½	1 ½	3	3	7 ½	10	3RV2021-1JA10②		11UD3B	
9-12.5	½	2	3	3	7 ½	10	3RV2021-1KA10②		11VD3B	
11-16	1	3	5	5	10	15③	3RV2021-4AA10②		11WD3B	
14-20	1 ½	3	5	7 ½	15	20③	3RV2021-4BA10②		11XD3B	
17-22	2	3	7 ½	7 ½	15	20③	3RV2021-4CA10②		11YD3B	
20-25	2③	5③	7 ½③	7 ½③	15③	20③	3RV2021-4DA10②		11ZD3B	

Manual Switch—Class 11 - 3RV

Rated Current①	Max HP						Enclosure			
	Single Phase HP Ratings		3-Phase HP Ratings				Open Type		NEMA 1 General Purpose	
	115V	230V	200V	230V	460V	575V	Catalog No.	List Price $	Catalog No.	List Price $
1	—	—	—	—	½③	½③	3RV2321-0JC10②		111D3B	
5	⅛③	½③	1③	1③	3③	3③	3RV2321-1FC10②		112D3B	
10	½③	1 ½③	3③	3③	7 ½③	10③	3RV2321-1JC10②		113D3B	
20	1 ½③	3③	5③	7 ½③	15③	20③	3RV2321-4BC10②		114D3B	
25	2③	5③	7 ½③	7 ½ ③	15③	20③	3RV2321-4DC10②		115D3B	

① Instantaneous Magnetic Trip will occur at 13 times the maximum FLA dial setting or rated switch current.
② Product Category: IEC
③ Shaded Ratings apply for Manual Motor Controllers Only! These Ratings do not apply as UL Listed Manual Combination Starters.



Class

- **17** — Combination Starter (Non Fusible, Fusible)
- **18** — Combination Starter (Circuit Breaker)
- **25** — Reversing Combination Starter (Non Fusible, Fusible)
- **26** — Reversing Combination Starter (Circuit Breaker)

Size

- **B** — 00
- **C** — 0
- **D** — 1
- **E** — 1¾
- **F** — 2
- **G** — 2½
- **H** — 3
- **I** — 3½
- **J** — 4
- **L** — 5
- **M** — 6
- **N** — 7
- **P** — 8

Model

- **U** — Solid-state OLR size 0–4 & size 7 & 8
- **P** — Solid-state size 5 & 6

Solid-state OLR Current Range

Three Phase

- **A** — 0.25–1
- **B** — 0.75–3.4
- **C** — 3–12
- **D** — 5.5–22
- **E** — 10–40
- **F** — 13–52
- **G** — 25–100
- **H** — 50–200
- **J** — 100–300 w/ CT's
- **K** — 133–400 w/ CT's
- **L** — 200–600 w/ CT's
- **M** — 250–750 w/ CT's
- **N** — 400–1200 w/ CT's

Enclosure Size

- **92** — Standard Width
- **82** — Extra Wide

Enclosure Type

- **B** — NEMA 1
- **F** — NEMA 4X Fiberglass
- **N** — NEMA 3/3R/4/12
- **W** — NEMA 4/4X 304 Stainless Steel
- **X** — NEMA 4/4X 316 Stainless Steel

Class

- **14** — Across the Line NEMA Motor Starter
- **22** — Reversing NEMA Motor Starter
- **40** — Across the Line NEMA Magnetic Contactor
- **43** — Reversing NEMA Magnetic Contactor

Size

- **B** — 00
- **C** — 0
- **D** — 1
- **E** — 1¾
- **F** — 2
- **G** — 2½
- **H** — 3
- **I** — 3½
- **J** — 4
- **L** — 5
- **M** — 6
- **N** — 7
- **P** — 8

Model

- **U** — Solid-state OLR size 00–4, Size 7 & 8
- **P** — Solid-state sizes 5 & 6

Solid-state OLR Current Range

Three Phase

- **A** — 0.25–1
- **B** — 0.75–3.4
- **C** — 3–12
- **D** — 5.5–22
- **E** — 10–40
- **F** — 13–52
- **G** — 25–100
- **H** — 50–200
- **J** — 100–300 w/ CT's
- **K** — 133–400 w/ CT's
- **L** — 200–600 w/ CT's
- **M** — 250–750 w/ CT's
- **N** — 400–1200 w/ CT's

Single Phase①

- **A** — 0.25–1
- **B** — 0.75–3.4
- **C** — 3–12
- **D** — 5.5–22

Pilot Control Circuit

- **2** — suitable for 3-wire control (NO aux. contact incl.)

Enclosure Size

- **1** — 2 power poles,1-phase
- **3** — 3 power poles, 3-phase
- **8** — 3 power poles, 3-phase, extra wide enclosure

Enclosure Type

- **A** — Open
- **B** — NEMA 1
- **F** — NEMA 4X Fiberglass
- **0** — NEMA 3/3R/4/12
- **W** — NEMA 4/4X 304 Stainless Steel
- **X** — NEMA 4/4X 316 Stainless Steel

Coil

- **A**②— 110–120V/220–240V@60Hz 110V/190–220V@50Hz
- **C**②— 220–240V/440–480V@60Hz 190–220V/380–440V@50Hz
- **D** — 200–208V@60Hz
- **E** — 550–600V@60Hz 550V@50Hz
- **F** — 120V@60Hz 110V@50Hz
- **G** — 220–240V@60Hz 190–220V@50Hz
- **H** — 440–480V@60Hz 380–440V@50Hz
- **J**④— 24V@60Hz 24V@50Hz
- **L** — 277V@60Hz 240V@50Hz

Class

- **36** — Non Combination Reduced Voltage Starter
- **37** — Combination Reduced Voltage Starter

Size

- **C** — 0
- **D** — 1
- **E** — 1¾
- **F** — 2
- **G** — 2½
- **H** — 3
- **I** — 3½
- **J** — 4
- **L** — 5
- **M** — 6
- **N** — 7
- **P** — 8

Model

- **U** — Solid-state OLR size 0–4 & size 7 & 8
- **P** — Solid-state size 5 & 6

Solid-state OLR Current Range

Type

- **T** — Auto XFMR
- **P** — Part Wind.
- **0** — Wye Delta Open Trans.
- **C** — Wye Delta Closed Trans.

Line Volts

- **2** — 230
- **3** — 380
- **4** — 460
- **5** — 575
- **6** — 200/208

Enclosure Type

- **A** — Open
- **B** — NEMA 1
- **W** — NEMA 4/4X Stainless Steel
- **0** — NEMA 3/3R/4/12

Coil

- **D**
- **E**
- **F**
- **G**
- **H**
- **L**

Disconnect Type③

- **D** — Non Fused Disc.
- **F** — Fusible Disc.
- **P** — MCP

① Single phase solid-state OLR available on Class 14 Starters only.

② Not available on sizes 5–8.

③ For Class 37 only.

④ Not available on sizes 7 and 8.

Solid State Starter Class 14

Standard Features

Size 00–4 magnetic starters include the following standard features:

- Rugged Industrial Design
- Half Sizes for Cost and Space Savings
- Dual Voltage, Dual Frequency Coils
- Solid State Overload Protection
- Wide Range of Accessories
- Easy Coil Access
- Overload Test Feature
- Straight Thru Wiring
- Gravity Dropout
- Large Silver Cadmium Contacts
- UL listed file #E14900 (class 14, 22, 30, 40 & 43)
- CSA certified file #LR 6535 (class 14, 22, 30, 40 & 43)

Application

Heavy Duty starters are designed for across the line starting of single phase and polyphase motors.

These controls are available in NEMA Sizes 00 through 8. In addition to the usual NEMA Starter Sizes, Siemens offers three exclusive Half Sizes; 1¾, 2½ and 3½. These integral sizes offer the same rugged, industrial construction as our NEMA Sizes and ensure efficient operating performance. Half Sizes provide a real cost savings by cutting down on over capacity when NEMA Sizes exceed the motor ratings. All Siemens Heavy Duty controls, including our popular Half Sizes comply with applicable NEMA and UL tests.

All starters are supplied with a NO holding interlock that in conjunction with an appropriate pilot device will provide low voltage protection or release.

NEMA starters are ideal for applications requiring dependability and durability. Typical applications include use with machine tools, air conditioning equipment, material handling equipment, compressors, hoists and various production and industrial equipment as well as in demanding automotive applications.

Starters are available as an open type or in NEMA 1, 12/3/3R, 4 (painted), 4/4X (stainless), and 4X (fiberglass) enclosures.

Gravity Dropout

For added reliability, the gravity dropout of the armature and contacts is assisted by stainless steel springs which help provide quick, precise opening of the contacts.

45 Degree, Wedge Action Contacts

The 45 degree, wedge action contacts reduce tracking and provide faster arc quenching. The resulting self-cleaning and reduced contact bounce mean cooler operation and longer life for the large silver cadmium oxide contacts.

Terminal Design

Control terminals are self-rising pressure type.

Molded Coil

Magnetic coils are carefully wound and then sealed in epoxy. Encapsulation helps seal out moisture, promotes heat transfer and resists electrical, mechanical and thermal stresses.

Dual Voltage/Frequency Coil

Starters are available with dual voltage, dual frequency coils. They are designed to operate on either 50 or 60 Hertz.

Molded Stationary Contact Block

Thermoset materials resist arc tracking and the stresses of heat and severe impact.

Field Modification Kits

All starters can be modified in the field with a complete range of accessories. These include pushbuttons, selector switches, pilot lights, auxiliary contacts and surge suppressors.

Auxiliary Equipment

- NEMA starters are available with built-in START-STOP push buttons for 3-wire control or a HAND-OFF-AUTO selector switch for 2-wire control
- Field modifications such as auxiliary contacts, pilot lights, push buttons, selector switches, and fuse blocks are available to meet particular application requirements
- Normally opened or normally closed auxiliary power pole kits are available for Sizes 00 through 1¾
- Transformers can be ordered as either factory or field modifications. In some cases these may require a larger enclosure
- A full line of replacement parts are available including contact kits, coils, and overload relays

Size 5 & 6 Starters Additional Features

- Solid State Overload (3RB type) Standard
- Latest technology in arc quenching to extend contactor life
- Wide variety of enclosures in all starter configurations

Size 7 & 8 Starters Additional Features

- New Compact Design
- Can be mounted in any position
- Same coil voltage is AC or DC

ESP200™ Solid State Starter

ESP200™ starters combine the rugged NEMA contactors with a state of the art solid state overload that provides phase loss, phase unbalance ground fault protection. It offers the user greater motor protection and extended life in heavy duty applications. The ESP200™ ultimately results in a cost savings to the user.

ESP200™ Solid State Overload Relays

Standard features provide Improved Starter Performance:

- True phase loss protection; trips within 3 seconds
- Phase unbalanced prevents motor running inefficiently
- Ground fault trip when selected
- Selectable trip class 5, 10, 20 or 30
- Reset trip can be selected Auto/ Manual restart
- Easy to select and use, Dip Switch selectable
- Overload is self powered, no need for external power source

Half Size Starters

Half-Size starters feature all the rugged performance characteristics of our NEMA rated starter sizes, but are fractionally sized to more closely match your exact motor rating. As a result, significant economic savings are made possible without sacrificing the reliability you expect from a heavy duty starter.

These additional starter sizes have the reserve capacity to handle occasional plugging and jogging applications without derating. Superior operating performance in heavy duty applications is assured by the large current carrying parts, not by derating the device.

Exclusive "half-sizes" save potentially hundreds, even thousands of dollars per project.

Using the table below, simply match the specific size starter to the horsepower rating of your motor. Every half-size starter saves you money—up to 31%.

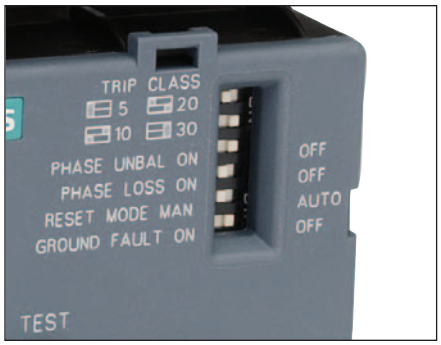
All "half-sizes" comply to applicable NEMA and UL standards.

ESP200® FLA Adjustment Dial—Set the adjustment dial on the overload to the FLA of the motor.

Figure 1

Typical Solid-State Overload Adjustment Dial Markings

Each overload is precisely calibrated and labels are laser printed.



DIP Switch Settings

Adjust DIP switch settings to the Trip Class desired 5, 10, 20, or 30.

- Set Phase Unbalance ON or OFF
- Set Phase Loss ON or OFF
- Set Reset to Manual or Automatic
- Set Ground Fault ON or OFF

Savings for Siemens "Half-Size" Starters in NEMA 1 Enclosures, FVNR

Motor Size		Starter Size	Half Size	List Price $	"Half-Size" Savings Over Next Full Size
230V	460V				
7½	10	1	—		—
10	15	—	1¾		31%
15	25	2	—		—
20	30	—	2½		20%
30	50	3	—		—
40	75	—	3½		13%
50	100	4	—		—

Standard Auxiliary Contacts			
Type	Size (3rd Character)	Configuration	Internal / External
All FVNR Starters & Contactors	B Thru E	1N.O.	Internal
	F Thru J	1N.O.	External
	L Thru M	2N.O., 2N.C.	External
	N Thru P	1N.O., 1N.C.	External

Heavy Duty Motor Starters

Solid State Overload with Auto/Manual Reset, Class 14

Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see pages 17-129 open and 17-141 enclosed.
- Wiring Diagrams see page 17-156.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24	J
120	F
110–120/220–240①	A
200–208	D
220–240	G
277	L
220–240/440–480①	C
440–480	H
575–600	E

For other voltages and frequencies, see Factory Modifications page 17-114.

Open Type & Standard Width Enclosure, 3-Phase, 3-Pole

Max Hp						Overload		Enclosure									
								Open Type Standard Auxiliary Contacts⑦		NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant @ = W for 304 Stainless Steel @ = X for 316 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Amp Range	Frame Size	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
⅛	⅛	⅓	½	00	—	0.25–1	A	14BUA32A*		14BUA32B*		Use Size 0	—	Use Size 0	—	Use Size 0	—
½	¾	1½	2	00	—	0.75–3.4	A	14BUB32A*		14BUB32B*		Use Size 0	—	Use Size 0	—	Use Size 0	—
1½	1½	2	—	00	—	3–12	A1	14BUC32A*		14BUC32B*		Use Size 0	—	Use Size 0	—	Use Size 0	—
⅛	⅛	⅓	½	0	—	0.25–1	A	14CUA32A*		14CUA32B*		14CUA32@*		14CUA32F*		14CUA320*	
½	¾	1½	2	0	—	0.75–3.4	A	14CUB32A*		14CUB32B*		14CUB32@*		14CUB32F*		14CUB320*	
2	2	5	5	0	—	3–12	A1	14CUC32A*		14CUC32B*		14CUC32@*		14CUC32F*		14CUC320*	
3	3	—	—	0	—	5.5–22	A1	14CUD32A*		14CUD32B*		14CUD32@*		14CUD32F*		14CUD320*	
⅛	⅛	⅓	½	1	—	0.25–1	A	14DUA32A*		14DUA32B*		14DUA32@*		14DUA32F*		14DUA320*	
½	¾	1½	2	1	—	0.75–3.4	A	14DUB32A*		14DUB32B*		14DUB32@*		14DUB32F*		14DUB320*	
2	2	5	5	1	—	3–12	A1	14DUC32A*		14DUC32B*		14DUC32@*		14DUC32F*		14DUC320*	
3	3	10	10	1	—	5.5–22	A1	14DUD32A*		14DUD32B*		14DUD32@*		14DUD32F*		14DUD320*	
7½	7½	—	—	1	—	10–40	A1	14DUE32A*		14DUE32B*		14DUE32@*		14DUE32F*		14DUE320*	
10	10	15	15	—	1¾	10–40	A1	14EUE32A*		14EUE32B*		14EUE32@*		14EUE32F*		14EUE320*	
10	15	25	25	2	—	13–52	B	14FUF32A*		14FUF32B*		14FUF32@*		14FUF32F*		14FUF320*	
15	20	30	30	—	2½	25–100	B	14GUG32A*		14GUG32B*		14GUG32@*		14GUG32F*		14GUG320*	
25	30	50	50	3	—	25–100	B	14HUG32A*		14HUG32B*		14HUG32@*		14HUG32F*		14HUG320*	
30	40	75	75	—	3½	50–200	B	14IUH32A*		14IUH32B*		14IUH32@*		14IUH32F*		14IUH320*	
40	50	100	100	4	—	50–200	B	14JUH32A*		14JUH32B*		14JUH32@*		14JUH32F*		14JUH320*	
75	100	200	200	5	—	55–250	—	14LPU32A*		14LPU32B*		—	—	—	—	14LPU320*	
150	200	400	400	6	—	160–630	—	14MPX32A*		14MPX32B*		—	—	—	—	14MPX320*	
—	300	600	600	7*③	—	400–1220	A1+CT	14NUN32A*		14NUN32B*		—	—	—	—	14NUN320*	
—	450	900	900	8④	—	400–1220	A1+CT	14PUN32A*		14PUN32B*		—	—	—	—	14PUN320*	

Open Type & Standard Width Enclosure, Single Phase, 2-Pole②⑤

Max Hp			Overload		Enclosure									
					Open Type Standard Auxiliary Contacts		NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant @ = W for 304 Stainless Steel @ = X for 316 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
115 Volts	208/ 230 Volts	NEMA Size	Amp Range	Frame Size	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
⅛	¼	0	0.75–3.4	A	14CUB12A*		14CUB12B*		14CUB12@*		14CUB12F*		14CUB120*	
¼	½	0	3–12	A1	14CUC12A*		14CUC12B*		14CUC12@*		14CUC12F*		14CUC120*	
1	2	0	5.5–22	A1	14CUD12A*		14CUD12B*		14CUD12@*		14CUD12F*		14CUD120*	
⅛	¼	1	0.75–3.4	A	14DUB12A*		14DUB12B*		14DUB12@*		14DUB12F*		14DUB120*	
¼	½	1	3–12	A1	14DUC12A*		14DUC12B*		14DUC12@*		14DUC12F*		14DUC120*	
1	2	1	5.5–22	A1	14DUD12A*		14DUD12B*		14DUD12@*		14DUD12F*		14DUD120*	
3	7½	2	25-100	B	14FUG12A*		14FUG12B*		14FUG12@*		14FUG12F*		14FUG120*	
7½	15	3	25-100	B	14HUG12A*		14HUG12B*		14HUG12@*		14HUG12F*		14HUG120*	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

① Dual voltage coils not available in size 5–8 starters.

② Coils D, F, or G will be wired for incoming voltage. J coil will be wired for separate source. Coils E, H, and L do not apply to single phase starters.

③ F coil 100-250V AC 50/60Hz, or DC, H coil 150-500V AC 50/60Hz, or DC

④ Only available F coil100-250V AC 50/60Hz, or DC

⑤ To receive a single phase starter in an extra wide enclosure order an enclosure kit from pg 17-111 and the open style starter from pg 17-15 as separate items.

NEMA 1

Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-141.
- Wiring Diagrams see page 17-156.
- Replacement Parts see page 17-120.

Coil Table

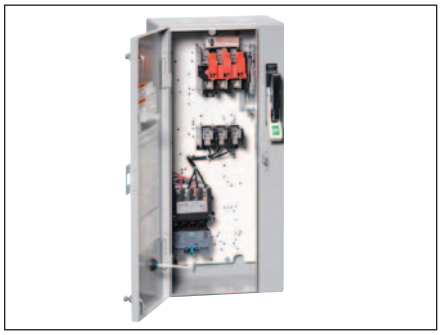
60Hz Voltage	Letter
24	J
120	F
110–120/220–240	A
200–208	D
220–240	G
277	L
220–240/440–480	C
440–480	H
575–600	E

For other voltages and frequencies, see Factory Modifications page 17-114.

Extra Wide Enclosure, 3-Phase, 3-Pole

Max Hp						Overload		Enclosure					
								NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant @ = W for 304 Stainless Steel @ = X for 316 Stainless Steel		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Amp Range	Frame Size	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
⅛	⅛	⅓	½	00	—	0.25–1	A	**14BUA82B***		**Use Size 0**	—	**Use Size 0**	—
½	¾	1½	2	00	—	0.75–3.4	A	**14BUB82B***		**Use Size 0**	—	**Use Size 0**	—
1½	1½	2	—	00	—	3–12	A1	**14BUC82B***		**Use Size 0**	—	**Use Size 0**	—
⅛	⅛	⅓	½	0	—	0.25–1	A	**14CUA82B***		**14CUA82@***		**14CUA820***	
½	¾	1½	2	0	—	0.75–3.4	A	**14CUB82B***		**14CUB82@***		**14CUB820***	
2	2	5	5	0	—	3–12	A1	**14CUC82B***		**14CUC82@***		**14CUC820***	
3	3	—	—	0	—	5.5–22	A1	**14CUD82B***		**14CUD82@***		**14CUD820***	
⅛	⅛	⅓	½	1	—	0.25–1	A	**14DUA82B***		**14DUA82@***		**14DUA820***	
½	¾	1½	2	1	—	0.75–3.4	A	**14DUB82B***		**14DUB82@***		**14DUB820***	
2	2	5	5	1	—	3–12	A1	**14DUC82B***		**14DUC82@***		**14DUC820***	
3	3	10	10	1	—	5.5–22	A1	**14DUD82B***		**14DUD82@***		**14DUD820***	
7½	7½	—	—	1	—	10–40	A1	**14DUE82B***		**14DUE82@***		**14DUE820***	
10	10	15	15	—	1¾	10–40	A1	**14EUE82B***		**14EUE82@***		**14EUE820***	
10	15	25	25	2	—	13–52	B	**14FUF82B***		**14FUF82@***		**14FUF820***	
15	20	30	30	—	2½	25–100	B	**14GUG82B***		**14GUG82@***		**14GUG820***	
25	30	50	50	3	—	25–100	B	**14HUG82B***		**14HUG82@***		**14HUG820***	
30	40	75	75	—	3½	50–200	B	**14IUH82B***		**14IUH82@***		**14IUH820***	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).



Combination Starter Features

Combination starters include the following features:

- Manufactured with Cold Forming "TOX" Process
- Solid State Overloads Standard on Sizes 5–8
- Easy to Install
- Wide Range of Enclosure Types Available
- Heavy Duty Quarter Turns
- 100kA Short Circuit Current Rating when Protected with Class R Fuses to 600V or MCP to 480V
- Visible Blade Disconnect
- Industrial Type Disconnect Handle
- UL listed file #E185287 (class 17, 18, 25, 26 & 32)
- CSA certified file #LR 6535 (class 17, 18, 25, 26 & 32)

Application

A combination starter meets National Electrical Code requirements for:

1. A means of providing short circuit motor protection with fused or breaker disconnection of line voltage.

2. A means of safeguarding personnel from contact with live parts and from accidental starting of machinery by disconnecting the motor and the controller.

3. A motor controller with overload protection.

Prewired combination starters eliminate the cost of wiring between separate disconnect and starter. Factory testing assures field performance. Combination starters also provide a more compact and attractive installation than separate units.

Enclosure Types

Combination starters are available in NEMA 1, 12/3/3R/4 (painted), 4/4X (stainless), and 4X fiberglass enclosures. Enclosures protect personnel from contact with live parts and depending upon the construction, protect the control in varying degrees from physical damage and harmful atmospheres. All enclosures are supplied with corrosion resistant finishes.

Heavy Duty Disconnect Switches

The disconnect switch that goes the distance in durability, performance and reliability has the following advantages:

- Visible blades for the highest level of safety
- Double break switching action to reduce arcing, increase lifetime and eliminate the "electric hinge"
- More rugged positive action switch
- Oversized lugs are standard
- Line side shield to help guard personnel from contact with live parts
- Higher horsepower rating for design E high efficiency motors
- UL listed for Ilsco, Burndy and T&B crimp type lugs
- The 200A switch accepts up to 300 MCM versus 250 MCM wire size

Its rugged construction - with a high fault withstand rating of 100kA at 600 VAC when fused with class R rated fuses - meets the most stringent industry standards set forth by the automotive, petro-chemical, and pulp and paper industries. UL recognized and CSA certified, our disconnect switches are available either non-fusible or fusible with class R and class J fuse clips.

Enclosure Kits for NEMA Combination Starters Description

You can assemble a non-stocked combination starter per your unanticipated needs in minutes. Say, for example, your customer needs a fusible combination starter that you don't have in stock. You need in now, but don't sweat it.

Simply start with the enclosure kit which has the handle preinstalled. You install the required starter and fusible disconnect, connect the power wire and you are finished. Within minutes, you have the required combination starter in your hands. No more waiting on the factory. You need it, you got it!

What Is In It For You!

- **Reduce Lead-time -** What used to take days to get now takes minutes
- **Reduced Inventory -** Instead of stocking scores of various combination starters, simply stock a few enclosure kits, disconnect kits, circuit breaker kits and open starters. With these basic "building blocks" you virtually have hundreds of products on-hand
- **Quality -** The same high level of quality you have been accustomed to with our products will also be found in these new enclosure kits
- **UL Listed -** By correctly following the instructions included with the kits, the product you build is UL/CSA Listed

Refer to page 17-112 for more details.

Siemens Type ETI Circuit Breaker

The ETI circuit breaker is a device designed specifically for application in motor circuits. The ETI is a magnetic only protective device designed to provide protection against short circuit current.

The instantaneous-only type ETI circuit breaker employs adjustable magnetic trip settings to allow broader application ranges and a higher degree of motor short circuit protection.

Heavy Duty Starters

These combination starters use the same starters described in the heavy duty starter section of this catalog.

Combination Heavy Duty Starters

Non-Fusible with Solid State Overload, Class 17

Selection

Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- For Fusible Styles see page 17-20.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-143.
- Wiring Diagrams see page 17-157.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24	J
120	F
110–120/220–240①	A
200–208	D
220–240	G
277	L
220–240/440–480①	C
440–480	H
575–600	E

For other voltages and frequencies, see Factory Modifications page 17-114.

Standard Width Enclosure, 3 Phase, 3-Pole

Max Hp						Overload			Enclosure							
									NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant @ = W for 304 Stainless Steel @ = X for 316 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Amp Range	Frame Size	Disc. Amp Range	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
⅛	⅛	⅓	½	0	—	0.25–1	A	30	**17CUA92B***		**17CUA92@***		**17CUA92F***		**17CUA92N***	
½	¾	1½	2	0	—	0.75–3.4	A	30	**17CUB92B***		**17CUB92@***		**17CUB92F***		**17CUB92N***	
2	2	5	5	0	—	3–12	A1	30	**17CUC92B***		**17CUC92@***		**17CUC92F***		**17CUC92N***	
3	3	—	—	0	—	5.5–22	A1	30	**17CUD92B***		**17CUD92@***		**17CUD92F***		**17CUD92N***	
⅛	⅛	⅓	½	1	—	0.25–1	A	30	**17DUA92B***		**17DUA92@***		**17DUA92F***		**17DUA92N***	
½	¾	1½	2	1	—	0.75–3.4	A	30	**17DUB92B***		**17DUB92@***		**17DUB92F***		**17DUB92N***	
2	2	5	5	1	—	3–12	A1	30	**17DUC92B***		**17DUC92@***		**17DUC92F***		**17DUC92N***	
3	3	10	10	1	—	5.5–22	A1	30	**17DUD92B***		**17DUD92@***		**17DUD92F***		**17DUD92N***	
7½	7½	—	—	1	—	10–40	A1	60	**17DUE92B***		**17DUE92@***		**17DUE92F***		**17DUE92N***	
10	10	15	15	—	1¾	10–40	A1	60	**17EUE92B***		**17EUE92@***		**17EUE92F***		**17EUE92N***	
10	15	25	25	2	—	13–52	B	60	**17FUF92B***		**17FUF92@***		**17FUF92F***		**17FUF92N***	
15	20	30	30	—	2½	25–100	B	100②	**17GUG92B***		**17GUG92@***		**17GUG92F***		**17GUG92N***	
20③	25④	50	50	3	—	25–100	B	100	**17HUG92B***		**17HUG92@***		**17HUG92F***		**17HUG92N***	
30	40	75	75	—	3½	50–200	B	200	**17IUH92B***		**17IUH92@***		**17IUH92F***		**17IUH92N***	
40	50	100	100	4	—	50–200	B	200	**17JUH92B***		**17JUH92@***		**17JUH92F***		**17JUH92N***	
75	100	200	200	5	—	55–250	—	400⑤	**17LPU92B***		—	—	—	—	**17LPU92N***	
150	200	400	400	6	—	160–630	—	600	**17MPX92B***		—	—	—	—	**17MPX92N***	
—	300	600	600	7⑥	—	400–1220	A1+CT	1200	**17NUN92B***		—	—	—	—	**17NUN92N***	
—	450	900	900	8⑦	—	400–1220	A1+CT	1600	**17PUN92B***		—	—	—	—	**17PUN92N***	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

① Dual voltage coils not available in starter sizes 5–8.
② For 60A disconnect, order fusible cat. no. page 17-20.
③ For 20 HP and 200A disconnect, order fusible cat. no. page 17-20.
④ For 25 HP and 200A disconnect, order fusible cat. no. page 17-20.
⑤ For 600A disconnect, order fusible cat. no. page 17-20.
⑥ F coil 100-250V AC 50/60Hz, or DC, H coil 150-500V AC 50/60Hz, or DC
⑦ Only available F coil 100-250V AC 50/60Hz, or DC

Combination Heavy Duty Starters

Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- For Fusible Styles see page 17-21.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-143.
- Wiring Diagrams see page 17-157.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24	J
120	F
110–120/220–240①	A
200–208	D
220–240	G
277	L
220–240/440–480①	C
440–480	H
575–600	E

For other voltages and frequencies, see Factory Modifications page 17-114.

Extra Wide Enclosure, 3-Phase, 3-Pole

Hp						Overload			Enclosure					
									NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant @ = W for 304 Stainless Steel @ = X for 316 Stainless Steel		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Amp Range	Frame Size	Disc. Amp Range	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
⅛	⅛	⅓	½	0	—	0.25–1	A	30	**17CUA82B***		**17CUA82@***		**17CUA82N***	
½	¾	1½	2	0	—	0.75–3.4	A	30	**17CUB82B***		**17CUB82@***		**17CUB82N***	
2	2	5	5	0	—	3–12	A1	30	**17CUC82B***		**17CUC82@***		**17CUC82N***	
3	3	—	—	0	—	5.5–22	A1	30	**17CUD82B***		**17CUD82@***		**17CUD82N***	
⅛	⅛	⅓	½	1	—	0.25–1	A	30	**17DUA82B***		**17DUA82@***		**17DUA82N***	
½	¾	1½	2	1	—	0.75–3.4	A	30	**17DUB82B***		**17DUB82@***		**17DUB82N***	
2	2	5	5	1	—	3–12	A1	30	**17DUC82B***		**17DUC82@***		**17DUC82N***	
3	3	10	10	1	—	5.5–22	A1	30	**17DUD82B***		**17DUD82@***		**17DUD82N***	
7½	7½	—	—	1	—	10–40	A1	60	**17DUE82B***		**17DUE82@***		**17DUE82N***	
10	10	15	15	—	1¼	10–40	A1	60	**17EUE82B***		**17EUE82@***		**17EUE82N***	
10	15	25	25	2	—	13–52	B	60	**17FUF82B***		**17FUF82@***		**17FUF82N***	
15	20	30	30	—	2½	25–100	B	100①	**17GUG82B***		**17GUG82@***		**17GUG82N***	
20②	25③	50	50	3	—	25–100	B	100	**17HUG82B***		**17HUG82@***		**17HUG82N***	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

① For 60A disconnect, order fusible cat. no. page 17-21.
② For 20 HP and 200A disconnect, order fusible cat. no. page 17-21.
③ For 25 HP and 200A disconnect, order fusible cat. no. page 17-21.

Combination Heavy Duty Starters

Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-143.
- Wiring Diagrams see page 17-157.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24	J
120	F
110–120/220–240①	A
200–208	D
220–240	G
277	L
220–240/440–480①	C
440–480	H
575–600	E

For other voltages and frequencies, see Factory Modifications page 17-114.

Standard Width Enclosure, 3-Phase, 3-Pole③

Max Hp						Overload		Disc.		Enclosure							
										NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant @ = W for 304 Stainless Steel @ = X for 316 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Amp Range	Frame Size	Amp Range	Fuse Clip Amp/Volts	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
⅛	⅛	—	—	0	—	0.25–1	A	30	30A/250V	17CUA92B*10		17CUA92@*10		17CUA92F*10		17CUA92N*10	
—	—	⅓	½	0	—	0.25–1	A	30	30A/600V	17CUA92B*11		17CUA92@*11		17CUA92F*11		17CUA92N*11	
½	¾	—	—	0	—	0.75–3.4	A	30	30A/250V	17CUB92B*10		17CUB92@*10		17CUB92F*10		17CUB92N*10	
—	—	1½	2	0	—	0.75–3.4	A	30	30A/600V	17CUB92B*11		17CUB92@*11		17CUB92F*11		17CUB92N*11	
2	2	—	—	0	—	3–12	A1	30	30A/250V	17CUC92B*10		17CUC92@*10		17CUC92F*10		17CUC92N*10	
—	—	5	5	0	—	3–12	A1	30	30A/600V	17CUC92B*11		17CUC92@*11		17CUC92F*11		17CUC92N*11	
3	3	—	—	0	—	5.5–22	A1	30	30A/250V	17CUD92B*10		17CUD92@*10		17CUD92F*10		17CUD92N*10	
⅛	⅛	—	—	1	—	0.25–1	A	30	30A/250V	17DUA92B*10		17DUA92@*10		17DUA92F*10		17DUA92N*10	
—	—	⅓	½	1	—	0.25–1	A	30	30A/600V	17DUA92B*11		17DUA92@*11		17DUA92F*11		17DUA92N*11	
½	¾	—	—	1	—	0.75–3.4	A	30	30A/250V	17DUB92B*10		17DUB92@*10		17DUB92F*10		17DUB92N*10	
—	—	1½	2	1	—	0.75–3.4	A	30	30A/600V	17DUB92B*11		17DUB92@*11		17DUB92F*11		17DUB92N*11	
2	2	—	—	1	—	3–12	A1	30	30A/250V	17DUC92B*10		17DUC92@*10		17DUC92F*10		17DUC92N*10	
—	—	5	5	1	—	3–12	A1	30	30A/600V	17DUC92B*11		17DUC92@*11		17DUC92F*11		17DUC92N*11	
3	3	—	—	1	—	5.5–22	A1	30	30A/250V	17DUD92B*10		17DUD92@*10		17DUD92F*10		17DUD92N*10	
—	—	10	10	1	—	5.5–22	A1	30	30A/600V	17DUD92B*11		17DUD92@*11		17DUD92F*11		17DUD92N*11	
7½	7½	—	—	1	—	10–40	A1	30	30A/250V	17DUE92B*10		17DUE92@*10		17DUE92F*10		17DUE92N*10	
7½	7½	—	—	1	—	10–40	A1	60	60A/250V	17DUE92B*12		17DUE92@*12		17DUE92F*12		17DUE92N*12	
—	—	15	15	—	1¾	10–40	A1	60	60A/600V	17EUE92B*13		17EUE92@*13		17EUE92F*13		17EUE92N*13	
10	10	—	—	—	1¾	10–40	A1	60	60A/250V	17EUE92B*12		17EUE92@*12		17EUE92F*12		17EUE92N*12	
10	15	—	—	2	—	13–52	B	60	60A/250V	17FUF92B*12		17FUF92@*12		17FUF92F*12		17FUF92N*12	
—	—	25	25	2	—	13–52	B	60	60A/600V	17FUF92B*13		17FUF92@*13		17FUF92F*13		17FUF92N*13	
—	—	—	30	—	2½	25–100	B	60	60A/600V	17GUG92B*13		17GUG92@*13		17GUG92F*13		17GUG92N*13	
—	—	30	—	—	2½	25–100	B	100	100A/600V	17GUG92B*15		17GUG92@*15		17GUG92F*15		17GUG92N*15	
15	20	—	—	—	2½	25–100	B	100	100A/250V	17GUG92B*14		17GUG92@*14		17GUG92F*14		17GUG92N*14	
20	25	—	—	3	—	25–100	B	100	100A/250V	17HUG92B*14		17HUG92@*14		17HUG92F*14		17HUG92N*14	
—	—	50	50	3	—	25–100	B	100	100A/600V	17HUG92B*15		17HUG92@*15		17HUG92F*15		17HUG92N*15	
25	30	—	—	3	—	25–100	B	200	200A/250V	17HUG92B*16		17HUG92@*16		17HUG92F*16		17HUG92N*16	
30	40	—	—	—	3½	50–200	B	200	200A/250V	17IUH92B*16		17IUH92@*16		17IUH92F*16		17IUH92N*16	
—	—	75	75	—	3½	50–200	B	200	200A/600V	17IUH92B*17		17IUH92@*17		17IUH92F*17		17IUH92N*17	
40	50	—	—	4	—	50–200	B	200	200A/250V	17JUH92B*16		17JUH92@*16		17JUH92F*16		17JUH92N*16	
—	—	100	100	4	—	50–200	B	200	200A/600V	17JUH92B*17		17JUH92@*17		17JUH92F*17		17JUH92N*17	
75	100	—	—	5	—	55–250	—	400	400A/250V	17LPU92B*18		—	—	—	—	17LPU92N*18	
—	100	—	—	5	—	55–250	—	600	600A/250V②	17LPU92B*20		—	—	—	—	17LPU92N*20	
—	—	—	125	5	—	55–250	—	200	200A/600V	17LPU92B*17		—	—	—	—	17LPU92N*17	
—	—	200	200	5	—	55–250	—	400	400A/600V	17LPU92B*19		—	—	—	—	17LPU92N*19	
—	—	200	—	5	—	55–250	—	600	600A/600V②	17LPU92B*21		—	—	—	—	17LPU92N*21	
150	200	—	—	6	—	160–630	—	600	600A/250V	17MPX92B*20		—	—	—	—	17MPX92N*20	
—	—	400	400	6	—	160–630	—	600	600A/600V	17MPX92B*21		—	—	—	—	17MPX92N*21	
—	—	400	400	6	—	160–630	—	800	800A/600V	17MPX92B*23		—	—	—	—	17MPX92N*23	
—	—	600	600	7④	—	400–1220	A1+CT	1200	1200A/600V	17NUN92B*24		—	—	—	—	17NUN92N*24	
—	—	900	900	8⑤	—	400–1220	A1+CT	1600	1600A/600V	17PUN92B*25		—	—	—	—	17PUN92N*25	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

① Dual voltage coils not available in starter sizes 5–8.
② Use Class J fuses only.
③ Single phase wiring page 17-156.
④ F coil 100-250V AC 50/60Hz, or DC, H coil 150-500V AC 50/60Hz, or DC
⑤ Only available F coil 100-250V AC 50/60Hz, or DC

Combination Heavy Duty Starters

Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-143.
- Wiring Diagrams see page 17-157.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24	J
120	F
110–120/220–240	A
200–208	D
220–240	G
277	L
220–240/440–480	C
440–480	H
575–600	E

For other voltages and frequencies, see Factory Modifications page 17-114.

Extra Wide Enclosure, 3-Phase, 3-Pole

Max Hp						Overload				Enclosure					
										NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, @ = W for 304 Stainless Steel @ = X for 316 Stainless Steel		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Amp Range	Frame Size	Disc. Amp Range	Fuse Clip Amp/Volts	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
⅛	⅛	—	—	0	—	0.25–1	A	30	30A/250V	**17CUA82B*10**		**17CUA82@*10**		**17CUA82N*10**	
—	—	⅓	½	0	—	0.25–1	A	30	30A/600V	**17CUA82B*11**		**17CUA82@*11**		**17CUA82N*11**	
¼	¾	—	—	0	—	0.75–3.4	A	30	30A/250V	**17CUB82B*10**		**17CUB82@*10**		**17CUB82N*10**	
—	—	1½	2	0	—	0.75–3.4	A	30	30A/600V	**17CUB82B*11**		**17CUB82@*11**		**17CUB82N*11**	
2	2	—	—	0	—	3–12	A1	30	30A/250V	**17CUC82B*10**		**17CUC82@*10**		**17CUC82N*10**	
—	—	5	5	0	—	3–12	A1	30	30A/600V	**17CUC82B*11**		**17CUC82@*11**		**17CUC82N*11**	
3	3	—	—	0	—	5.5–22	A1	30	30A/250V	**17CUD82B*10**		**17CUD82@*10**		**17CUD82N*10**	
⅛	⅛	—	—	1	—	0.25–1	A	30	30A/250V	**17DUA82B*10**		**17DUA82@*10**		**17DUA82N*10**	
—	—	⅓	½	1	—	0.25–1	A	30	30A/600V	**17DUA82B*11**		**17DUA82@*11**		**17DUA82N*11**	
¼	¾	—	—	1	—	0.75–3.4	A	30	30A/250V	**17DUB82B*10**		**17DUB82@*10**		**17DUB82N*10**	
—	—	1½	2	1	—	0.75–3.4	A	30	30A/600V	**17DUB82B*11**		**17DUB82@*11**		**17DUB82N*11**	
2	2	—	—	1	—	3–12	A1	30	30A/250V	**17DUC82B*10**		**17DUC82@*10**		**17DUC82N*10**	
—	—	5	5	1	—	3–12	A1	30	30A/600V	**17DUC82B*11**		**17DUC82@*11**		**17DUC82N*11**	
3	3	—	—	1	—	5.5–22	A1	30	30A/250V	**17DUD82B*10**		**17DUD82@*10**		**17DUD82N*10**	
—	—	10	10	1	—	5.5–22	A1	30	30A/600V	**17DUD82B*11**		**17DUD82@*11**		**17DUD82N*11**	
5	5	—	—	1	—	10–40	A1	30	30A/250V	**17DUE82B*10**		**17DUE82@*10**		**17DUE82N*10**	
7½	7½	—	—	1	—	10–40	A1	60	60A/250V	**17DUE82B*12**		**17DUE82@*12**		**17DUE82N*12**	
—	—	15	15	—	1¾	10–40	A1	60	60A/600V	**17EUE82B*13**		**17EUE82@*13**		**17EUE82N*13**	
10	10	—	—	—	1¾	10–40	A1	60	60A/250V	**17EUE82B*12**		**17EUE82@*12**		**17EUE82N*12**	
10	15	—	—	2	—	13–52	B	60	60A/250V	**17FUF82B*12**		**17FUF82@*12**		**17FUF82N*12**	
—	—	25	25	2	—	13–52	B	60	60A/600V	**17FUF82B*13**		**17FUF82@*13**		**17FUF82N*13**	
—	—	—	30	—	2½	25–100	B	60	60A/600V	**17GUG82B*13**		**17GUG82@*13**		**17GUG82N*13**	
—	—	30	—	—	2½	25–100	B	100	100A/600V	**17GUG82B*15**		**17GUG82@*15**		**17GUG82N*15**	
15	20	—	—	—	2½	25–100	B	100	100A/250V	**17GUG82B*14**		**17GUG82@*14**		**17GUG82N*14**	
20	25	—	—	3	—	25–100	B	100	100A/250V	**17HUG82B*14**		**17HUG82@*14**		**17HUG82N*14**	
—	—	50	50	3	—	25–100	B	100	100A/600V	**17HUG82B*15**		**17HUG82@*15**		**17HUG82N*15**	
25	30	—	—	3	—	25–100	B	200	200A/250V	**17HUG82B*16**		**17HUG82@*16**		**17HUG82N*16**	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

Combination Heavy Duty Starters

Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-143.
- Wiring Diagrams see page 17-157.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24	J
120	F
110–120/220–240①	A
200–208	D
220–240	G
277	L
220–240/440–480①	C
440–480	H
575–600	E

For other voltages and frequencies, see Factory Modifications page 17-114.

Standard Width Enclosure, 3-Phase, 3-Pole

Max Hp							Overload		Enclosure							
									NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant @ = W for 304 Stainless Steel @ = X for 316 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Motor Circuit Interruter ETI Amps	Amp Range	Frame Size	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
½	½	1	1	0	—	3	0.75–3.4	A	18CUB92B*		18CUB92@*		18CUB92F*		18CUB92N*	
2	2	5	5	0	—	10	3–12	A1	18CUC92B*		18CUC92@*		18CUC92F*		18CUC92N*	
3	3	—	—	0	—	25	5.5–22	A1	18CUD92B*		18CUD92@*		18CUD92F*		18CUD92N*	
½	½	1	1	1	—	3	0.75–3.4	A	18DUB92B*		18DUB92@*		18DUB92F*		18DUB92N*	
2	2	5	5	1	—	10	3–12	A1	18DUC92B*		18DUC92@*		18DUC92F*		18DUC92N*	
3	3	7 ½	10	1	—	25	5.5–22	A1	18DUD92B*		18DUD92@*		18DUD92F*		18DUD92N*	
7 ½	7 ½	10	—	1	—	30	10–40	A1	18DUE92B*		18DUE92@*		18DUE92F*		18DUE92N*	
—	—	15	15	—	1¼	40	10–40	A1	18EUE92B*		18EUE92@*		18EUE92F*		18EUE92N*	
10	15	25	25	2	—	50	13–52	B	18FUF92B*		18FUF92@*		18FUF92F*		18FUF92N*	
15	20	30	30	—	2 ½	100	25–100	B	18GUG92B*		18GUG92@*		18GUG92F*		18GUG92N*	
25	30	50	50	3	—	125	25–100	B	18HUG92B*		18HUG92@*		18HUG92F*		18HUG92N*	
30	40	75	75	—	3 ½	125	50–200	B	18IUH92B*		18IUH92@*		18IUH92F*		18IUH92N*	
40	50	100	100	4	—	150	50–200	B	18JUH92B*		18JUH92@*		18JUH92F*		18JUH92N*	
50	75	150	200	5	—	250	55–250	—	18LPT92B*		—	—	—	—	18LPT92N*	
75	100	200	—	5	—	400	55–250	—	18LPU92B*		—	—	—	—	18LPU92N*	
100	125	250	300	6	—	400	160–630	—	18MPW92B*		—	—	—	—	18MPW92N*	
150	200	400	400	6	—	600	160–630	—	18MPX92B*		—	—	—	—	18MPX92N*	
—	250	500	500	7②	—	800	400–1220	A1+CT	18NUV92B*		—	—	—	—	18NUV92N*	
—	300	600	600	7②	—	1000	400–1220	A1+CT	18NUY92B*		—	—	—	—	18NUY92N*	
—	400	800	800	8③	—	1200	400–1220	A1+CT	18PUW92B*		—	—	—	—	18PUW92N*	
—	450	900	900	8③	—	1600	400–1220	A1+CT	18PUZ92B*		—	—	—	—	18PUZ92N*	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

① Dual voltage coils not available in starter sizes 5–8.

② F coil 100-250V AC 50/60Hz, or DC, H coil 150-500V AC 50/60Hz, or DC

③ Only available F coil 100-250V AC 50/60Hz, or DC

Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-143.
- Wiring Diagrams see page 17-157.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24	J
120	F
110–120/220–240	A
200–208	D
220–240	G
277	L
220–240/440–480	C
440–480	H
575–600	E

For other voltages and frequencies, see Factory Modifications page 17-114.

Extra Wide Enclosure, 3-Phase, 3-Pole

Max Hp							Overload		Enclosure					
									NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant @ = W for 304 Stainless Steel @ = X for 316 Stainless Steel		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Motor Circuit Interruter ETI Amps	Amp Range	Frame Size	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
½	½	1	1	0	—	3	0.75–3.4	A	**18CUB82B***		**18CUB82@***		**18CUB82N***	
2	2	5	5	0	—	10	3–12	A1	**18CUC82B***		**18CUC82@***		**18CUC82N***	
3	3	—	—	0	—	25	5.5–22	A1	**18CUD82B***		**18CUD82@***		**18CUD82N***	
½	½	1	1	1	—	3	0.75–3.4	A	**18DUB82B***		**18DUB82@***		**18DUB82N***	
2	2	5	5	1	—	10	3–12	A1	**18DUC82B***		**18DUC82@***		**18DUC82N***	
3	3	7½	10	1	—	25	5.5–22	A1	**18DUD82B***		**18DUD82@***		**18DUD82N***	
7½	7½	10	—	1	—	30	10–40	A1	**18DUE82B***		**18DUE82@***		**18DUE82N***	
—	—	15	15	—	1¾	40	10–40	A1	**18EUE82B***		**18EUE82@***		**18EUE82N***	
10	15	25	25	2	—	50	13–52	B	**18FUF82B***		**18FUF82@***		**18FUF82N***	
15	20	30	30	—	2½	100	25–100	B	**18GUG82B***		**18GUG82@***		**18GUG82N***	
25	30	50	50	3	—	125	25–100	B	**18HUG82B***		**18HUG82@***		**18HUG82N***	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-130 open and 17-145 enclosed.
- Wiring Diagrams see page 17-158.

Coil Table

60Hz Voltage	Letter
24	J
120	F
110–120/220–240①	A
200–208	D
220–240	G
277	L
220–240/440–480①	C
440–480	H
575–600	E

For other voltages and frequencies, see Factory Modifications page 17-114.

Open Type & Standard Width Enclosure, 3-Phase, 3-Pole

Max Hp						Overload		Enclosure									
								Open Type Standard Auxiliary Contacts④		NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant 304 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Amp Range	Frame Size	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
⅛	⅛	⅓	½	00	—	0.25–1	A	**22BUA32A***		**22BUA32B***		**Use Size 0**	—	**Use Size 0**	—	**Use Size 0**	—
½	¾	1½	2	00	—	0.75–3.4	A	**22BUB32A***		**22BUB32B***		**Use Size 0**	—	**Use Size 0**	—	**Use Size 0**	—
1½	1½	2	—	00	—	3–12	A1	**22BUC32A***		**22BUC32B***		**Use Size 0**	—	**Use Size 0**	—	**Use Size 0**	—
⅛	⅛	⅓	1⁄2	0	—	0.25–1	A	**22CUA32A***		**22CUA32B***		**22CUA32W***		**22CUA32F***		**22CUA320***	
½	¾	1½	2	0	—	0.75–3.4	A	**22CUB32A***		**22CUB32B***		**22CUB32W***		**22CUB32F***		**22CUB320***	
2	2	5	5	0	—	3–12	A1	**22CUC32A***		**22CUC32B***		**22CUC32W***		**22CUC32F***		**22CUC320***	
3	3	—	—	0	—	5.5–22	A1	**22CUD32A***		**22CUD32B***		**22CUD32W***		**22CUD32F***		**22CUD320***	
⅛	⅛	⅓	½	1	—	0.25–1	A	**22DUA32A***		**22DUA32B***		**22DUA32W***		**22DUA32F***		**22DUA320***	
½	¾	1½	2	1	—	0.75–3.4	A	**22DUB32A***		**22DUB32B***		**22DUB32W***		**22DUB32F***		**22DUB320***	
2	2	5	5	1	—	3–12	A1	**22DUC32A***		**22DUC32B***		**22DUC32W***		**22DUC32F***		**22DUC320***	
3	3	10	10	1	—	5.5–22	A1	**22DUD32A***		**22DUD32B***		**22DUD32W***		**22DUD32F***		**22DUD320***	
7½	7½	—	—	1	—	10–40	A1	**22DUE32A***		**22DUE32B***		**22DUE32W***		**22DUE32F***		**22DUE320***	
10	10	15	15	—	1¾	10–40	A1	**22EUE32A***		**22EUE32B***		**22EUE32W***		**22EUE32F***		**22EUE320***	
10	15	25	25	2	—	13–52	B	**22FUF32A***		**22FUF32B***		**22FUF32W***		**22FUF32F***		**22FUF320***	
15	20	30	30	—	2½	25–100	B	**22GUG32A***		**22GUG32B***		**22GUG32W***		**22GUG32F***		**22GUG320***	
25	30	50	50	3	—	25–100	B	**22HUG32A***		**22HUG32B***		**22HUG32W***		**22HUG32F***		**22HUG320***	
30	40	75	75	—	3½	50–200	B	**22IUH32A***		**22IUH32B***		**22IUH32W***		**22IUH32F***		**22IUH320***	
40	50	100	100	4	—	50–200	B	**22JUH32A***		**22JUH32B***		**22JUH32W***		**22JUH32F***		**22JUH320***	
75	100	200	200	5	—	55–250	—	**22LPU32A***		**22LPU32B***		—	—	—	—	**22LPU320***	
150	200	400	400	6	—	160–630	—	**22MPX32A***		**22MPX32B***		—	—	—	—	**22MPX320***	
—	300	600	600	7②	—	400–1220	A1+CT	**22NUN32A***		**22NUN32B***		—	—	—	—	**22NUN320***	
—	450	900	900	8③	—	400–1220	A1+CT	**22PUN32A***		**22PUN32B***		—	—	—	—	**22PUN320***	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

① Dual voltage coils not available in size 5–8 starters.

② Only available
F coil 100-250V AC 50/60Hz, or DC
H coil 150-500V AC 50/60Hz, or DC

③ Only available
F coil 100-250V AC 50/60Hz, or DC

④ Auxiliary contacts
22B-22E 4th pole built-in
22F-22J 2 NO & 2 NC

Combination Reversing Heavy Duty Starters

Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Fuse clips see page 17-115.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-147.
- Wiring Diagrams see page 17-159.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24	J
120	F
110–120/220–240①	A
200–208	D
220–240	G
277	L
220–240/440–480①	C
440–480	H
575–600	E

For other voltages and frequencies, see Factory Modifications page 17-114.

Standard Width Enclosure with Solid State Overload, 3-Phase, 3-Pole

Max Hp						Overload			Enclosure							
									NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant 304 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Amp Range	Frame Size	Disc. Amp Rating	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
⅛	⅛	⅓	½	0	—	0.25–1	A	30	**25CUA92B***		**25CUA92W***		**25CUA92F***		**25CUA92N***	
½	¾	1½	2	0	—	0.75–3.4	A	30	**25CUB92B***		**25CUB92W***		**25CUB92F***		**25CUB92N***	
2	2	5	5	0	—	3–12	A1	30	**25CUC92B***		**25CUC92W***		**25CUC92F***		**25CUC92N***	
3	3	—	—	0	—	5.5–22	A1	30	**25CUD92B***		**25CUD92W***		**25CUD92F***		**25CUD92N***	
⅛	⅛	⅓	½	1	—	0.25–1	A	30	**25DUA92B***		**25DUA92W***		**25DUA92F***		**25DUA92N***	
½	¾	1½	2	1	—	0.75–3.4	A	30	**25DUB92B***		**25DUB92W***		**25DUB92F***		**25DUB92N***	
2	2	5	5	1	—	3–12	A1	30	**25DUC92B***		**25DUC92W***		**25DUC92F***		**25DUC92N***	
3	3	10	10	1	—	5.5–22	A1	30	**25DUD92B***		**25DUD92W***		**25DUD92F***		**25DUD92N***	
7½	7½	—	—	1	—	10–40	A1	60	**25DUE92B***		**25DUE92W***		**25DUE92F***		**25DUE92N***	
10	10	15	15	—	1¾	10–40	A1	60	**25EUE92B***		**25EUE92W***		**25EUE92F***		**25EUE92N***	
10	15	25	25	2	—	13–52	B	60	**25FUF92B***		**25FUF92W***		**25FUF92F***		**25FUF92N***	
15	20	30	30	—	2½	25–100	B	100	**25GUG92B***		**25GUG92W***		**25GUG92F***		**25GUG92N***	
20	25	50	50	3	—	25–100	B	100	**25HUG92B***		**25HUG92W***		**25HUG92F***		**25HUG92N***	
30	40	75	75	—	3½	50–200	B	200	**25IUH92B***		**25IUH92W***		**25IUH92F***		**25IUH92N***	
40	50	100	100	4	—	50–200	B	200	**25JUH92B***		**25JUH92W***		**25JUH92F***		**25JUH92N***	
75	100	200	200	5	—	55–250	—	400	**25LPU92B***		—	—	—	—	**25LPU92N***	
150	200	400	400	6	—	160–630	—	600	**25MPX92B***		—	—	—	—	**25MPX92N***	
—	300	600	600	7②	—	400–1220	A1+CT	1200	**25NUN92B***		—	—	—	—	**25NUN92N***	
—	450	900	900	8③	—	400–1220	A1+CT	1600	**25PUN92B***		—	—	—	—	**25PUN92N***	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

① Dual voltage coils not available in starter sizes 5–8.

② F coil 100-250V AC 50/60Hz, or DC, H coil 150-500V AC 50/60Hz, or DC

③ Only available F coil 100-250V AC 50/60Hz, or DC

Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-147.
- Wiring Diagrams see page 17-159.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24	J
120	F
110–120/220–240①	A
200–208	D
220–240	G
277	L
220–240/440–480①	C
440–480	H
575–600	E

For other voltages and frequencies, see Factory Modifications page 17-114.

Standard Width Enclosure with Solid State Overload, 3-Phase, 3-Pole

Max Hp							Overload		Enclosure					
									NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant 304 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Motor Circuit Interruter ETI Amps	Amp Range	Frame Size	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
½	½	1	1	0	—	3	0.75–3.4	A	**26CUB92B***		**26CUB92W***		**26CUB92F***		**26CUB92N***	
2	2	5	5	0	—	10	3–12	A1	**26CUC92B***		**26CUC92W***		**26CUC92F***		**26CUC92N***	
3	3	—	—	0	—	25	5.5–22	A1	**26CUD92B***		**26CUD92W***		**26CUD92F***		**26CUD92N***	
½	½	1	1	1	—	3	0.75–3.4	A	**26DUB92B***		**26DUB92W***		**26DUB92F***		**26DUB92N***	
2	2	5	5	1	—	10	3–12	A1	**26DUC92B***		**26DUC92W***		**26DUC92F***		**26DUC92N***	
3	3	7½	10	1	—	25	5.5–22	A1	**26DUD92B***		**26DUD92W***		**26DUD92F***		**26DUD92N***	
7½	7½	10	—	1	—	30	10–40	A1	**26DUE92B***		**26DUE92W***		**26DUE92F***		**26DUE92N***	
—	—	15	15	—	1¼	40	10–40	A1	**26EUE92B***		**26EUE92W***		**26EUE92F***		**26EUE92N***	
10	15	25	25	2	—	50	13–52	B	**26FUF92B***		**26FUF92W***		**26FUF92F***		**26FUF92N***	
15	20	30	30	—	2½	100	25–100	B	**26GUG92B***		**26GUG92W***		**26GUG92F***		**26GUG92N***	
25	30	50	50	3	—	125	25–100	B	**26HUG92B***		**26HUG92W***		**26HUG92F***		**26HUG92N***	
30	40	75	75	—	3½	125	50–200	B	**26IUH92B***		**26IUH92W***		**26IUH92F***		**26IUH92N***	
40	50	100	100	4	—	150	50–200	B	**26JUH92B***		**26JUH92W***		**26JUH92F***		**26JUH92N***	
50	75	150	200	5	—	250	55–250	—	**26LPT92B***		—	—	—	—	**26LPT92N***	
75	100	200	—	5	—	400	55–250	—	**26LPU92B***		—	—	—	—	**26LPU92N***	
100	125	250	300	6	—	400	160–630	—	**26MPW92B***		—	—	—	—	**26MPW92N***	
150	200	400	400	6	—	600	160–630	—	**26MPX92B***		—	—	—	—	**26MPX92N***	
—	250	500	500	7*②	—	800	400–1220	A1+CT	**26NUV92B***		—	—	—	—	**26NUV92N***	
—	300	600	600	7*②	—	1000	400–1220	A1+CT	**26NUY92B***		—	—	—	—	**26NUY92N***	
—	400	800	800	8③	—	1200	400–1220	A1+CT	**26PUW92B***		—	—	—	—	**26PUW92N***	
—	450	900	900	8③	—	1600	400–1220	A1+CT	**26PUZ92B***		—	—	—	—	**26PUZ92N***	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

① Dual voltage coils not available in starter sizes 5–8.

② F coil 100-250V AC 50/60Hz, or DC, H coil 150-500V AC 50/60Hz, or DC

③ Only available F coil 100-250V AC 50/60Hz, or DC

Two Speed Heavy Duty Starters

Features

- Rugged Industrial Design
- Dual Voltage, Dual Frequency Coils
- Compact Design
- Snap-On Front Removable Auxiliary Contacts
- Electrical and Mechanical Interlocks
- Half Sizes — Space and Cost Savings
- Industrial Type Disconnect Operating Handle
- Visible Blade Disconnect Thru Size 4
- Adjustable Motor Circuit Protector
- 100,000 Amp Fault Protection with MCP or Class R Fuses
- Pilot Device Locations identified on All Enclosures
- UL Listed File #E14900
- CSA Certified File #LR6535

Applications

Multi-speed magnetic starters automatically reconnect multi-speed motor windings for the desired speed in response to a signal received from push button stations or other pilot devices.

These starters are available for two speed motors.

Consequent Pole multi-speed motors having two speeds on a single winding (consequent pole) require a starter which reconnects the motor leads to half the number of effective motor poles at the high speed point. In this type of motor, **the low speed is one half the high speed.**

Separate Windings motors having separate windings for each speed provide more varied speed combinations in that the low speed need not be one half the high speed. **Starters for separate winding motors consist of a starter unit for each speed.**

Multi-speed motor starters are available for constant torque, variable torque and constant horsepower motors.

Constant Torque motors maintain constant torque at all speeds. Horsepower varies directly with speed. This type of motor is applicable to conveyors, mills and similar applications.

Variable Torque motors produce a torque characteristic which varies as the square of the speed. This type of motor is applicable to fans, blowers and centrifugal pumps.

Constant Horsepower motors maintain constant horsepower at all speeds and therefore torque varies inversely with speed. This type of motor is applicable where the same horsepower is required at all speeds. **The higher current required at low speed requires derating on starters for constant horsepower applications.** This type of motor is applicable to metal working machines such as drills, lathes, mills, bending machines, punch presses, and power wrenches.

Operation

Magnetic starters for multi-speed applications select the desired speed in accordance with the pilot control.

The shock to machinery upon the reduction of speed is greater than when the speed is increased. Therefore, the pilot control should be wired so that the stop button must be depressed before dropping to a lower speed or time delays should be used for applications requiring full automatic operations. The multi-speed controls are available with the necessary interlocks or relays to provide this type of operation.

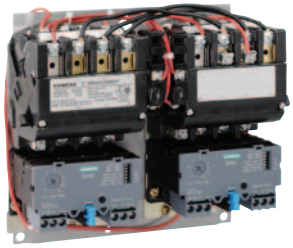
These controls may be modified for compelling or acceleration pilot control.

Selective Control permits the operator to start the motor at any speed and to change to a higher speed by merely pushing a button. To change to a lower speed it is necessary to first depress the stop button and to then press the proper speed button. Selective control is a function of the pilot control selected and requires no starter modifications.

Compelling Control requires that the motor always be started at the lower speed and that the push buttons be operated in speed sequence to go to the next higher speed. To change to a lower speed, the stop button must be depressed and then the push buttons operated in speed sequence until the desired speed is reached. Compelling control can be added from the factory modification section page 17-117.

Acceleration Control provides that the motor be accelerated automatically with timers by progressively energizing the controls from the push button station from the lowest to highest speed. To change to a lower speed the stop button is depressed and then it is necessary to proceed as if starting from rest. Acceleration control can be added from the factory modification section page 17-117.

Deceleration Control provides that the motor be decelerated automatically with a timer when going from high speed to low speed. The timer allows the motor to decelerate from high speed to a lower speed before automatically restarting the motor in low speed. Deceleration control can be added from the factory modification section page 17-117.



Open Style Two Speed Starter (ESP100 Overload)

Two Speed Heavy Duty Starters

2S2W Starter
(ESP200 Overload)

Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Replace the (†) with the letter that corresponds to the correct low speed FLA in the FLA table.①
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-136.
- Wiring Diagrams see page 17-160.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24	J
120	F
110–120/220–240	A
200–208	D
220–240	G
277	L
220–240/440–480	C
440–480	H
575–600	E

For other voltages and frequencies, see Factory Modifications page 17-114.

Low Speed FLA Table

Size	FLA	OLR Frame Size	†
0,1	0.25–1	A	A
0,1	0.75–3.4	A	B
0,1	3–12	A1	C
0,1	5.5–22	A1	D
0-1 3/4	10–40	A1	E
2-3	13–52	B	F
2-3	25–100	B	G
3 1/2-4	50–200	B	H

One Winding Consequent Pole, 3-Phase (Constant or Variable Torque)

Max Hp						Overload		Enclosure									
								Open Type Standard Auxiliary Contacts②		NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant 304 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Amp Range	Frame Size	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
½	¾	1½	2	0	—	0.75–3.4	A	30CUB†32A2V*		30CUB†32B2V*		30CUB†32W2V*		30CUC†32F2V*		30CUC†3202V*	
2	2	5	5	0	—	3–12	A1	30CUC†32A2V*		30CUC†32B2V*		30CUC†32W2V*		30CUC†32F2V*		30CUC†3202V*	
3	3	—	—	0	—	5.5–22	A1	30CUD†32A2V*		30CUD†32B2V*		30CUD†32W2V*		30CUD†32F2V*		30CUD†3202V*	
½	¾	1½	1½	1	—	0.75–3.4	A	30DUB†32A2V*		30DUB†32B2V*		30DUB†32W2V*		30DUB†32F2V*		30DUB†3202V*	
2	2	5	5	1	—	3–12	A1	30DUC†32A2V*		30DUC†32B2V*		30DUC†32W2V*		30DUC†32F2V*		30DUC†3202V*	
3	3	10	10	1	—	5.5–22	A1	30DUD†32A2V*		30DUD†32B2V*		30DUD†32W2V*		30DUD†32F2V*		30DUD†3202V*	
7½	7½	—	—	1	—	10–40	A1	30DUE†32A2V*		30DUE†32B2V*		30DUE†32W2V*		30DUE†32F2V*		30DUE†3202V*	
10	10	15	15	—	1¾	10–40	A1	30EUE†32A2V*		30EUE†32B2V*		30EUE†32W2V*		30EUE†32F2V*		30EUE†3202V*	
10	15	25	25	2	—	13–52	B	30FUF†32A2V*		30FUF†32B2V*		30FUF†32W2V*		30FUF†32F2V*		30FUF†3202V*	
15	20	30	30	—	2½	25–100	B	30GUG†32A2V*		30GUG†32B2V*		30GUG†32W2V*		30GUG†32F2V*		30GUG†3202V*	
25	30	50	50	3	—	25–100	B	30HUG†32A2V*		30HUG†32B2V*		30HUG†32W2V*		30HUG†32F2V*		30HUG†3202V*	
30	40	75	75	—	3½	50–200	B	30IUH†32A2V*		30IUH†32B2V*		30IUH†32W2V*		30IUH†32F2V*		30IUH†3202V*	
40	50	100	100	4	—	50–200	B	30JUH†32A2V*		30JUH†32B2V*		30JUH†32W2V*		30JUH†32F2V*		30JUH†3202V*	

Two Separate Windings, 3-Phase (Constant or Variable Torque)

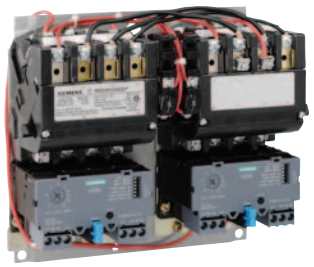
Max Hp						Overload		Enclosure									
								Open Type② Standard Auxiliary Contacts		NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant 304 Stainless Steel 316 Stainless Steel (Optional)		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Amp Range	Frame Size	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
½	¾	1½	2	0	—	0.75–3.4	A	30CUB†32A1V*		30CUB†32B1V*		30CUB†32W1V*		30CUB†32F1V*		30CUB†3201V*	
2	2	5	5	0	—	3–12	A1	30CUC†32A1V*		30CUC†32B1V*		30CUC†32W1V*		30CUC†32F1V*		30CUC†3201V*	
3	3	—	—	0	—	5.5–22	A1	30CUD†32A1V*		30CUD†32B1V*		30CUD†32W1V*		30CUD†32F1V*		30CUD†3201V*	
½	¾	1½	1½	1	—	0.75–3.4	A	30DUB†32A1V*		30DUB†32B1V*		30DUB†32W1V*		30DUB†32F1V*		30DUB†3201V*	
2	2	5	5	1	—	3–12	A1	30DUC†32A1V*		30DUC†32B1V*		30DUC†32W1V*		30DUC†32F1V*		30DUC†3201V*	
3	3	10	10	1	—	5.5–22	A1	30DUD†32A1V*		30DUD†32B1V*		30DUD†32W1V*		30DUD†32F1V*		30DUD†3201V*	
7½	7½	—	—	1	—	10–40	A1	30DUE†32A1V*		30DUE†32B1V*		30DUE†32W1V*		30DUE†32F1V*		30DUE†3201V*	
10	10	15	15	—	1¾	10–40	A1	30EUE†32A1V*		30EUE†32B1V*		30EUE†32W1V*		30EUE†32F1V*		30EUE†3201V*	
10	15	25	25	2	—	13–52	B	30FUF†32A1V*		30FUF†32B1V*		30FUF†32W1V*		30FUF†32F1V*		30FUF†3201V*	
15	20	30	30	—	2½	25–100	B	30GUG†32A1V*		30GUG†32B1V*		30GUG†32W1V*		30GUG†32F1V*		30GUG†3201V*	
25	30	50	50	3	—	25–100	B	30HUG†32A1V*		30HUG†32B1V*		30HUG†32W1V*		30HUG†32F1V*		30HUG†3201V*	
30	40	75	75	—	3½	50–200	B	30IUH†32A1V*		30IUH†32B1V*		30IUH†32W1V*		30IUH†32F1V*		30IUH†3201V*	
40	50	100	100	4	—	50–200	B	30JUH†32A1V*		30JUH†32B1V*		30JUH†32W1V*		30JUH†32F1V*		30JUH†3201V*	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

① If motor FLA are unknown, select overload on the basis that low speed FLA will be no greater than 50% of high speed FLA.

② Auxiliary contacts 30C-30E 4th pole built-in 30F-30J 2 NO & 2 NC

Two Speed Heavy Duty Starters



2S2W Starter
(ESP200 Overload)

Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Replace the (†) with the letter that corresponds to the correct FLA in High/Low Speed FLA Table.①
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-136.
- Wiring Diagrams see page 17-160.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24	J
120	F
110–120/220–240	A
200–208	D
220–240	G
277	L
220–240/440–480	C
440–480	H
575–600	E

For other voltages and frequencies, see Factory Modifications page 17-114.

High/Low Speed FLA Table①

Size	FLA	OLR Frame Size	†
0,1	0.25–1	A	A
0,1	0.75–3.4	A	B
0,1	3–12	A1	C
0,1	5.5–22	A1	D
0-1 3/4	10–40	A1	E
2-3	13–52	B	F
2-3	25–100	B	G
3 1/2-4	50–200	B	H

* First (†) for high speed, second (†) for low speed. Use motor nameplate to select FLA. If motor FLA are unknown, select overload on the bases that the low speed FLA will be no greater than 50 % of high speed FLA.

One Winding Consequent Pole, 3-Phase (Constant Horsepower)

Max Hp						Enclosure									
						Open Type Standard Auxiliary Contacts②		NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant 304 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
2	2	3	3	0	—	30CU††32A2H*		30CU††32B2H*		30CU††32W2H*		30CU††32F2H*		30CU††3202H*	
5	5	7½	7½	1	—	30DU††32A2H*		30DU††32B2H*		30DU††32W2H*		30DU††32F2H*		30DU††3202H*	
7½	7½	10	10	—	1¾	30EU††32A2H*		30EU††32B2H*		30EU††32W2H*		30EU††32F2H*		30EU††3202H*	
7½	10	20	20	2	—	30FU††32A2H*		30FU††32B2H*		30FU††32W2H*		30FU††32F2H*		30FU††3202H*	
10	15	25	25	—	2½	30GU††32A2H*		30GU††32B2H*		30GU††32W2H*		30GU††32F2H*		30GU††3202H*	
20	25	40	40	3	—	30HU††32A2H*		30HU††32B2H*		30HU††32W2H*		30HU††32F2H*		30HU††3202H*	
25	30	50	50	—	3½	30IU††32A2H*		30IU††32B2H*		30IU††32W2H*		30IU††32F2H*		30IU††3202H*	
30	40	75	75	4	—	30JU††32A2H*		30JU††32B2H*		30JU††32W2H*		30JU††32F2H*		30JU††3202H*	

Two Separate Windings, 3-Phase (Constant Horsepower)

Max Hp						Enclosure									
						Open Type Standard Auxiliary Contacts②		NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant 304 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
2	2	3	3	0	—	30CU††32A1H*		30CU††32B1H*		30CU††32W1H*		30CU††32F1H*		30CU††3201H*	
5	5	7½	7½	1	—	30DU††32A1H*		30DU††32B1H*		30DU††32W1H*		30DU††32F1H*		30DU††3201H*	
7½	7½	10	10	—	13⁄4	30EU††32A1H*		30EU††32B1H*		30EU††32W1H*		30EU††32F1H*		30EU††3201H*	
7½	10	20	20	2	—	30FU††32A1H*		30FU††32B1H*		30FU††32W1H*		30FU††32F1H*		30FU††3201H*	
10	15	25	25	—	2½	30GU††32A1H*		30GU††32B1H*		30GU††32W1H*		30GU††32F1H*		30GU††3201H*	
20	25	40	40	3	—	30HU††32A1H*		30HU††32B1H*		30HU††32W1H*		30HU††32F1H*		30HU††3201H*	
25	30	50	50	—	3½	30IU††32A1H*		30IU††32B1H*		30IU††32W1H*		30IU††32F1H*		30IU††3201H*	
30	40	75	75	4	—	30JU††32A1H*		30JU††32B1H*		30JU††32W1H*		30JU††32F1H*		30JU††3201H*	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

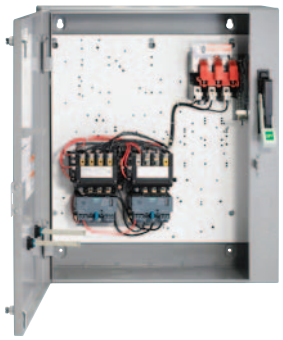
① First (†) for high speed, second (†) for low speed. Use motor nameplate information to select FLA. If motor FLA are unknown, select overload on the basis that low speed FLA will be no greater than 50% of high speed FLA.

② Auxiliary contacts
30C-30E 4th pole built-in
30F-30J 2 NO & 2 NC

Combination Two Speed Heavy Duty Starters

Non-Fusible, Constant or Variable Torque with Solid State Overload, Class 32

Selection



Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Replace the (†) with the letter that corresponds to the correct low speed FLA in the FLA table.②
- Fuse clips see page 17-115.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-149.
- Wiring Diagrams see page 17-160.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24	J
120	F
110–120/220–240①	A
200–208	D
220–240	G
277	L
220–240/440–480①	C
440–480	H
575–600	E

For other voltages and frequencies, see Factory Modifications page 17-114.

Low Speed FLA Table

Size	FLA	OLR Frame Size	†
0,1	0.25–1	A	A
0,1	0.75–3.4	A	B
0,1	3–12	A1	C
0,1	5.5–22	A1	D
0-1 3/4	10–40	A1	E
2-3	13–52	B	F
2-3	25–100	B	G
3 1/2-4	50–200	B	H

One Winding Consequent Pole, 3-Phase (Constant or Variable Torque)

Max Hp						Overload			Enclosure							
									NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant 304 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Amp Range	Frame Size	Disc. Amp Range	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
½	¾	1½	2	0	—	0.75–3.4	A	30	32CUB†92B2V2*		32CUB†92W2V2*		32CUB†92F2V2*		32CUB†92N2V2*	
2	2	5	5	0	—	3–12	A1	30	32CUC†92B2V2*		32CUC†92W2V2*		32CUC†92F2V2*		32CUC†92N2V2*	
3	3	—	—	0	—	5.5–22	A1	30	32CUD†92B2V2*		32CUD†92W2V2*		32CUD†92F2V2*		32CUD†92N2V2*	
½	¾	1½	1½	1	—	0.75–3.4	A	30	32DUB†92B2V2*		32DUB†92W2V2*		32DUB†92F2V2*		32DUB†92N2V2*	
2	2	5	5	1	—	3–12	A1	30	32DUC†92B2V2*		32DUC†92W2V2*		32DUC†92F2V2*		32DUC†92N2V2*	
3	3	10	10	1	—	5.5–22	A1	30	32DUD†92B2V2*		32DUD†92W2V2*		32DUD†92F2V2*		32DUD†92N2V2*	
7½	7½	—	—	1	—	10–40	A1	60	32DUE†92B2V2*		32DUE†92W2V2*		32DUE†92F2V2*		32DUE†92N2V2*	
10	10	15	15	—	1¾	10–40	A1	60	32EUE†92B2V2*		32EUE†92W2V2*		32EUE†92F2V2*		32EUE†92N2V2*	
10	15	25	25	2	—	13–52	B	60	32FUF†92B2V2*		32FUF†92W2V2*		32FUF†92F2V2*		32FUF†92N2V2*	
15	20	30	30	—	2½	25–100	B	100	32GUG†92B2V2*		32GUG†92W2V2*		32GUG†92F2V2*		32GUG†92N2V2*	
20	25	50	50	3	—	25–100	B	100	32HUG†92B2V2*		32HUG†92W2V2*		32HUG†92F2V2*		32HUG†92N2V2*	
30	40	75	75	—	3½	50–200	B	200	32IUH†92B2V2*		32IUH†92W2V2*		32IUH†92F2V2*		32IUH†92N2V2*	
40	50	100	100	4	—	50–200	B	200	32JUH†92B2V2*		32JUH†92W2V2*		32JUH†92F2V2*		32JUH†92N2V2*	

Two Separate Windings, 3-Phase (Constant or Variable Torque)

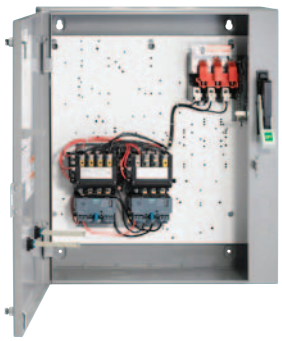
Max Hp						Overload			Enclosure							
									NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant 304 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Amp Range	Frame Size	Disc. Amp Range	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
½	¾	1½	2	0	—	0.75–3.4	A	30	32CUB†92B1V2*		32CUB†92W1V2*		32CUB†92F1V2*		32CUB†92N1V2*	
2	2	5	5	0	—	3–12	A1	30	32CUC†92B1V2*		32CUC†92W1V2*		32CUC†92F1V2*		32CUC†92N1V2*	
3	3	—	—	0	—	5.5–22	A1	30	32CUD†92B1V2*		32CUD†92W1V2*		32CUD†92F1V2*		32CUD†92N1V2*	
½	¾	1½	1½	1	—	0.75–3.4	A	30	32DUB†92B1V2*		32DUB†92W1V2*		32DUB†92F1V2*		32DUB†92N1V2*	
2	2	5	5	1	—	3–12	A1	30	32DUC†92B1V2*		32DUC†92W1V2*		32DUC†92F1V2*		32DUC†92N1V2*	
3	3	10	10	1	—	5.5–22	A1	30	32DUD†92B1V2*		32DUD†92W1V2*		32DUD†92F1V2*		32DUD†92N1V2*	
7½	7½	—	—	1	—	10–40	A1	60	32DUE†92B1V2*		32DUE†92W1V2*		32DUE†92F1V2*		32DUE†92N1V2*	
10	10	15	15	—	1¾	10–40	A1	60	32EUE†92B1V2*		32EUE†92W1V2*		32EUE†92F1V2*		32EUE†92N1V2*	
10	15	25	25	2	—	13–52	B	60	32FUF†92B1V2*		32FUF†92W1V2*		32FUF†92F1V2*		32FUF†92N1V2*	
15	20	30	30	—	2½	25–100	B	100	32GUG†92B1V2*		32GUG†92W1V2*		32GUG†92F1V2*		32GUG†92N1V2*	
20	25	50	50	3	—	25–100	B	100	32HUG†92B1V2*		32HUG†92W1V2*		32HUG†92F1V2*		32HUG†92N1V2*	
30	40	75	75	—	3½	50–200	B	200	32IUH†92B1V2*		32IUH†92W1V2*		32IUH†92F1V2*		32IUH†92N1V2*	
40	50	100	100	4	—	50–200	B	200	32JUH†92B1V2*		32JUH†92W1V2*		32JUH†92F1V2*		32JUH†92N1V2*	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

① Dual voltage coils not available in modified starters.

② If motor FLA are unknown, select overload on the basis that low speed FLA will be no greater than 50% of high speed FLA.

Combination Two Speed Heavy Duty Starters



Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Replace the (†) with the letter that corresponds to the correct FLA in the High/Low Speed FLA Table.②
- Fuse clips see page 17-115.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-149.
- Wiring Diagrams see page 17-160.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24	J
120	F
110–120/220–240①	A
200–208	D
220–240	G
277	L
220–240/440–480①	C
440–480	H
575–600	E

For other voltages and frequencies see Factory Modifications page 17-114.

High/Low Speed FLA Table②

Size	FLA	OLR Frame Size	†
0,1	0.25–1	A	A
0,1	0.75–3.4	A	B
0,1	3–12	A1	C
0,1	5.5–22	A1	D
0-1 3/4	10–40	A1	E
2-3	13–52	B	F
2-3	25–100	B	G
3 1/2-4	50–200	B	H

* First (†) for high speed, second (†) for low speed. Use motor nameplate to select FLA. If motor FLA are unknown, select overload on the bases that the low speed FLA will be no greater than 50 % of high speed FLA.

One Winding Consequent Pole, 3-Phase (Constant Horsepower)

Max Hp						Overload			Enclosure							
									NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant 304 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Amp Range	Frame Size	Disc. Amp Range	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
2	2	3	3	0	—	—	—	30	32CU††92B2H2*		32CU††92W2H2*	4054.00	32CU††92F2H2*		32CU††92N2H2*	
5	5	7½	7½	1	—	—	—	30	32DU††92B2H2*		32DU††92W2H2*	4173.00	32DU††92F2H2*		32DU††92N2H2*	
7½	7½	10	10	—	1¾	—	—	60	32EU††92B2H2*		32EU††92W2H2*	4873.00	32EU††92F2H2*		32EU††92N2H2*	
7½	10	20	20	2	—	—	—	60	32FU††92B2H2*		32FU††92W2H2*	6146.00	32FU††92F2H2*		32FU††92N2H2*	
10	15	25	25	—	2½	—	—	100	32GU††92B2H2*		32GU††92W2H2*	7219.00	32GU††92F2H2*		32GU††92N2H2*	
20	25	40	40	3	—	—	—	100	32HU††92B2H2*		32HU††92W2H2*	9321.00	32HU††92F2H2*		32HU††92N2H2*	
25	30	50	50	—	3½	—	—	200	32IU††92B2H2*		32IU††92W2H2*	18079.00	32IU††92F2H2*		32IU††92N2H2*	
30	40	75	75	4	—	—	—	200	32JU††92B2H2*		32JU††92W2H2*	19263.00	32JU††92F2H2*		32JU††92N2H2*	

Two Separate Windings, 3-Phase (Constant Horsepower)

Max Hp						Overload			Enclosure							
									NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant 304 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Amp Range	Frame Size	Disc. Amp Range	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
2	2	3	3	0	—	—	—	30	32CU††92B1H2*		32CU††92W1H2*		32CU††92F1H2*		32CU††92N1H2*	
5	5	7½	7½	1	—	—	—	30	32DU††92B1H2*		32DU††92W1H2*		32DU††92F1H2*		32DU††92N1H2*	
7½	7½	10	10	—	1¾	—	—	60	32EU††92B1H2*		32EU††92W1H2*		32EU††92F1H2*		32EU††92N1H2*	
7½	10	20	20	2	—	—	—	60	32FU††92B1H2*		32FU††92W1H2*		32FU††92F1H2*		32FU††92N1H2*	
10	15	25	25	—	2½	—	—	100	32GU††92B1H2*		32GU††92W1H2*		32GU††92F1H2*		32GU††92N1H2*	
20	25	40	40	3	—	—	—	100	32HU††92B1H2*		32HU††92W1H2*		32HU††92F1H2*		32HU††92N1H2*	
25	30	50	50	—	3½	—	—	200	32IU††92B1H2*		32IU††92W1H2*		32IU††92F1H2*		32IU††92N1H2*	
30	40	75	75	4	—	—	—	200	32JU††92B1H2*		32JU††92W1H2*		32JU††92F1H2*		32JU††92N1H2*	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

① Dual voltage coils not available in modified starters.

② First † for high speed, second † for low speed. Use motor nameplate information to select FLA. If motor FLA are unknown, select overload on the basis that low speed FLA will be no greater than 50% of high speed FLA.

Combination Two Speed Heavy Duty Starters

Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Replace the (†) with the letter that corresponds to the correct low speed FLA in the FLA table.②
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-149.
- Wiring Diagrams see page 17-160.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24	J
120	F
110–120/220–240①	A
200–208	D
220–240	G
277	L
220–240/440–480①	C
440–480	H
575–600	E

For other voltages and frequencies, see Factory Modifications page 17-114.

Low Speed FLA Table

Size	FLA	OLR Frame Size	†
0,1	0.25–1	A	A
0,1	0.75–3.4	A	B
0,1	3–12	A1	C
0,1	5.5–22	A1	D
0-1 3/4	10–40	A1	E
2-3	13–52	B	F
2-3	25–100	B	G
3 1/2-4	50–200	B	H

One Winding Consequent Pole, 3-Phase (Constant or Variable Torque)

Max Hp							Overload		Enclosure							
									NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant 304 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Motor Circuit Interruter ETI Amps	Amp Range	Frame Size	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
½	¾	1½	2	0	—	3	0.75–3.4	A	32CUB†92B2V*		32CUB†92W2V*		32CUB†92F2V*		32CUB†92N2V*	
2	2	5	5	0	—	10	3–12	A1	32CUC†92B2V*		32CUC†92W2V*		32CUC†92F2V*		32CUC†92N2V*	
3	3	—	—	0	—	25	5.5–22	A1	32CUD†92B2V*		32CUD†92W2V*		32CUD†92F2V*		32CUD†92N2V*	
½	¾	1½	1½	1	—	3	0.75–3.4	A	32DUB†92B2V*		32DUB†92W2V*		32DUB†92F2V*		32DUB†92N2V*	
2	2	5	5	1	—	10	3–12	A1	32DUC†92B2V*		32DUC†92W2V*		32DUC†92F2V*		32DUC†92N2V*	
3	3	10	10	1	—	25	5.5–22	A1	32DUD†92B2V*		32DUD†92W2V*		32DUD†92F2V*		32DUD†92N2V*	
7½	7½	—	—	1	—	30	10–40	A1	32DUE†92B2V*		32DUE†92W2V*		32DUE†92F2V*		32DUE†92N2V*	
—	—	15	15	—	1¾	40	10–40	A1	32EUE†92B2V*		32EUE†92W2V*		32EUE†92F2V*		32EUE†92N2V*	
10	15	25	25	2	—	50	13–52	B	32FUF†92B2V*		32FUF†92W2V*		32FUF†92F2V*		32FUF†92N2V*	
15	20	30	30	—	2½	100	25–100	B	32GUG†92B2V*		32GUG†92W2V*		32GUG†92F2V*		32GUG†92N2V*	
25	30	50	50	3	—	125	25–100	B	32HUG†92B2V*		32HUG†92W2V*		32HUG†92F2V*		32HUG†92N2V*	
30	40	75	75	—	3½	125	50–200	B	32IUH†92B2V*		32IUH†92W2V*		32IUH†92F2V*		32IUH†92N2V*	
40	50	100	100	4	—	150	50–200	B	32JUH†92B2V*		32JUH†92W2V*		32JUH†92F2V*		32JUH†92N2V*	

Two Separate Windings, 3-Phase (Constant or Variable Torque)

Max Hp							Overload		Enclosure							
									NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant 304 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Motor Circuit Interruter ETI Amps	Amp Range	Frame Size	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
½	¾	1½	2	0	—	3	0.75–3.4	A	32CUB†92B1V*		32CUB†92W1V*		32CUB†92F1V*		32CUB†92N1V*	
2	2	5	5	0	—	10	3–12	A1	32CUC†92B1V*		32CUC†92W1V*		32CUC†92F1V*		32CUC†92N1V*	
3	3	—	—	0	—	25	5.5–22	A1	32CUD†92B1V*		32CUD†92W1V*		32CUD†92F1V*		32CUD†92N1V*	
½	¾	1½	1½	1	—	3	0.75–3.4	A	32DUB†92B1V*		32DUB†92W1V*		32DUB†92F1V*		32DUB†92N1V*	
2	2	5	5	1	—	10	3–12	A1	32DUC†92B1V*		32DUC†92W1V*		32DUC†92F1V*		32DUC†92N1V*	
3	3	10	10	1	—	25	5.5–22	A1	32DUD†92B1V*		32DUD†92W1V*		32DUD†92F1V*		32DUD†92N1V*	
7½	7½	—	—	1	—	30	10–40	A1	32DUE†92B1V*		32DUE†92W1V*		32DUE†92F1V*		32DUE†92N1V*	
—	—	15	15	—	1¾	40	10–40	A1	32EUE†92B1V*		32EUE†92W1V*		32EUE†92F1V*		32EUE†92N1V*	
10	15	25	25	2	—	50	13–52	B	32FUF†92B1V*		32FUF†92W1V*		32FUF†92F1V*		32FUF†92N1V*	
15	20	30	30	—	2½	100	25–100	B	32GUG†92B1V*		32GUG†92W1V*		32GUG†92F1V*		32GUG†92N1V*	
25	30	50	50	3	—	125	25–100	B	32HUG†92B1V*		32HUG†92W1V*		32HUG†92F1V*		32HUG†92N1V*	
30	40	75	75	—	3½	125	50–200	B	32IUH†92B1V*		32IUH†92W1V*		32IUH†92F1V*		32IUH†92N1V*	
40	50	100	100	4	—	150	50–200	B	32JUH†92B1V*		32JUH†92W1V*		32JUH†92F1V*		32JUH†92N1V*	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

① Dual voltage coils not available in modified starters.

② If motor FLA are unknown, select overload on the basis that low speed FLA will be no greater than 50% of high speed FLA.

Combination Two Speed Heavy Duty Starters

Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Replace the (†) with the letter that corresponds to the correct FLA in the High/Low Speed FLA table.②
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-149.
- Wiring Diagrams see page 17-160.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24	J
120	F
110–120/220–240①	A
200–208	D
220–240	G
277	L
220–240/440–480①	C
440–480	H
575–600	E

For other voltages and frequencies see Factory Modifications page 17-114.

High/Low Speed FLA Table②

Size	FLA	OLR Frame Size	†
0,1	0.25–1	A	A
0,1	0.75–3.4	A	B
0,1	3–12	A1	C
0,1	5.5–22	A1	D
0-1 3/4	10–40	A1	E
2-3	13–52	B	F
2-3	25–100	B	G
3 1/2-4	50–200	B	H

* First (†) for high speed, second (†) for low speed. Use motor nameplate to select FLA. If motor FLA are unknown, select overload on the bases that the low speed FLA will be no greater than 50 % of high speed FLA.

One Winding Consequent Pole, 3-Phase (Constant Horsepower)

Max Hp							Overload		Enclosure							
									NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant 304 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Motor Circuit Interruter ETI Amps	Amp Range	Frame Size	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
2	2	3	3	0	—	10	—	A or A1	32CU††92B2H*		32CU††92W2H*		32CU††92F2H*		32CU††92N2H*	
5	5	7½	7½	1	—	25	—	A or A1	32DU††92B2H*		32DU††92W2H*		32DU††92F2H*		32DU††92N2H*	
7½	7½	10	10	—	1¾	40	—	A1	32EU††92B2H*		32EU††92W2H*		32EU††92F2H*		32EU††92N2H*	
7½	10	20	20	2	—	50	—	B	32FU††92B2H*		32FU††92W2H*		32FU††92F2H*		32FU††92N2H*	
10	15	25	25	—	2½	100	—	B	32GU††92B2H*		32GU††92W2H*		32GU††92F2H*		32GU††92N2H*	
20	25	40	40	3	—	100	—	B	32HU††92B2H*		32HU††92W2H*		32HU††92F2H*		32HU††92N2H*	
25	30	50	50	—	3½	125	—	B	32IU††92B2H*		32IU††92W2H*		32IU††92F2H*		32IU††92N2H*	
30	40	75	75	4	—	150	—	B	32JU††92B2H*		32JU††92W2H*		32JU††92F2H*		32JU††92N2H*	

Two Separate Windings, 3-Phase (Constant Horsepower)

Max Hp							Overload		Enclosure							
									NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant 304 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Motor Circuit Interruter ETI Amps	Amp Range	Frame Size	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
2	2	3	3	0	—	10	—	A or A1	32CU††92B1H*		32CU††92W1H*		32CU††92F1H*		32CU††92N1H*	
5	5	7½	7½	1	—	25	—	A or A1	32DU††92B1H*		32DU††92W1H*		32DU††92F1H*		32DU††92N1H*	
7½	7½	10	10	—	1¾	40	—	A1	32EU††92B1H*		32EU††92W1H*		32EU††92F1H*		32EU††92N1H*	
7½	10	20	20	2	—	50	—	B	32FU††92B1H*		32FU††92W1H*		32FU††92F1H*		32FU††92N1H*	
10	15	25	25	—	2½	100	—	B	32GU††92B1H*		32GU††92W1H*		32GU††92F1H*		32GU††92N1H*	
20	25	40	40	3	—	100	—	B	32HU††92B1H*		32HU††92W1H*		32HU††92F1H*		32HU††92N1H*	
25	30	50	50	—	3½	125	—	B	32IU††92B1H*		32IU††92W1H*		32IU††92F1H*		32IU††92N1H*	
30	40	75	75	4	—	150	—	B	32JU††92B1H*		32JU††92W1H*		32JU††92F1H*		32JU††92N1H*	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

① Dual voltage coils not available in modified starters.

② First † for high speed, second † for low speed. Use motor nameplate information to select FLA. If motor FLA are unknown, select overload on the basis that low speed FLA will be no greater than 50% of high speed FLA.

Reduced Voltage Heavy Duty Starters

Features and Benefits

General

Siemens manufactures the three commonly used electromechanical reduced voltage starters. Each one is designed for specific application requirements and consists of auto transformer, wye-delta and partwinding starters.

The reduced voltage starter:

- Reduces inrush current
- Provides smoother acceleration of the load
- Reduces starting torque
- Reduces stresses on mechanical linkages

Combination and non-combination reduced voltage starter sizes range from 0 to 6 including Siemens exclusive motormatched half-sizes. Enclosure types include 1, 3R/12, 4 painted and 4/4X stainless steel. UL listed file #E14900 (class 36); file #E185287 (class 37). CSA certified file #LR 6535 (class 36 & 37).

Auto Transformer Starter

- Maximum torque per amp
- Three coil auto transformer for balanced starting currents
- 50, 65 and 80% voltage taps
- Closed circuit transition
- Adjustable starting time
- Solid-state OLR overload as standard
- CPT supplied as standard
- Wide range of factory modifications

Wye-Delta Starter

- Lowest starting torque
- Closed or open circuit transition
- Adjustable starting time
- Solid-state OLR overload as standard
- CPT supplied as standard
- Wide range of factory modifications

Part-Winding Starter

- Simplest design – most economical
- Adjustable starting time
- Solid-state OLR overload as standard
- CPT supplied as standard
- Wide range of factory modifications

Various Methods of Electro-Mechanical Reduced Voltage Motor Starting —A General Comparison

Characteristic	Autotransformer 50% Tap	Autotransformer 65% Tap	Autotransformer 80% Tap	Part-Winding 2 step	Wye-Delta
Starting current drawn from line as % of that which would be drawn upon full voltage starting	25%	42%	64%	65%	33%
Starting current drawn by the motor	50%	65%	80%	65%	58%
Starting torque developed as % of that which would be developed on full voltage starting	25% Increases slightly with speed	42%	64%	40%	33%
Smoothness of acceleration	First in order of Smoothness			Third in order of Smoothness	Second in order of Smoothness
Allowable accelerating times (typical)	15 seconds at 200HP max. or 30 seconds on 200HP based on NEMA medium duty transformers			5 seconds max. Limited by motor design	5-60 seconds Limited by motor design
Starting current and torque and adjustments	Adjustable within limits of various taps			Fixed	Fixed

Ordering Information

- ► Field Modification Kits see page 17-102.
- ► Factory Modifications see page 17-114.
- ► Dimensions see page 17-150.
- ► Wiring Diagrams see page 17-163.
- ► Replacement Parts see page 17-120.

Coil and Control Voltage

The coil voltage will always match the motor voltage. As standard, a CPT is supplied and 120V control voltage is utilized. To change to 120V voltage (CPT not supplied), change the 9th character to "F". To change to 24VAC voltage (CPT not supplied), change the 9th character to "J".

NEMA 1 General Purpose Enclosures

			Overload Relay		Non-Combination		Combination Non-Fusible Disconnect			Combination Fusible Disconnect			Combination Circit Breaker		
Motor Voltage	Max Hp	NEMA Size (1/2 Size)	Amp Range	Frame Size	Catalog Number	List Price $	Disc. Amp Rating	Catalog Number	List Price $	Fuse Clip Amp/Volt Rating	Catalog Number	List Price $	Circuit Breaker Amps	Catalog Number	List Price $
200	10	(1¾)	10–40	A1	**36EUET6BD**		60	**37EUET6BDD**		60A/250V	**37EUET6BDF**		50	**37EUET6BDP**	
	10	2	13–52	B	**36FUFT6BD**		60	**37FUFT6BDD**		60A/250V	**37FUFT6BDF**		50	**37FUFT6BDP**	
	15	(2½)	25–100	B	**36GUGT6BD**		100	**37GUGT6BDD**		100A/250V	**37GUGT6BDF**		100	**37GUGT6BDP**	
	25	3	25–100	B	**36HUGT6BD**		100	**37HUGT6BDD**		100A/250V	**37HUGT6BDF**		100	**37HUGT6BDP**	
	30	(3½)	50–200	B	**36IUHT6BD**		200	**37IUHT6BDD**		200A/250V	**37IUHT6BDF**		125	**37IUHT6BDP**	
	40	4	50–200	B	**36JUHT6BD**		200	**37JUHT6BDD**		200A/250V	**37JUHT6BDF**		150	**37JUHT6BDP**	
	50	5	55–250	—	—		—	—		—	—		250	**37LPST6BDP**	
	75	5	55–250	—	**36LPUT6BD**		400	**37LPUT6BDD**		400A/250V	**37LPUT6BDF**		400	**37LPUT6BDP**	
	150	6	160–630	—	**36MPXT6BD**		600	**37MPXT6BDD**		600A/250V	**37MPXT6BDF**		600	**37MPXT6BDP**	
230	10	(1¾)	10–40	A1	**36EUET2BG**		60	**37EUET2BGD**		60A/250V	**37EUET2BGF**		50	**37EUET2BGP**	
	15	2	13–52	B	**36FUFT2BG**		60	**37FUFT2BGD**		60A/250V	**37FUFT2BGF**		50	**37FUFT2BGP**	
	20	(2½)	25–100	B	**36GUGT2BG**		100	**37GUGT2BGD**		100A/250V	**37GUGT2BGF**		100	**37GUGT2BGP**	
	30	3	25–100	B	**36HUGT2BG**		100	**37HUGT2BGD**		100A/250V	**37HUGT2BGF**		100	**37HUGT2BGP**	
	40	(3½)	50–200	B	**36IUHT2BG**		200	**37IUHT2BGD**		200A/250V	**37IUHT2BGF**		125	**37IUHT2BGP**	
	50	4	50–200	B	**36JUHT2BG**		200	**37JUHT2BGD**		200A/250V	**37JUHT2BGF**		150	**37JUHT2BGP**	
	75	5	55–250	—	—		—	—		—	—		250	**37LPST2BGP**	
	100	5	55–250	—	**36LPUT2BG**		400	**37LPUT2BGD**		400A/250V	**37LPUT2BGF**		400	**37LPUT2BGP**	
	200	6	160–630	—	**36MPXT2BG**		600	**37MPXT2BGD**		600A/250V	**37MPXT2BGF**		600	**37MPXT2BGP**	
460	15	(1¾)	10–40	A1	**36EUET4BH**		60	**37EUET4BHD**		60A/600V	**37EUET4BHF**		50	**37EUET4BHP**	
	25	2	13–52	B	**36FUFT4BH**		60	**37FUFT4BHD**		60A/600V	**37FUFT4BHF**		50	**37FUFT4BHP**	
	30	(2½)	13–52	B	**36GUGT4BH**		100	**37GUGT4BHD**		100A/600V	**37GUGT4BHF**		100	**37GUGT4BHP**	
	50	3	25–100	B	**36HUGT4BH**		100	**37HUGT4BHD**		100A/600V	**37HUGT4BHF**		100	**37HUGT4BHP**	
	75	(3½)	50–200	B	**36IUHT4BH**		200	**37IUHT4BHD**		200A/600V	**37IUHT4BHF**		125	**37IUHT4BHP**	
	100	4	50–200	B	**36JUHT4BH**		200	**37JUHT4BHD**		200A/600V	**37JUHT4BHF**		150	**37JUHT4BHP**	
	150	5	55–250	—	—		—	—		—	—		250	**37LPST4BHP**	
	200	5	55–250	—	**36LPUT4BH**		400	**37LPUT4BHD**		400A/600V	**37LPUT4BHF**		400	**37LPUT4BHP**	
	400	6	160–630	—	**36MPXT4BH**		600	**37MPXT4BHD**		600A/600V	**37MPXT4BHF**		600	**37MPXT4BHP**	
575	15	(1¾)	10–40	A1	**36EUET5BE**		60	**37EUET5BED**		60A/600V	**37EUET5BEF**		50	**37EUET5BEP**	
	25	2	13–52	B	**36FUFT5BE**		60	**37FUFT5BED**		60A/600V	**37FUFT5BEF**		50	**37FUFT5BEP**	
	30	(2½)	13–52	B	**36GUGT5BE**		100	**37GUGT5BED**		100A/600V	**37GUGT5BEF**		100	**37GUGT5BEP**	
	50	3	25–100	B	**36HUGT5BE**		100	**37HUGT5BED**		100A/600V	**37HUGT5BEF**		100	**37HUGT5BEP**	
	75	(3½)	50–200	B	**36IUHT5BE**		200	**37IUHT5BED**		200A/600V	**37IUHT5BEF**		125	**37IUHT5BEP**	
	100	4	50–200	B	**36JUHT5BE**		200	**37JUHT5BED**		200A/600V	**37JUHT5BEF**		150	**37JUHT5BEP**	
	150	5	55–250	—	—		—	—		—	—		250	**37LPST5BEP**	
	200	5	55–250	—	**36LPUT5BE**		400	**37LPUT5BED**		400A/600V	**37LPUT5BEF**		400	**37LPUT5BEP**	
	400	6	160–630	—	**36MPXT5BE**		600	**37MPXT5BED**		600A/600V	**37MPXT5BEF**		600	**37MPXT5BEP**	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

Ordering Information

- ► Field Modification Kits see page 17-102.
- ► Factory Modifications see page 17-114.
- ► Dimensions see page 17-150.
- ► Wiring Diagrams see page 17-163.
- ► Replacement Parts see page 17-120.

Coil and Control Voltage

The coil voltage will always match the motor voltage. As standard, a CPT is supplied and 120V control voltage is utilized. To change to 120V voltage (CPT not supplied), change the 9th character to "F". To change to 24VAC voltage (CPT not supplied), change the 9th character to "J".

NEMA 4 Painted Enclosures

			Overload Relay		Non-Combination		Combination Non-Fusible Disconnect			Combination Fusible Disconnect			Combination Circit Breaker		
Motor Voltage	Max Hp	NEMA Size (1/2 Size)	Amp Range	Frame Size	Catalog Number	List Price $	Disc. Amp Rating	Catalog Number	List Price $	Fuse Clip Amp/Volt Rating	Catalog Number	List Price $	Circuit Breaker Amps	Catalog Number	List Price $
200	10	(1¾)	10–40	A1	**36EUET6ED**		60	**37EUET6EDD**		60A/250V	**37EUET6EDF**		50	**37EUET6EDP**	
	10	2	13–52	B	**36FUFT6ED**		60	**37FUFT6EDD**		60A/250V	**37FUFT6EDF**		50	**37FUFT6EDP**	
	15	(2½)	25–100	B	**36GUGT6ED**		100	**37GUGT6EDD**		100A/250V	**37GUGT6EDF**		100	**37GUGT6EDP**	
	25	3	25–100	B	**36HUGT6ED**		100	**37HUGT6EDD**		100A/250V	**37HUGT6EDF**		100	**37HUGT6EDP**	
	30	(3½)	50–200	B	**36IUHT6ED**		200	**37IUHT6EDD**		200A/250V	**37IUHT6EDF**		125	**37IUHT6EDP**	
	40	4	50–200	B	**36JUHT6ED**		200	**37JUHT6EDD**		200A/250V	**37JUHT6EDF**		150	**37JUHT6EDP**	
	50	5	55–250	—	—		—	—		—	—		250	**37LPST6EDP**	
	75	5	55–250	—	**36LPUT6ED**		400	**37LPUT6EDD**		400A/250V	**37LPUT6EDF**		400	**37LPUT6EDP**	
	150	6	160–630	—	**36MPXT6ED**		600	**37MPXT6EDD**		600A/250V	**37MPXT6EDF**		600	**37MPXT6EDP**	
230	10	(1¾)	10–40	A1	**36EUET2EG**		60	**37EUET2EGD**		60A/250V	**37EUET2EGF**		50	**37EUET2EGP**	
	15	2	13–52	B	**36FUFT2EG**		60	**37FUFT2EGD**		60A/250V	**37FUFT2EGF**		50	**37FUFT2EGP**	
	20	(2½)	25–100	B	**36GUGT2EG**		100	**37GUGT2EGD**		100A/250V	**37GUGT2EGF**		100	**37GUGT2EGP**	
	30	3	25–100	B	**36HUGT2EG**		100	**37HUGT2EGD**		100A/250V	**37HUGT2EGF**		100	**37HUGT2EGP**	
	40	(3½)	50–200	B	**36IUHT2EG**		200	**37IUHT2EGD**		200A/250V	**37IUHT2EGF**		125	**37IUHT2EGP**	
	50	4	50–200	B	**36JUHT2EG**		200	**37JUHT2EGD**		200A/250V	**37JUHT2EGF**		150	**37JUHT2EGP**	
	75	5	55–250	—	—		—	—		—	—		250	**37LPST2EGP**	
	100	5	55–250	—	**36LPUT2EG**		400	**37LPUT2EGD**		400A/250V	**37LPUT2EGF**		400	**37LPUT2EGP**	
	200	6	160–630	—	**36MPXT2EG**		600	**37MPXT2EGD**		600A/250V	**37MPXT2EGF**		600	**37MPXT2EGP**	
460	15	(1¾)	10–40	A1	**36EUET4EH**		60	**37EUET4EHD**		60A/600V	**37EUET4EHF**		50	**37EUET4EHP**	
	25	2	13–52	B	**36FUFT4EH**		60	**37FUFT4EHD**		60A/600V	**37FUFT4EHF**		50	**37FUFT4EHP**	
	30	(2½)	13–52	B	**36GUGT4EH**		100	**37GUGT4EHD**		100A/600V	**37GUGT4EHF**		100	**37GUGT4EHP**	
	50	3	25–100	B	**36HUGT4EH**		100	**37HUGT4EHD**		100A/600V	**37HUGT4EHF**		100	**37HUGT4EHP**	
	75	(3½)	50–200	B	**36IUHT4EH**		200	**37IUHT4EHD**		200A/600V	**37IUHT4EHF**		125	**37IUHT4EHP**	
	100	4	50–200	B	**36JUHT4EH**		200	**37JUHT4EHD**		200A/600V	**37JUHT4EHF**		150	**37JUHT4EHP**	
	150	5	55–250	—	—		—	—		—	—		250	**37LPST4EHP**	
	200	5	55–250	—	**36LPUT4EH**		400	**37LPUT4EHD**		400A/600V	**37LPUT4EHF**		400	**37LPUT4EHP**	
	400	6	160–630	—	**36MPXT4EH**		600	**37MPXT4EHD**		600A/600V	**37MPXT4EHF**		600	**37MPXT4EHP**	
575	15	(1¾)	10–40	A1	**36EUET5EE**		60	**37EUET5EED**		60A/600V	**37EUET5EEF**		50	**37EUET5EEP**	
	25	2	13–52	B	**36FUFT5EE**		60	**37FUFT5EED**		60A/600V	**37FUFT5EEF**		50	**37FUFT5EEP**	
	30	(2½)	13–52	B	**36GUGT5EE**		100	**37GUGT5EED**		100A/600V	**37GUGT5EEF**		100	**37GUGT5EEP**	
	50	3	25–100	B	**36HUGT5EE**		100	**37HUGT5EED**		100A/600V	**37HUGT5EEF**		100	**37HUGT5EEP**	
	75	(3½)	50–200	B	**36IUHT5EE**		200	**37IUHT5EED**		200A/600V	**37IUHT5EEF**		125	**37IUHT5EEP**	
	100	4	50–200	B	**36JUHT5EE**		200	**37JUHT5EED**		200A/600V	**37JUHT5EEF**		150	**37JUHT5EEP**	
	150	5	55–250	—	—		—	—		—	—		250	**37LPST5EEP**	
	200	5	55–250	—	**36LPUT5EE**		400	**37LPUT5EED**		400A/600V	**37LPUT5EEF**		400	**37LPUT5EEP**	
	400	6	160–630	—	**36MPXT5EE**		600	**37MPXT5EED**		600A/600V	**37MPXT5EEF**		600	**37MPXT5EEP**	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

Ordering Information

- ► Field Modification Kits see page 17-102.
- ► Factory Modifications see page 17-114.
- ► Dimensions see page 17-150.
- ► Wiring Diagrams see page 17-163.
- ► Replacement Parts see page 17-120.

Coil and Control Voltage

The coil voltage will always match the motor voltage. As standard, a CPT is supplied and 120V control voltage is utilized. To change to 120V voltage (CPT not supplied), change the 9th character to "F". To change to 24VAC voltage (CPT not supplied), change the 9th character to "J".

NEMA 4/4X Stainless Steel Enclosures

			Overload Relay		Non-Combination		Combination Non-Fusible Disconnect			Combination Fusible Disconnect			Combination Circit Breaker		
Motor Voltage	Max Hp	NEMA Size (1/2 Size)	Amp Range	Frame Size	Catalog Number	List Price $	Disc. Amp Rating	Catalog Number	List Price $	Fuse Clip Amp/Volt Rating	Catalog Number	List Price $	Circuit Breaker Amps	Catalog Number	List Price $
200	10	(1¾)	10–40	A1	**36EUET6WD**		60	**37EUET6WDD**		60A/250V	**37EUET6WDF**		50	**37EUET6WDP**	
	10	2	13–52	B	**36FUFT6WD**		60	**37FUFT6WDD**		60A/250V	**37FUFT6WDF**		50	**37FUFT6WDP**	
	15	(2½)	25–100	B	**36GUGT6WD**		100	**37GUGT6WDD**		100A/250V	**37GUGT6WDF**		100	**37GUGT6WDP**	
	25	3	25–100	B	**36HUGT6WD**		100	**37HUGT6WDD**		100A/250V	**37HUGT6WDF**		100	**37HUGT6WDP**	
	30	(3½)	50–200	B	**36IUHT6WD**		200	**37IUHT6WDD**		200A/250V	**37IUHT6WDF**		125	**37IUHT6WDP**	
	40	4	50–200	B	**36JUHT6WD**		200	**37JUHT6WDD**		200A/250V	**37JUHT6WDF**		150	**37JUHT6WDP**	
230	10	(1¾)	10–40	A1	**36EUET2WG**		60	**37EUET2WGD**		60A/250V	**37EUET2WGF**		50	**37EUET2WGP**	
	15	2	13–52	B	**36FUFT2WG**		60	**37FUFT2WGD**		60A/250V	**37FUFT2WGF**		50	**37FUFT2WGP**	
	20	(2½)	25–100	B	**36GUGT2WG**		100	**37GUGT2WGD**		100A/250V	**37GUGT2WGF**		100	**37GUGT2WGP**	
	30	3	25–100	B	**36HUGT2WG**		100	**37HUGT2WGD**		100A/250V	**37HUGT2WGF**		100	**37HUGT2WGP**	
	40	(3½)	50–200	B	**36IUHT2WG**		200	**37IUHT2WGD**		200A/250V	**37IUHT2WGF**		125	**37IUHT2WGP**	
	50	4	50–200	B	**36JUHT2WG**		200	**37JUHT2WGD**		200A/250V	**37JUHT2WGF**		150	**37JUHT2WGP**	
460	15	(1¾)	10–40	A1	**36EUET4WH**		60	**37EUET4WHD**		60A/600V	**37EUET4WHF**		50	**37EUET4WHP**	
	25	2	13–52	B	**36FUFT4WH**		60	**37FUFT4WHD**		60A/600V	**37FUFT4WHF**		50	**37FUFT4WHP**	
	30	(2½)	13–52	B	**36GUGT4WH**		100	**37GUGT4WHD**		100A/600V	**37GUGT4WHF**		100	**37GUGT4WHP**	
	50	3	25–100	B	**36HUGT4WH**		100	**37HUGT4WHD**		100A/600V	**37HUGT4WHF**		100	**37HUGT4WHP**	
	75	(3½)	50–200	B	**36IUHT4WH**		200	**37IUHT4WHD**		200A/600V	**37IUHT4WHF**		125	**37IUHT4WHP**	
	100	4	50–200	B	**36JUHT4WH**		200	**37JUHT4WHD**		200A/600V	**37JUHT4WHF**		150	**37JUHT4WHP**	
575	15	(1¾)	10–40	A1	**36EUET5WE**		60	**37EUET5WED**		60A/600V	**37EUET5WEF**		50	**37EUET5WEP**	
	25	2	13–52	B	**36FUFT5WE**		60	**37FUFT5WED**		60A/600V	**37FUFT5WEF**		50	**37FUFT5WEP**	
	30	(2½)	13–52	B	**36GUGT5WE**		100	**37GUGT5WED**		100A/600V	**37GUGT5WEF**		100	**37GUGT5WEP**	
	50	3	25–100	B	**36HUGT5WE**		100	**37HUGT5WED**		100A/600V	**37HUGT5WEF**		100	**37HUGT5WEP**	
	75	(3½)	50–200	B	**36IUHT5WE**		200	**37IUHT5WED**		200A/600V	**37IUHT5WEF**		125	**37IUHT5WEP**	
	100	4	50–200	B	**36JUHT5WE**		200	**37JUHT5WED**		200A/600V	**37JUHT5WEF**		150	**37JUHT5WEP**	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

Ordering Information

- ► Field Modification Kits see page 17-102.
- ► Factory Modifications see page 17-114.
- ► Dimensions see page 17-150.
- ► Wiring Diagrams see page 17-163.
- ► Replacement Parts see page 17-120.

Coil and Control Voltage

The coil voltage will always match the motor voltage. As standard, a CPT is supplied and 120V control voltage is utilized. To change to 120V voltage (CPT not supplied), change the 9th character to "F". To change to 24VAC voltage (CPT not supplied), change the 9th character to "J".

NEMA 12, NEMA 3/3R

Motor Voltage	Max Hp	NEMA Size (1/2 Size)	Overload Relay		Non-Combination		Combination Non-Fusible Disconnect			Combination Fusible Disconnect			Combination Circit Breaker		
			Amp Range	Frame Size	Catalog Number	List Price $	Disc. Amp Rating	Catalog Number	List Price $	Fuse Clip Amp/Volt Rating	Catalog Number	List Price $	Circuit Breaker Amps	Catalog Number	List Price $
	10	(1¾)	10–40	A1	**36EUET6ND**		60	**37EUET6NDD**		60A/250V	**37EUET6NDF**		50	**37EUET6NDP**	
	10	2	13–52	B	**36FUFT6ND**		60	**37FUFT6NDD**		60A/250V	**37FUFT6NDF**		50	**37FUFT6NDP**	
	15	(2½)	25–100	B	**36GUGT6ND**		100	**37GUGT6NDD**		100A/250V	**37GUGT6NDF**		100	**37GUGT6NDP**	
	25	3	25–100	B	**36HUGT6ND**		100	**37HUGT6NDD**		100A/250V	**37HUGT6NDF**		100	**37HUGT6NDP**	
200	30	(3½)	50–200	B	**36IUHT6ND**		200	**37IUHT6NDD**		200A/250V	**37IUHT6NDF**		125	**37IUHT6NDP**	
	40	4	50–200	B	**36JUHT6ND**		200	**37JUHT6NDD**		200A/250V	**37JUHT6NDF**		150	**37JUHT6NDP**	
	50	5	55–250	—	—		—	—		—	—		250	**37LPST6NDP**	
	75	5	55–250	—	**36LPUT6ND**		400	**37LPUT6NDD**		400A/250V	**37LPUT6NDF**		400	**37LPUT6NDP**	
	150	6	160–630	—	**36MPXT6ND**		600	**37MPXT6NDD**		600A/250V	**37MPXT6NDF**		600	**37MPXT6NDP**	
	10	(1¾)	10–40	A1	**36EUET2NG**		60	**37EUET2NGD**		60A/250V	**37EUET2NGF**		50	**37EUET2NGP**	
	15	2	13–52	B	**36FUFT2NG**		60	**37FUFT2NGD**		60A/250V	**37FUFT2NGF**		50	**37FUFT2NGP**	
	20	(2½)	25–100	B	**36GUGT2NG**		100	**37GUGT2NGD**		100A/250V	**37GUGT2NGF**		100	**37GUGT2NGP**	
	30	3	25–100	B	**36HUGT2NG**		100	**37HUGT2NGD**		100A/250V	**37HUGT2NGF**		100	**37HUGT2NGP**	
230	40	(3½)	50–200	B	**36IUHT2NG**		200	**37IUHT2NGD**		200A/250V	**37IUHT2NGF**		125	**37IUHT2NGP**	
	50	4	50–200	B	**36JUHT2NG**		200	**37JUHT2NGD**		200A/250V	**37JUHT2NGF**		150	**37JUHT2NGP**	
	75	5	55–250	—	—		—	—		—	—		250	**37LPST2NGP**	
	100	5	55–250	—	**36LPUT2NG**		400	**37LPUT2NGD**		400A/250V	**37LPUT2NGF**		400	**37LPUT2NGP**	
	200	6	160–630	—	**36MPXT2NG**		600	**37MPXT2NGD**		600A/250V	**37MPXT2NGF**		600	**37MPXT2NGP**	
	15	(1¾)	10–40	A1	**36EUET4NH**		60	**37EUET4NHD**		60A/600V	**37EUET4NHF**		50	**37EUET4NHP**	
	25	2	13–52	B	**36FUFT4NH**		60	**37FUFT4NHD**		60A/600V	**37FUFT4NHF**		50	**37FUFT4NHP**	
	30	(2½)	13–52	B	**36GUGT4NH**		100	**37GUGT4NHD**		100A/600V	**37GUGT4NHF**		100	**37GUGT4NHP**	
	50	3	25–100	B	**36HUGT4NH**		100	**37HUGT4NHD**		100A/600V	**37HUGT4NHF**		100	**37HUGT4NHP**	
460	75	(3½)	50–200	B	**36IUHT4NH**		200	**37IUHT4NHD**		200A/600V	**37IUHT4NHF**		125	**37IUHT4NHP**	
	100	4	50–200	B	**36JUHT4NH**		200	**37JUHT4NHD**		200A/600V	**37JUHT4NHF**		150	**37JUHT4NHP**	
	150	5	55–250	—	—		—	—		—	—		250	**37LPST4NHP**	
	200	5	55–250	—	**36LPUT4NH**		400	**37LPUT4NHD**		400A/600V	**37LPUT4NHF**		400	**37LPUT4NHP**	
	400	6	160–630	—	**36MPXT4NH**		600	**37MPXT4NHD**		600A/600V	**37MPXT4NHF**		600	**37MPXT4NHP**	
	15	(1¾)	10–40	A1	**36EUET5NE**		60	**37EUET5NED**		60A/600V	**37EUET5NEF**		50	**37EUET5NEP**	
	25	2	13–52	B	**36FUFT5NE**		60	**37FUFT5NED**		60A/600V	**37FUFT5NEF**		50	**37FUFT5NEP**	
	30	(2½)	13–52	B	**36GUGT5NE**		100	**37GUGT5NED**		100A/600V	**37GUGT5NEF**		100	**37GUGT5NEP**	
	50	3	25–100	B	**36HUGT5NE**		100	**37HUGT5NED**		100A/600V	**37HUGT5NEF**		100	**37HUGT5NEP**	
575	75	(3½)	50–200	B	**36IUHT5NE**		200	**37IUHT5NED**		200A/600V	**37IUHT5NEF**		125	**37IUHT5NEP**	
	100	4	50–200	B	**36JUHT5NE**		200	**37JUHT5NED**		200A/600V	**37JUHT5NEF**		150	**37JUHT5NEP**	
	150	5	55–250	—	—		—	—		—	—		250	**37LPST5NEP**	
	200	5	55–250	—	**36LPUT5NE**		400	**37LPUT5NED**		400A/600V	**37LPUT5NEF**		400	**37LPUT5NEP**	
	400	6	160–630	—	**36MPXT5NE**		600	**37MPXT5NED**		600A/600V	**37MPXT5NEF**		600	**37MPXT5NEP**	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

Ordering Information

- ► Field Modification Kits see page 17-102.
- ► Factory Modifications see page 17-114.
- ► Dimensions see page page 17-150.
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- ► Replacement Parts see page 17-120.

Coil and Control Voltage

The coil voltage will always match the motor voltage. As standard, a CPT is supplied and 120V control voltage is utilized. To change to 120V voltage (CPT not supplied), change the 9th character to "F". To change to 24VAC voltage (CPT not supplied), change the 9th character to "J".

NEMA 1 General Purpose Enclosures

			Overload Relay		Non-Combination		Combination Non-Fusible Disconnect			Combination Fusible Disconnect			Combination Circit Breaker		
Motor Voltage	Max Hp	NEMA Size (1/2 Size)	Amp Range	Frame Size	Catalog Number	List Price $	Disc. Amp Rating	Catalog Number	List Price $	Fuse Clip Amp/Volt Rating	Catalog Number	List Price $	Circuit Breaker Amps	Catalog Number	List Price $
200	7½	0	5.5–22	A1	**36CUDP6BD**		60	**37CUDP6BDD**		60A/250V	**37CUDP6BDF**		30	**37CUDP6BDP**	
	10	1	5.5–22	A1	**36DUDP6BD**		60	**37DUDP6BDD**		60A/250V	**37DUDP6BDF**		50	**37DUDP6BDP**	
	15	(1¾)	10–40	A1	**36EUEP6BD**		100	**37EUEP6BDD**		100A/250V	**37EUEP6BDF**		100	**37EUEP6BDP**	
	20	2	13–52	B	**36FUFP6BD**		100	**37FUFP6BDD**		100A/250V	**37FUFP6BDF**		100	**37FUFP6BDP**	
	30	(2½)	25–100	B	**36GUGP6BD**		200	**37GUGP6BDD**		200A/250V	**37GUGP6BDF**		125	**37GUGP6BDP**	
	40	3	25–100	B	**36HUGP6BD**		200	**37HUGP6BDD**		200A/250V	**37HUGP6BDF**		150	**37HUGP6BDP**	
	50	(3½)	50–200	B	**36IUHP6BD**		200	**37IUHP6BDD**		200A/250V	**37IUHP6BDF**		250	**37IUHP6BDP**	
	75	4	50–200	B	**36JUHP6BD**		400	**37JUHP6BDD**		400A/250V	**37JUHP6BDF**		400	**37JUHP6BDP**	
	100	5	55–250	—	—		—	—		—	—		600	**37LPSP6BDP**	
	150	5	55–250	—	**36LPUP6BD**		600	**37LPUP6BDD**		600A/250V	**37LPUP6BDF**		600	**37LPUP6BDP**	
230	7½	0	5.5–22	A1	**36CUDP2BG**		60	**37CUDP2BGD**		60A/250V	**37CUDP2BGF**		30	**37CUDP2BGP**	
	10	1	5.5–22	A1	**36DUDP2BG**		60	**37DUDP2BGD**		60A/250V	**37DUDP2BGF**		50	**37DUDP2BGP**	
	20	(1½)	10–40	A1	**36EUEP2BG**		100	**37EUEP2BGD**		100A/250V	**37EUEP2BGF**		100	**37EUEP2BGP**	
	25	2	13–52	B	**36FUFP2BG**		100	**37FUFP2BGD**		100A/250V	**37FUFP2BGF**		100	**37FUFP2BGP**	
	30	(2½)	25–100	B	**36GUGP2BG**		200	**37GUGP2BGD**		200A/250V	**37GUGP2BGF**		100	**37GUGP2BGP**	
	50	3	25–100	B	**36HUGP2BG**		200	**37HUGP2BGD**		200A/250V	**37HUGP2BGF**		150	**37HUGP2BGP**	
	60	(3½)	50–200	B	**36IUHP2BG**		200	**37IUHP2BGD**		200A/250V	**37IUHP2BGF**		250	**37IUHP2BGP**	
	75	4	50–200	B	**36JUHP2BG**		400	**37JUHP2BGD**		400A/250V	**37JUHP2BGF**		250	**37JUHP2BGP**	
	125	5	55–250	—	—		—	—		—	—		400	**37LPSP2BGP**	
	150	5	55–250	—	**36LPUP2BG**		600	**37LPUP2BGD**		600A/250V	**37LPUP2BGF**		600	**37LPUP2BGP**	
	300	6	160–630	—	**36MPXP2BG**		1200	**37MPXP2BGD**		1200A/250V	**37MPXP2BGF**		1200	**37MPXP2BGP**	
460	10	0	5.5–22	A1	**36CUDP4BH**		30	**37CUDP4BHD**		30A/600V	**37CUDP4BHF**		30	**37CUDP4BHP**	
	15	1	5.5–22	A1	**36DUDP4BH**		60	**37DUDP4BHD**		60A/600V	**37DUDP4BHF**		30	**37DUDP4BHP**	
	30	(1¾)	10–40	A1	**36EUEP4BH**		60	**37EUEP4BHD**		60A/600V	**37EUEP4BHF**		50	**37EUEP4BHP**	
	40	2	13–52	B	**36FUFP4BH**		100	**37FUFP4BHD**		100A/600V	**37FUFP4BHF**		100	**37FUFP4BHP**	
	60	(2½)	25–100	B	**36GUGP4BH**		200	**37GUGP4BHD**		200A/600V	**37GUGP4BHF**		100	**37GUGP4BHP**	
	75	3	25–100	B	**36HUGP4BH**		200	**37HUGP4BHD**		200A/600V	**37HUGP4BHF**		125	**37HUGP4BHP**	
	100	(3½)	50–200	B	**36IUHP4BH**		200	**37IUHP4BHD**		200A/600V	**37IUHP4BHF**		150	**37IUHP4BHP**	
	150	4	50–200	B	**36JUHP4BH**		400	**37JUHP4BHD**		400A/600V	**37JUHP4BHF**		250	**37JUHP4BHP**	
	250	5	55–250	—	—		—	—		—	—		400	**37LPSP4BHP**	
	350	5	55–250	—	**36LPUP4BH**		600	**37LPUP4BHD**		600A/600V	**37LPUP4BHF**		600	**37LPUP4BHP**	
	600	6	160–630	—	**36MPXP4BH**		1200	**37MPXP4BHD**		1200A/600V	**37MPXP4BHF**		1200	**37MPXP4BHP**	
575	10	0	5.5–22	A1	**36CUDP5BE**		30	**37CUDP5BED**		30A/600V	**37CUDP5BEF**		30	**37CUDP5BEP**	
	15	1	5.5–22	A1	**36DUDP5BE**		60	**37DUDP5BED**		60A/600V	**37DUDP5BEF**		30	**37DUDP5BEP**	
	30	(1¾)	10–40	A1	**36EUEP5BE**		60	**37EUEP5BED**		60A/600V	**37EUEP5BEF**		50	**37EUEP5BEP**	
	40	2	13–52	B	**36FUFP5BE**		60	**37FUFP5BED**		60A/600V	**37FUFP5BEF**		50	**37FUFP5BEP**	
	60	(2½)	25–100	B	**36GUGP5BE**		100	**37GUGP5BED**		100A/600V	**37GUGP5BEF**		100	**37GUGP5BEP**	
	75	3	25–100	B	**36HUGP5BE**		200	**37HUGP5BED**		200A/600V	**37HUGP5BEF**		125	**37HUGP5BEP**	
	100	(3½)	50–200	B	**36IUHP5BE**		400	**37IUHP5BED**		400A/600V	**37IUHP5BEF**		150	**37IUHP5BEP**	
	150	4	50–200	B	**36JUHP5BE**		400	**37JUHP5BED**		400A/600V	**37JUHP5BEF**		250	**37JUHP5BEP**	
	250	5	55–250	—	—		—	—		400A/600V	**37LPSP5BEF**		—	—	
	350	5	55–250	—	**36LPUP5BE**		600	**37LPUP5BED**		600A/600V	**37LPUP5BEF**		400	**37LPUP5BEP**	
	600	6	160–630	—	**36MPXP5BE**		1200	**37MPXP5BED**		1200A/600V	**37MPXP5BEF**		1200	**37MPXP5BEP**	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

Ordering Information

- ► Field Modification Kits see page 17-102.
- ► Factory Modifications see page 17-114.
- ► Dimensions see page page 17-150.
- ► Wiring Diagrams see page 17-162.
- ► Replacement Parts see page 17-120.

Coil and Control Voltage

The coil voltage will always match the motor voltage. As standard, a CPT is supplied and 120V control voltage is utilized. To change to 120V voltage (CPT not supplied), change the 9th character to "F". To change to 24VAC voltage (CPT not supplied), change the 9th character to "J".

NEMA 4 Painted Enclosures

			Overload Relay		Non-Combination		Combination Non-Fusible Disconnect			Combination Fusible Disconnect			Combination Circit Breaker		
Motor Voltage	Max Hp	NEMA Size (1/2 Size)	Amp Range	Frame Size	Catalog Number	List Price $	Disc. Amp Rating	Catalog Number	List Price $	Fuse Clip Amp/Volt Rating	Catalog Number	List Price $	Circuit Breaker Amps	Catalog Number	List Price $
200	7½	0	5.5–22	A1	**36CUDP6ED**		60	**37CUDP6EDD**		60A/250V	**37CUDP6EDF**		30	**37CUDP6EDP**	
	10	1	5.5–22	A1	**36DUDP6ED**		60	**37DUDP6EDD**		60A/250V	**37DUDP6EDF**		50	**37DUDP6EDP**	
	15	(1¾)	10–40	A1	**36EUEP6ED**		100	**37EUEP6EDD**		100A/250V	**37EUEP6EDF**		100	**37EUEP6EDP**	
	20	2	13–52	B	**36FUFP6ED**		100	**37FUFP6EDD**		100A/250V	**37FUFP6EDF**		100	**37FUFP6EDP**	
	30	(2½)	25–100	B	**36GUGP6ED**		200	**37GUGP6EDD**		200A/250V	**37GUGP6EDF**		125	**37GUGP6EDP**	
	40	3	25–100	B	**36HUGP6ED**		200	**37HUGP6EDD**		200A/250V	**37HUGP6EDF**		150	**37HUGP6EDP**	
	50	(3½)	50–200	B	**36IUHP6ED**		200	**37IUHP6EDD**		200A/250V	**37IUHP6EDF**		250	**37IUHP6EDP**	
	75	4	50–200	B	**36JUHP6ED**		400	**37JUHP6EDD**		400A/250V	**37JUHP6EDF**		400	**37JUHP6EDP**	
	100	5	55–250	—	—		—	—		—	—		600	**37LPSP6EDP**	
	150	5	55–250	—	**36LPUP6ED**		600	**37LPUP6EDD**		600A/250V	**37LPUP6EDF**		600	**37LPUP6EDP**	
230	7½	0	5.5–22	A1	**36CUDP2EG**		60	**37CUDP2EGD**		60A/250V	**37CUDP2EGF**		30	**37CUDP2EGP**	
	10	1	5.5–22	A1	**36DUDP2EG**		60	**37DUDP2EGD**		60A/250V	**37DUDP2EGF**		50	**37DUDP2EGP**	
	20	(1½)	10–40	A1	**36EUEP2EG**		100	**37EUEP2EGD**		100A/250V	**37EUEP2EGF**		100	**37EUEP2EGP**	
	25	2	13–52	B	**36FUFP2EG**		100	**37FUFP2EGD**		100A/250V	**37FUFP2EGF**		100	**37FUFP2EGP**	
	30	(2½)	25–100	B	**36GUGP2EG**		200	**37GUGP2EGD**		200A/250V	**37GUGP2EGF**		100	**37GUGP2EGP**	
	50	3	25–100	B	**36HUGP2EG**		200	**37HUGP2EGD**		200A/250V	**37HUGP2EGF**		150	**37HUGP2EGP**	
	60	(3½)	50–200	B	**36IUHP2EG**		200	**37IUHP2EGD**		200A/250V	**37IUHP2EGF**		250	**37IUHP2EGP**	
	75	4	50–200	B	**36JUHP2EG**		400	**37JUHP2EGD**		400A/250V	**37JUHP2EGF**		250	**37JUHP2EGP**	
	125	5	55–250	—	—		—	—		—	—		400	**37LPSP2EGP**	
	150	5	55–250	—	**36LPUP2EG**		600	**37LPUP2EGD**		600A/250V	**37LPUP2EGF**		600	**37LPUP2EGP**	
	300	6	160–630	—	**36MPXP2EG**		1200	**37MPXP2EGD**		1200A/250V	**37MPXP2EGF**		1200	**37MPXP2EGP**	
460	10	0	5.5–22	A1	**36CUDP4EH**		30	**37CUDP4EHD**		30A/600V	**37CUDP4EHF**		30	**37CUDP4EHP**	
	15	1	5.5–22	A1	**36DUDP4EH**		60	**37DUDP4EHD**		60A/600V	**37DUDP4EHF**		30	**37DUDP4EHP**	
	30	(1¾)	10–40	A1	**36EUEP4EH**		60	**37EUEP4EHD**		60A/600V	**37EUEP4EHF**		50	**37EUEP4EHP**	
	40	2	13–52	B	**36FUFP4EH**		100	**37FUFP4EHD**		100A/600V	**37FUFP4EHF**		100	**37FUFP4EHP**	
	60	(2½)	25–100	B	**36GUGP4EH**		200	**37GUGP4EHD**		200A/600V	**37GUGP4EHF**		100	**37GUGP4EHP**	
	75	3	25–100	B	**36HUGP4EH**		200	**37HUGP4EHD**		200A/600V	**37HUGP4EHF**		125	**37HUGP4EHP**	
	100	(3½)	50–200	B	**36IUHP4EH**		200	**37IUHP4EHD**		200A/600V	**37IUHP4EHF**		150	**37IUHP4EHP**	
	150	4	50–200	B	**36JUHP4EH**		400	**37JUHP4EHD**		400A/600V	**37JUHP4EHF**		250	**37JUHP4EHP**	
	250	5	55–250	—	—		—	—		—	—		400	**37LPSP4EHP**	
	350	5	55–250	—	**36LPUP4EH**		600	**37LPUP4EHD**		600A/600V	**37LPUP4EHF**		600	**37LPUP4EHP**	
	600	6	160–630	—	**36MPXP4EH**		1200	**37MPXP4EHD**		1200A/600V	**37MPXP4EHF**		1200	**37MPXP4EHP**	
575	10	0	5.5–22	A1	**36CUDP5EE**		30	**37CUDP5EED**		30A/600V	**37CUDP5EEF**		30	**37CUDP5EEP**	
	15	1	5.5–22	A1	**36DUDP5EE**		60	**37DUDP5EED**		60A/600V	**37DUDP5EEF**		30	**37DUDP5EEP**	
	30	(1¾)	10–40	A1	**36EUEP5EE**		60	**37EUEP5EED**		60A/600V	**37EUEP5EEF**		50	**37EUEP5EEP**	
	40	2	13–52	B	**36FUFP5EE**		60	**37FUFP5EED**		60A/600V	**37FUFP5EEF**		50	**37FUFP5EEP**	
	60	(2½)	25–100	B	**36GUGP5EE**		100	**37GUGP5EED**		100A/600V	**37GUGP5EEF**		100	**37GUGP5EEP**	
	75	3	25–100	B	**36HUGP5EE**		200	**37HUGP5EED**		200A/600V	**37HUGP5EEF**		125	**37HUGP5EEP**	
	100	(3½)	50–200	B	**36IUHP5EE**		400	**37IUHP5EED**		400A/600V	**37IUHP5EEF**		150	**37IUHP5EEP**	
	150	4	50–200	B	**36JUHP5EE**		400	**37JUHP5EED**		400A/600V	**37JUHP5EEF**		250	**37JUHP5EEP**	
	250	5	55–250	—	—		—	—		400A/600V	**37LPSP5EEF**		—	—	
	350	5	55–250	—	**36LPUP5EE**		600	**37LPUP5EED**		600A/600V	**37LPUP5EEF**		400	**37LPUP5EEP**	
	600	6	160–630	—	**36MPXP5EE**		1200	**37MPXP5EED**		1200A/600V	**37MPXP5EEF**		1200	**37MPXP5EEP**	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

Ordering Information

- ► Field Modification Kits see page 17-102.
- ► Factory Modifications see page 17-114.
- ► Dimensions see page page 17-150.
- ► Wiring Diagrams see page 17-162.
- ► Replacement Parts see page 17-120.

Coil and Control Voltage

The coil voltage will always match the motor voltage. As standard, a CPT is supplied and 120V control voltage is utilized. To change to 120V voltage (CPT not supplied), change the 9th character to "F". To change to 24VAC voltage (CPT not supplied), change the 9th character to "J".

NEMA 4/4X Stainless Steel Enclosures

			Overload Relay		Non-Combination		Combination Non-Fusible Disconnect			Combination Fusible Disconnect		Combination Circit Breaker		
Motor Voltage	Max Hp	NEMA Size (1/2 Size)	Amp Range	Frame Size	Catalog Number	List Price $	Disc. Amp Rating	Catalog Number	List Price $	Fuse Clip Amp/Volt Rating	Catalog Number	Circuit Breaker Amps	Catalog Number	List Price $
200	7½	0	5.5–22	A1	**36CUDP6WD**		60	**37CUDP6WDD**		60A/250V	**37CUDP6WDF**	30	**37CUDP6WDP**	
	10	1	5.5–22	A1	**36DUDP6WD**		60	**37DUDP6WDD**		60A/250V	**37DUDP6WDF**	50	**37DUDP6WDP**	
	15	(1¾)	10–40	A1	**36EUEP6WD**		100	**37EUEP6WDD**		100A/250V	**37EUEP6WDF**	100	**37EUEP6WDP**	
	20	2	13–52	B	**36FUFP6WD**		100	**37FUFP6WDD**		100A/250V	**37FUFP6WDF**	100	**37FUFP6WDP**	
	30	(2½)	25–100	B	**36GUGP6WD**		200	**37GUGP6WDD**		200A/250V	**37GUGP6WDF**	125	**37GUGP6WDP**	
	40	3	25–100	B	**36HUGP6WD**		200	**37HUGP6WDD**		200A/250V	**37HUGP6WDF**	150	**37HUGP6WDP**	
	50	(3½)	50–200	B	**36IUHP6WD**		200	**37IUHP6WDD**		200A/250V	**37IUHP6WDF**	250	**37IUHP6WDP**	
	75	4	50–200	B	**36JUHP6WD**		400	**37JUHP6WDD**		400A/250V	**37JUHP6WDF**	400	**37JUHP6WDP**	
230	7½	0	5.5–22	A1	**36CUDP2WG**		60	**37CUDP2WGD**		60A/250V	**37CUDP2WGF**	30	**37CUDP2WGP**	
	10	1	5.5–22	A1	**36DUDP2WG**		60	**37DUDP2WGD**		60A/250V	**37DUDP2WGF**	50	**37DUDP2WGP**	
	20	(1½)	10–40	A1	**36EUEP2WG**		100	**37EUEP2WGD**		100A/250V	**37EUEP2WGF**	100	**37EUEP2WGP**	
	25	2	13–52	B	**36FUFP2WG**		100	**37FUFP2WGD**		100A/250V	**37FUFP2WGF**	100	**37FUFP2WGP**	
	30	(2½)	25–100	B	**36GUGP2WG**		200	**37GUGP2WGD**		200A/250V	**37GUGP2WGF**	100	**37GUGP2WGP**	
	50	3	25–100	B	**36HUGP2WG**		200	**37HUGP2WGD**		200A/250V	**37HUGP2WGF**	150	**37HUGP2WGP**	
	60	(3½)	50–200	B	**36IUHP2WG**		200	**37IUHP2WGD**		200A/250V	**37IUHP2WGF**	250	**37IUHP2WGP**	
	75	4	50–200	B	**36JUHP2WG**		400	**37JUHP2WGD**		400A/250V	**37JUHP2WGF**	250	**37JUHP2WGP**	
460	10	0	5.5–22	A1	**36CUDP4WH**		30	**37CUDP4WHD**		30A/600V	**37CUDP4WHF**	30	**37CUDP4WHP**	
	15	1	5.5–22	A1	**36DUDP4WH**		60	**37DUDP4WHD**		60A/600V	**37DUDP4WHF**	30	**37DUDP4WHP**	
	30	(1¾)	10–40	A1	**36EUEP4WH**		60	**37EUEP4WHD**		60A/600V	**37EUEP4WHF**	50	**37EUEP4WHP**	
	40	2	13–52	B	**36FUFP4WH**		100	**37FUFP4WHD**		100A/600V	**37FUFP4WHF**	100	**37FUFP4WHP**	
	60	(2½)	25–100	B	**36GUGP4WH**		200	**37GUGP4WHD**		200A/600V	**37GUGP4WHF**	100	**37GUGP4WHP**	
	75	3	25–100	B	**36HUGP4WH**		200	**37HUGP4WHD**		200A/600V	**37HUGP4WHF**	125	**37HUGP4WHP**	
	100	(3½)	50–200	B	**36IUHP4WH**		200	**37IUHP4WHD**		200A/600V	**37IUHP4WHF**	150	**37IUHP4WHP**	
	150	4	50–200	B	**36JUHP4WH**		400	**37JUHP4WHD**		400A/600V	**37JUHP4WHF**	250	**37JUHP4WHP**	
575	10	0	5.5–22	A1	**36CUDP5WE**		30	**37CUDP5WED**		30A/600V	**37CUDP5WEF**	30	**37CUDP5WEP**	
	15	1	5.5–22	A1	**36DUDP5WE**		60	**37DUDP5WED**		60A/600V	**37DUDP5WEF**	30	**37DUDP5WEP**	
	30	(1¾)	10–40	A1	**36EUEP5WE**		60	**37EUEP5WED**		60A/600V	**37EUEP5WEF**	50	**37EUEP5WEP**	
	40	2	13–52	B	**36FUFP5WE**		60	**37FUFP5WED**		60A/600V	**37FUFP5WEF**	50	**37FUFP5WEP**	
	60	(2½)	25–100	B	**36GUGP5WE**		100	**37GUGP5WED**		100A/600V	**37GUGP5WEF**	100	**37GUGP5WEP**	
	75	3	25–100	B	**36HUGP5WE**		200	**37HUGP5WED**		200A/600V	**37HUGP5WEF**	125	**37HUGP5WEP**	
	100	(3½)	50–200	B	**36IUHP5WE**		400	**37IUHP5WED**		400A/600V	**37IUHP5WEF**	150	**37IUHP5WEP**	
	150	4	50–200	B	**36JUHP5WE**		400	**37JUHP5WED**		400A/600V	**37JUHP5WEF**	250	**37JUHP5WEP**	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

Reduced Voltage Heavy Duty Starters

Ordering Information

- ► Field Modification Kits see page 17-102.
- ► Factory Modifications see page 17-114.
- ► Dimensions see page page 17-150.
- ► Wiring Diagrams see page 17-162.
- ► Replacement Parts see page 17-120.

Coil and Control Voltage

The coil voltage will always match the motor voltage. As standard, a CPT is supplied and 120V control voltage is utilized. To change to 120V voltage (CPT not supplied), change the 9th character to "F". To change to 24VAC voltage (CPT not supplied), change the 9th character to "J".

NEMA 12, NEMA 3/3R

			Overload Relay		Non-Combination		Combination Non-Fusible Disconnect			Call Combination Fusible Disconnect Call			Combination Circit Breaker		
Motor Voltage	Max Hp	NEMA Size (1/2 Size)	Amp Range	Frame Size	Catalog Number	List Price $	Disc. Amp Rating	Catalog Number	List Price $	Fuse Clip Amp/Volt Rating	Catalog Number	List Price $	Circuit Breaker Amps	Catalog Number	List Price $
200	7½	0	5.5–22	A1	**36CUDP6ND**		60	**37CUDP6NDD**		60A/250V	**37CUDP6NDF**		30	**37CUDP6NDP**	
	10	1	5.5–22	A1	**36DUDP6ND**		60	**37DUDP6NDD**		60A/250V	**37DUDP6NDF**		50	**37DUDP6NDP**	
	15	(1¾)	10–40	A1	**36EUEP6ND**		100	**37EUEP6NDD**		100A/250V	**37EUEP6NDF**		100	**37EUEP6NDP**	
	20	2	13–52	B	**36FUFP6ND**		100	**37FUFP6NDD**		100A/250V	**37FUFP6NDF**		100	**37FUFP6NDP**	
	30	(2½)	25–100	B	**36GUGP6ND**		200	**37GUGP6NDD**		200A/250V	**37GUGP6NDF**		125	**37GUGP6NDP**	
	40	3	25–100	B	**36HUGP6ND**		200	**37HUGP6NDD**		200A/250V	**37HUGP6NDF**		150	**37HUGP6NDP**	
	50	(3½)	50–200	B	**36IUHP6ND**		200	**37IUHP6NDD**		200A/250V	**37IUHP6NDF**		250	**37IUHP6NDP**	
	75	4	50–200	B	**36JUHP6ND**		400	**37JUHP6NDD**		400A/250V	**37JUHP6NDF**		400	**37JUHP6NDP**	
	100	5	55–250	—	—		—	—		—	—		600	**37LPSP6NDP**	
	150	5	55–250	—	**36LPUP6ND**		600	**37LPUP6NDD**		600A/250V	**37LPUP6NDF**		600	**37LPUP6NDP**	
230	7½	0	5.5–22	A1	**36CUDP2NG**		60	**37CUDP2NGD**		60A/250V	**37CUDP2NGF**		30	**37CUDP2NGP**	
	10	1	5.5–22	A1	**36DUDP2NG**		60	**37DUDP2NGD**		60A/250V	**37DUDP2NGF**		50	**37DUDP2NGP**	
	20	(1½)	10–40	A1	**36EUEP2NG**		100	**37EUEP2NGD**		100A/250V	**37EUEP2NGF**		100	**37EUEP2NGP**	
	25	2	13–52	B	**36FUFP2NG**		100	**37FUFP2NGD**		100A/250V	**37FUFP2NGF**		100	**37FUFP2NGP**	
	30	(2½)	25–100	B	**36GUGP2NG**		200	**37GUGP2NGD**		200A/250V	**37GUGP2NGF**		100	**37GUGP2NGP**	
	50	3	25–100	B	**36HUGP2NG**		200	**37HUGP2NGD**		200A/250V	**37HUGP2NGF**		150	**37HUGP2NGP**	
	60	(3½)	50–200	B	**36IUHP2NG**		200	**37IUHP2NGD**		200A/250V	**37IUHP2NGF**		250	**37IUHP2NGP**	
	75	4	50–200	B	**36JUHP2NG**		400	**37JUHP2NGD**		400A/250V	**37JUHP2NGF**		250	**37JUHP2NGP**	
	125	5	55–250	—	—		—	—		—	—		400	**37LPSP2NGP**	
	150	5	55–250	—	**36LPUP2NG**		600	**37LPUP2NGD**		600A/250V	**37LPUP2NGF**		600	**37LPUP2NGP**	
	300	6	160–630	—	**36MPXP2NG**		1200	**37MPXP2NGD**		1200A/250V	**37MPXP2NGF**		1200	**37MPXP2NGP**	
460	10	0	5.5–22	A1	**36CUDP4NH**		30	**37CUDP4NHD**		30A/600V	**37CUDP4NHF**		30	**37CUDP4NHP**	
	15	1	5.5–22	A1	**36DUDP4NH**		60	**37DUDP4NHD**		60A/600V	**37DUDP4NHF**		30	**37DUDP4NHP**	
	30	(1¾)	10–40	A1	**36EUEP4NH**		60	**37EUEP4NHD**		60A/600V	**37EUEP4NHF**		50	**37EUEP4NHP**	
	40	2	13–52	B	**36FUFP4NH**		100	**37FUFP4NHD**		100A/600V	**37FUFP4NHF**		100	**37FUFP4NHP**	
	60	(2½)	25–100	B	**36GUGP4NH**		200	**37GUGP4NHD**		200A/600V	**37GUGP4NHF**		100	**37GUGP4NHP**	
	75	3	25–100	B	**36HUGP4NH**		200	**37HUGP4NHD**		200A/600V	**37HUGP4NHF**		125	**37HUGP4NHP**	
	100	(3½)	50–200	B	**36IUHP4NH**		200	**37IUHP4NHD**		200A/600V	**37IUHP4NHF**		150	**37IUHP4NHP**	
	150	4	50–200	B	**36JUHP4NH**		400	**37JUHP4NHD**		400A/600V	**37JUHP4NHF**		250	**37JUHP4NHP**	
	250	5	55–250	—	—		—	—		—	—		400	**37LPSP4NHP**	
	350	5	55–250	—	**36LPUP4NH**		600	**37LPUP4NHD**		600A/600V	**37LPUP4NHF**		600	**37LPUP4NHP**	
	600	6	160–630	—	**36MPXP4NH**		1200	**37MPXP4NHD**		1200A/600V	**37MPXP4NHF**		1200	**37MPXP4NHP**	
575	10	0	5.5–22	A1	**36CUDP5NE**		30	**37CUDP5NED**		30A/600V	**37CUDP5NEF**		30	**37CUDP5NEP**	
	15	1	5.5–22	A1	**36DUDP5NE**		60	**37DUDP5NED**		60A/600V	**37DUDP5NEF**		30	**37DUDP5NEP**	
	30	(1¾)	10–40	A1	**36EUEP5NE**		60	**37EUEP5NED**		60A/600V	**37EUEP5NEF**		50	**37EUEP5NEP**	
	40	2	13–52	B	**36FUFP5NE**		60	**37FUFP5NED**		60A/600V	**37FUFP5NEF**		50	**37FUFP5NEP**	
	60	(2½)	25–100	B	**36GUGP5NE**		100	**37GUGP5NED**		100A/600V	**37GUGP5NEF**		100	**37GUGP5NEP**	
	75	3	25–100	B	**36HUGP5NE**		200	**37HUGP5NED**		200A/600V	**37HUGP5NEF**		125	**37HUGP5NEP**	
	100	(3½)	50–200	B	**36IUHP5NE**		400	**37IUHP5NED**		400A/600V	**37IUHP5NEF**		150	**37IUHP5NEP**	
	150	4	50–200	B	**36JUHP5NE**		400	**37JUHP5NED**		400A/600V	**37JUHP5NEF**		250	**37JUHP5NEP**	
	250	5	55–250	—	—		—	—		400A/600V	**37LPSP5NEF**		—	—	
	350	5	55–250	—	**36LPUP5NE**		600	**37LPUP5NED**		600A/600V	**37LPUP5NEF**		400	**37LPUP5NEP**	
	600	6	160–630	—	**36MPXP5NE**		1200	**37MPXP5NED**		1200A/600V	**37MPXP5NEF**		1200	**37MPXP5NEP**	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

Reduced Voltage Heavy Duty Starters

Ordering Information

- ► Field Modification Kits see page 17-102.
- ► Factory Modifications see page 17-114.
- ► Dimensions see page 17-150.
- ► Wiring Diagrams see page 17-164 .
- ► Replacement Parts see page 17-120.

Coil and Control Voltage

The coil voltage will always match the motor voltage. As standard, a CPT is supplied and 120V control voltage is utilized. To change to 120V voltage (CPT not supplied), change the 9th character to "F". To change to 24VAC voltage (CPT not supplied), change the 9th character to "J".

NEMA 1 General Purpose Enclosures

			Overload Relay		Non-Combination		Combination Non-Fusible Disconnect			Combination Fusible Disconnect			Combination Circit Breaker		
Motor Voltage	Max Hp	NEMA Size (1/2 Size)	Amp Range	Frame Size	Catalog Number	List Price $	Disc. Amp Rating	Catalog Number	List Price $	Fuse Clip Amp/Volt Rating	Catalog Number	List Price $	Circuit Breaker Amps	Catalog Number	List Price $
200	10	1	10–40	A1	**36DUE06BD**		60	**37DUE06BDD**		60A/250V	**37DUE06BDF**		50	**37DUE06BDP**	
	15	(1¾)	10–40	A1	**36EUE06BD**		100	**37EUE06BDD**		100A/250V	**37EUE06BDF**		100	**37EUE06BDP**	
	20	2	13–52	B	**36FUF06BD**		100	**37FUF06BDD**		100A/250V	**37FUF06BDF**		100	**37FUF06BDP**	
	30	(2½)	25–100	B	**36GUG06BD**		200	**37GUG06BDD**		200A/250V	**37GUG06BDF**		125	**37GUG06BDP**	
	40	3	25–100	B	**36HUG06BD**		200	**37HUG06BDD**		200A/250V	**37HUG06BDF**		150	**37HUG06BDP**	
	50	(3½)	50–200	B	**36IUH06BD**		200	**37IUH06BDD**		200A/250V	**37IUH06BDF**		250	**37IUH06BDP**	
	60	4	50–200	B	**36JUH06BD**		400	**37JUH06BDD**		400A/250V	**37JUH06BDF**		250	**37JUH06BDP**	
	75	5	55–250	—	**36LPS06BD**		400	**37LPS06BDD**		400A/250V	**37LPS06BDF**		400	**37LPS06BDP**	
	150	5	55–250	—	**36LPU06BD**		600	**37LPU06BDD**		600A/250V	**37LPU06BDF**		600	**37LPU06BDP**	
	300	6	160–630	—	**36MPX06BD**		1200	**37MPX06BDD**		1200A/250V	**37MPX06BDF**		1200	**37MPX06BDP**	
230	10	1	10–40	A1	**36DUE02BG**		60	**37DUE02BGD**		60A/250V	**37DUE02BGF**		50	**37DUE02BGP**	
	15	(1¾)	10–40	A1	**36EUE02BG**		60	**37EUE02BGD**		60A/250V	**37EUE02BGF**		50	**37EUE02BGP**	
	25	2	13–52	B	**36FUF02BG**		100	**37FUF02BGD**		100A/250V	**37FUF02BGF**		100	**37FUF02BGP**	
	30	(2½)	25–100	B	**36GUG02BG**		200	**37GUG02BGD**		200A/250V	**37GUG02BGF**		100	**37GUG02BGP**	
	50	3	25–100	B	**36HUG02BG**		200	**37HUG02BGD**		200A/250V	**37HUG02BGF**		150	**37HUG02BGP**	
	60	(3½)	50–200	B	**36IUH02BG**		200	**37IUH02BGD**		200A/250V	**37IUH02BGF**		250	**37IUH02BGP**	
	75	4	50–200	B	**36JUH02BG**		400	**37JUH02BGD**		400A/250V	**37JUH02BGF**		250	**37JUH02BGP**	
	100	5	55–250	—	**36LPS02BG**		400	**37LPS02BGD**		400A/250V	**37LPS02BGF**		400	**37LPS02BGP**	
	150	5	55–250	—	**36LPU02BG**		600	**37LPU02BGD**		600A/250V	**37LPU02BGF**		600	**37LPU02BGP**	
	350	6	160–630	—	**36MPX02BG**		1200	**37MPX02BGD**		1200A/250V	**37MPX02BGF**		1200	**37MPX02BGP**	
460	15	1	5.5-22	A1	**36DUD04BH**		30	**37DUD04BHD**		30A/600V	**37DUD04BHF**		30	**37DUD04BHP**	
	30	(1¾)	10–40	A1	**36EUE04BH**		60	**37EUE04BHD**		60A/600V	**37EUE04BHF**		50	**37EUE04BHP**	
	40	2	13–52	B	**36FUF04BH**		100	**37FUF04BHD**		100A/600V	**37FUF04BHF**		100	**37FUF04BHP**	
	60	(2½)	25–100	B	**36GUG04BH**		200	**37GUG04BHD**		200A/600V	**37GUG04BHF**		100	**37GUG04BHP**	
	75	3	25–100	B	**36HUG04BH**		200	**37HUG04BHD**		200A/600V	**37HUG04BHF**		125	**37HUG04BHP**	
	100	(3½)	50–200	B	**36IUH04BH**		200	**37IUH04BHD**		200A/600V	**37IUH04BHF**		150	**37IUH04BHP**	
	150	4	50–200	B	**36JUH04BH**		400	**37JUH04BHD**		400A/600V	**37JUH04BHF**		250	**37JUH04BHP**	
	200	5	55–250	—	**36LPS04BH**		400	**37LPS04BHD**		400A/600V	**37LPS04BHF**		400	**37LPS04BHP**	
	300	5	55–250	—	**36LPU04BH**		600	**37LPU04BHD**		600A/600V	**37LPU04BHF**		600	**37LPU04BHP**	
	700	6	160–630	—	**36MPX04BH**		1600	**37MPX04BHD**		1600A/600V	**37MPX04BHF**		1200	**37MPX04BHP**	
575	15	1	5.5-22	A1	**36DUD05BE**		30	**37DUD05BED**		30A/600V	**37DUD05BEF**		30	**37DUD05BEP**	
	30	(1¾)	10–40	A1	**36EUE05BE**		60	**37EUE05BED**		60A/600V	**37EUE05BEF**		50	**37EUE05BEP**	
	40	2	13–52	B	**36FUF05BE**		100	**37FUF05BED**		100A/600V	**37FUF05BEF**		50	**37FUF05BEP**	
	60	(2½)	25–100	B	**36GUG05BE**		100	**37GUG05BED**		100A/600V	**37GUG05BEF**		100	**37GUG05BEP**	
	75	3	25–100	B	**36HUG05BE**		200	**37HUG05BED**		200A/600V	**37HUG05BEF**		125	**37HUG05BEP**	
	100	(3½)	50–200	B	**36IUH05BE**		200	**37IUH05BED**		200A/600V	**37IUH05BEF**		150	**37IUH05BEP**	
	150	4	50–200	B	**36JUH05BE**		400	**37JUH05BED**		400A/600V	**37JUH05BEF**		250	**37JUH05BEP**	
	200	5	55–250	—	**36LPS05BE**		400	**37LPS05BED**		400A/600V	**37LPS05BEF**		250	**37LPS05BEP**	
	300	5	55–250	—	**36LPU05BE**		600	**37LPU05BED**		600A/600V	**37LPU05BEF**		400	**37LPU05BEP**	
	700	6	160–630	—	**36MPX05BE**		1600	**37MPX05BED**		1600A/600V	**37MPX05BEF**		1600	**37MPX05BEP**	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

Ordering Information

- ► Field Modification Kits see page 17-102.
- ► Factory Modifications see page 17-114.
- ► Dimensions see page 17-150.
- ► Wiring Diagrams see page 17-164 .
- ► Replacement Parts see page 17-120.

Coil and Control Voltage

The coil voltage will always match the motor voltage. As standard, a CPT is supplied and 120V control voltage is utilized. To change to 120V voltage (CPT not supplied), change the 9th character to "F". To change to 24VAC voltage (CPT not supplied), change the 9th character to "J".

NEMA 4 Painted Enclosures

			Overload Relay		Non-Combination		Combination Non-Fusible Disconnect			Combination Fusible Disconnect			Combination Circit Breaker		
Motor Voltage	Max Hp	NEMA Size (1/2 Size)	Amp Range	Frame Size	Catalog Number	List Price $	Disc. Amp Rating	Catalog Number	List Price $	Fuse Clip Amp/Volt Rating	Catalog Number	List Price $	Circuit Breaker Amps	Catalog Number	List Price $
200	10	1	10–40	A1	**36DUE06ED**		60	**37DUE06EDD**		60A/250V	**37DUE06EDF**		50	**37DUE06EDP**	
	15	(1¾)	10–40	A1	**36EUE06ED**		100	**37EUE06EDD**		100A/250V	**37EUE06EDF**		100	**37EUE06EDP**	
	20	2	13–52	B	**36FUF06ED**		100	**37FUF06EDD**		100A/250V	**37FUF06EDF**		100	**37FUF06EDP**	
	30	(2½)	25–100	B	**36GUG06ED**		200	**37GUG06EDD**		200A/250V	**37GUG06EDF**		125	**37GUG06EDP**	
	40	3	25–100	B	**36HUG06ED**		200	**37HUG06EDD**		200A/250V	**37HUG06EDF**		150	**37HUG06EDP**	
	50	(3½)	50–200	B	**36IUH06ED**		200	**37IUH06EDD**		200A/250V	**37IUH06EDF**		250	**37IUH06EDP**	
	60	4	50–200	B	**36JUH06ED**		400	**37JUH06EDD**		400A/250V	**37JUH06EDF**		250	**37JUH06EDP**	
	75	5	55–250	—	**36LPS06ED**		400	**37LPS06EDD**		400A/250V	**37LPS06EDF**		400	**37LPS06EDP**	
	150	5	55–250	—	**36LPU06ED**		600	**37LPU06EDD**		600A/250V	**37LPU06EDF**		600	**37LPU06EDP**	
	300	6	160–630	—	**36MPX06ED**		1200	**37MPX06EDD**		1200A/250V	**37MPX06EDF**		1200	**37MPX06EDP**	
230	10	1	10–40	A1	**36DUE02EG**		60	**37DUE02EGD**		60A/250V	**37DUE02EGF**		50	**37DUE02EGP**	
	15	(1¾)	10–40	A1	**36EUE02EG**		60	**37EUE02EGD**		60A/250V	**37EUE02EGF**		50	**37EUE02EGP**	
	25	2	13–52	B	**36FUF02EG**		100	**37FUF02EGD**		100A/250V	**37FUF02EGF**		100	**37FUF02EGP**	
	30	(2½)	25–100	B	**36GUG02EG**		200	**37GUG02EGD**		200A/250V	**37GUG02EGF**		100	**37GUG02EGP**	
	50	3	25–100	B	**36HUG02EG**		200	**37HUG02EGD**		200A/250V	**37HUG02EGF**		150	**37HUG02EGP**	
	60	(3½)	50–200	B	**36IUH02EG**		200	**37IUH02EGD**		200A/250V	**37IUH02EGF**		250	**37IUH02EGP**	
	75	4	50–200	B	**36JUH02EG**		400	**37JUH02EGD**		400A/250V	**37JUH02EGF**		250	**37JUH02EGP**	
	100	5	55–250	—	**36LPS02EG**		400	**37LPS02EGD**		400A/250V	**37LPS02EGF**		400	**37LPS02EGP**	
	150	5	55–250	—	**36LPU02EG**		600	**37LPU02EGD**		600A/250V	**37LPU02EGF**		600	**37LPU02EGP**	
	350	6	160–630	—	**36MPX02EG**		1200	**37MPX02EGD**		1200A/250V	**37MPX02EGF**		1200	**37MPX02EGP**	
460	15	1	5.5-22	A1	**36DUD04EH**		30	**37DUD04EHD**		30A/600V	**37DUD04EHF**		30	**37DUD04EHP**	
	30	(1¾)	10–40	A1	**36EUE04EH**		60	**37EUE04EHD**		60A/600V	**37EUE04EHF**		50	**37EUE04EHP**	
	40	2	13–52	B	**36FUF04EH**		100	**37FUF04EHD**		100A/600V	**37FUF04EHF**		100	**37FUF04EHP**	
	60	(2½)	25–100	B	**36GUG04EH**		200	**37GUG04EHD**		200A/600V	**37GUG04EHF**		100	**37GUG04EHP**	
	75	3	25–100	B	**36HUG04EH**		200	**37HUG04EHD**		200A/600V	**37HUG04EHF**		125	**37HUG04EHP**	
	100	(3½)	50–200	B	**36IUH04EH**		200	**37IUH04EHD**		200A/600V	**37IUH04EHF**		150	**37IUH04EHP**	
	150	4	50–200	B	**36JUH04EH**		400	**37JUH04EHD**		400A/600V	**37JUH04EHF**		250	**37JUH04EHP**	
	200	5	55–250	—	**36LPS04EH**		400	**37LPS04EHD**		400A/600V	**37LPS04EHF**		400	**37LPS04EHP**	
	300	5	55–250	—	**36LPU04EH**		600	**37LPU04EHD**		600A/600V	**37LPU04EHF**		600	**37LPU04EHP**	
	700	6	160–630	—	**36MPX04EH**		1600	**37MPX04EHD**		1600A/600V	**37MPX04EHF**		1200	**37MPX04EHP**	
575	15	1	5.5-22	A1	**36DUD05EE**		30	**37DUD05EED**		30A/600V	**37DUD05EEF**		30	**37DUD05EEP**	
	30	(1¾)	10–40	A1	**36EUE05EE**		60	**37EUE05EED**		60A/600V	**37EUE05EEF**		50	**37EUE05EEP**	
	40	2	13–52	B	**36FUF05EE**		100	**37FUF05EED**		100A/600V	**37FUF05EEF**		50	**37FUF05EEP**	
	60	(2½)	25–100	B	**36GUG05EE**		100	**37GUG05EED**		100A/600V	**37GUG05EEF**		100	**37GUG05EEP**	
	75	3	25–100	B	**36HUG05EE**		200	**37HUG05EED**		200A/600V	**37HUG05EEF**		125	**37HUG05EEP**	
	100	(3½)	50–200	B	**36IUH05EE**		200	**37IUH05EED**		200A/600V	**37IUH05EEF**		150	**37IUH05EEP**	
	150	4	50–200	B	**36JUH05EE**		400	**37JUH05EED**		400A/600V	**37JUH05EEF**		250	**37JUH05EEP**	
	200	5	55–250	—	**36LPS05EE**		400	**37LPS05EED**		400A/600V	**37LPS05EEF**		250	**37LPS05EEP**	
	300	5	55–250	—	**36LPU05EE**		600	**37LPU05EED**		600A/600V	**37LPU05EEF**		400	**37LPU05EEP**	
	700	6	160–630	—	**37MPX05EF**		1600	**37MPX05EED**		1600A/600V	**37MPX05EEF**		1600	**37MPX05EEP**	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

Ordering Information

- ► Field Modification Kits see page 17-102.
- ► Factory Modifications see page 17-114.
- ► Dimensions see page 17-150.
- ► Wiring Diagrams see page 17-164 .
- ► Replacement Parts see page 17-120.

Coil and Control Voltage

The coil voltage will always match the motor voltage. As standard, a CPT is supplied and 120V control voltage is utilized. To change to 120V voltage (CPT not supplied), change the 9th character to "F". To change to 24VAC voltage (CPT not supplied), change the 9th character to "J".

NEMA 4/4X Stainless Steel Enclosures

			Overload Relay		Non-Combination		Combination Non-Fusible Disconnect			Combination Fusible Disconnect			Combination Circit Breaker		
Motor Voltage	Max Hp	NEMA Size (1/2 Size)	Amp Range	Frame Size	Catalog Number	List Price $	Disc. Amp Rating	Catalog Number	List Price $	Fuse Clip Amp/Volt Rating	Catalog Number	List Price $	Circuit Breaker Amps	Catalog Number	List Price $
	10	1	10–40	A1	**36DUE06WD**		60	**37DUE06WDD**		60A/250V	**37DUE06WDF**		50	**37DUE06WDP**	
	15	(1¾)	10–40	A1	**36EUE06WD**		100	**37EUE06WDD**		100A/250V	**37EUE06WDF**		100	**37EUE06WDP**	
	20	2	13–52	B	**36FUF06WD**		100	**37FUF06WDD**		100A/250V	**37FUF06WDF**		100	**37FUF06WDP**	
200	30	(2½)	25–100	B	**36GUG06WD**		200	**37GUG06WDD**		200A/250V	**37GUG06WDF**		125	**37GUG06WDP**	
	40	3	25–100	B	**36HUG06WD**		200	**37HUG06WDD**		200A/250V	**37HUG06WDF**		150	**37HUG06WDP**	
	50	(3½)	50–200	B	**36IUH06WD**		200	**37IUH06WDD**		200A/250V	**37IUH06WDF**		250	**37IUH06WDP**	
	60	4	50–200	B	**36JUH06WD**		400	**37JUH06WDD**		400A/250V	**37JUH06WDF**		250	**37JUH06WDP**	
	10	1	10–40	A1	**36DUE02WG**		60	**37DUE02WGD**		60A/250V	**37DUE02WGF**		50	**37DUE02WGP**	
	15	(1¾)	10–40	A1	**36EUE02WG**		60	**37EUE02WGD**		60A/250V	**37EUE02WGF**		50	**37EUE02WGP**	
	25	2	13–52	B	**36FUF02WG**		100	**37FUF02WGD**		100A/250V	**37FUF02WGF**		100	**37FUF02WGP**	
230	30	(2½)	25–100	B	**36GUG02WG**		200	**37GUG02WGD**		200A/250V	**37GUG02WGF**		100	**37GUG02WGP**	
	50	3	25–100	B	**36HUG02WG**		200	**37HUG02WGD**		200A/250V	**37HUG02WGF**		150	**37HUG02WGP**	
	60	(3½)	50–200	B	**36IUH02WG**		200	**37IUH02WGD**		200A/250V	**37IUH02WGF**		250	**37IUH02WGP**	
	75	4	50–200	B	**36JUH02WG**		400	**37JUH02WGD**		400A/250V	**37JUH02WGF**		250	**37JUH02WGP**	
	15	1	5.5-22	A1	**36DUD04WH**		30	**37DUD04WHD**		30A/600V	**37DUD04WHF**		30	**37DUD04WHP**	
	30	(1¾)	10–40	A1	**36EUE04WH**		60	**37EUE04WHD**		60A/600V	**37EUE04WHF**		50	**37EUE04WHP**	
	40	2	13–52	B	**36FUF04WH**		100	**37FUF04WHD**		100A/600V	**37FUF04WHF**		100	**37FUF04WHP**	
460	60	(2½)	25–100	B	**36GUG04WH**		200	**37GUG04WHD**		200A/600V	**37GUG04WHF**		100	**37GUG04WHP**	
	75	3	25–100	B	**36HUG04WH**		200	**37HUG04WHD**		200A/600V	**37HUG04WHF**		125	**37HUG04WHP**	
	100	(3½)	50–200	B	**36IUH04WH**		200	**37IUH04WHD**		200A/600V	**37IUH04WHF**		150	**37IUH04WHP**	
	150	4	50–200	B	**36JUH04WH**		400	**37JUH04WHD**		400A/600V	**37JUH04WHF**		250	**37JUH04WHP**	
	15	1	5.5-22	A1	**36DUD05WE**		30	**37DUD05WED**		30A/600V	**37DUD05WEF**		30	**37DUD05WEP**	
	30	(1¾)	10–40	A1	**36EUE05WE**		60	**37EUE05WED**		60A/600V	**37EUE05WEF**		50	**37EUE05WEP**	
	40	2	13–52	B	**36FUF05WE**		100	**37FUF05WED**		100A/600V	**37FUF05WEF**		50	**37FUF05WEP**	
575	60	(2½)	25–100	B	**36GUG05WE**		100	**37GUG05WED**		100A/600V	**37GUG05WEF**		100	**37GUG05WEP**	
	75	3	25–100	B	**36HUG05WE**		200	**37HUG05WED**		200A/600V	**37HUG05WEF**		125	**37HUG05WEP**	
	100	(3½)	50–200	B	**36IUH05WE**		200	**37IUH05WED**		200A/600V	**37IUH05WEF**		150	**37IUH05WEP**	
	150	4	50–200	B	**36JUH05WE**		400	**37JUH05WED**		400A/600V	**37JUH05WEF**		250	**37JUH05WEP**	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

Reduced Voltage Heavy Duty Starters

Ordering Information

- ► Field Modification Kits see page 17-102.
- ► Factory Modifications see page 17-114.
- ► Dimensions see page 17-150.
- ► Wiring Diagrams see page 17-164 .
- ► Replacement Parts see page 17-120.

Coil and Control Voltage

The coil voltage will always match the motor voltage. As standard, a CPT is supplied and 120V control voltage is utilized. To change to 120V voltage (CPT not supplied), change the 9th character to "F". To change to 24VAC voltage (CPT not supplied), change the 9th character to "J".

NEMA 12, NEMA 3/3R

			Overload Relay		Non-Combination		Combination Non-Fusible Disconnect			Combination Fusible Disconnect			Combination Circit Breaker		
Motor Voltage	Max Hp	NEMA Size (1/2 Size)	Amp Range	Frame Size	Catalog Number	List Price $	Disc. Amp Rating	Catalog Number	List Price $	Fuse Clip Amp/Volt Rating	Catalog Number	List Price $	Circuit Breaker Amps	Catalog Number	List Price $
200	10	1	10–40	A1	**36DUE06ND**		60	**37DUE06NDD**		60A/250V	**37DUE06NDF**		50	**37DUE06NDP**	
	15	(1¾)	10–40	A1	**36EUE06ND**		100	**37EUE06NDD**		100A/250V	**37EUE06NDF**		100	**37EUE06NDP**	
	20	2	13–52	B	**36FUF06ND**		100	**37FUF06NDD**		100A/250V	**37FUF06NDF**		100	**37FUF06NDP**	
	30	(2½)	25–100	B	**36GUG06ND**		200	**37GUG06NDD**		200A/250V	**37GUG06NDF**		125	**37GUG06NDP**	
	40	3	25–100	B	**36HUG06ND**		200	**37HUG06NDD**		200A/250V	**37HUG06NDF**		150	**37HUG06NDP**	
	50	(3½)	50–200	B	**36IUH06ND**		200	**37IUH06NDD**		200A/250V	**37IUH06NDF**		250	**37IUH06NDP**	
	60	4	50–200	B	**36JUH06ND**		400	**37JUH06NDD**		400A/250V	**37JUH06NDF**		250	**37JUH06NDP**	
	75	5	55–250	—	**36LPS06ND**		400	**37LPS06NDD**		400A/250V	**37LPS06NDF**		400	**37LPS06NDP**	
	150	5	55–250	—	**36LPU06ND**		600	**37LPU06NDD**		600A/250V	**37LPU06NDF**		600	**37LPU06NDP**	
	300	6	160–630	—	**36MPX06ND**		1200	**37MPX06NDD**		1200A/250V	**37MPX06NDF**		1200	**37MPX06NDP**	
230	10	1	10–40	A1	**36DUE02NG**		60	**37DUE02NGD**		60A/250V	**37DUE02NGF**		50	**37DUE02NGP**	
	15	(1¾)	10–40	A1	**36EUE02NG**		60	**37EUE02NGD**		60A/250V	**37EUE02NGF**		50	**37EUE02NGP**	
	25	2	13–52	B	**36FUF02NG**		100	**37FUF02NGD**		100A/250V	**37FUF02NGF**		100	**37FUF02NGP**	
	30	(2½)	25–100	B	**36GUG02NG**		200	**37GUG02NGD**		200A/250V	**37GUG02NGF**		100	**37GUG02NGP**	
	50	3	25–100	B	**36HUG02NG**		200	**37HUG02NGD**		200A/250V	**37HUG02NGF**		150	**37HUG02NGP**	
	60	(3½)	50–200	B	**36IUH02NG**		200	**37IUH02NGD**		200A/250V	**37IUH02NGF**		250	**37IUH02NGP**	
	75	4	50–200	B	**36JUH02NG**		400	**37JUH02NGD**		400A/250V	**37JUH02NGF**		250	**37JUH02NGP**	
	100	5	55–250	—	**36LPS02NG**		400	**37LPS02NGD**		400A/250V	**37LPS02NGF**		400	**37LPS02NGP**	
	150	5	55–250	—	**36LPU02NG**		600	**37LPU02NGD**		600A/250V	**37LPU02NGF**		600	**37LPU02NGP**	
	350	6	160–630	—	**36MPX02NG**		1200	**37MPX02NGD**		1200A/250V	**37MPX02NGF**		1200	**37MPX02NGP**	
460	15	1	5.5-22	A1	**36DUD04NH**		30	**37DUD04NHD**		30A/600V	**37DUD04NHF**		30	**37DUD04NHP**	
	30	(1¾)	10–40	A1	**36EUE04NH**		60	**37EUE04NHD**		60A/600V	**37EUE04NHF**		50	**37EUE04NHP**	
	40	2	13–52	B	**36FUF04NH**		100	**37FUF04NHD**		100A/600V	**37FUF04NHF**		100	**37FUF04NHP**	
	60	(2½)	25–100	B	**36GUG04NH**		200	**37GUG04NHD**		200A/600V	**37GUG04NHF**		100	**37GUG04NHP**	
	75	3	25–100	B	**36HUG04NH**		200	**37HUG04NHD**		200A/600V	**37HUG04NHF**		125	**37HUG04NHP**	
	100	(3½)	50–200	B	**36IUH04NH**		200	**37IUH04NHD**		200A/600V	**37IUH04NHF**		150	**37IUH04NHP**	
	150	4	50–200	B	**36JUH04NH**		400	**37JUH04NHD**		400A/600V	**37JUH04NHF**		250	**37JUH04NHP**	
	200	5	55–250	—	**36LPS04NH**		400	**37LPS04NHD**		400A/600V	**37LPS04NHF**		400	**37LPS04NHP**	
	300	5	55–250	—	**36LPU04NH**		600	**37LPU04NHD**		600A/600V	**37LPU04NHF**		600	**37LPU04NHP**	
	700	6	160–630	—	**36MPX04NH**		1600	**37MPX04NHD**		1600A/600V	**37MPX04NHF**		1200	**37MPX04NHP**	
575	15	1	5.5-22	A1	**36DUD05NE**		30	**37DUD05NED**		30A/600V	**37DUD05NEF**		30	**37DUD05NEP**	
	30	(1¾)	10–40	A1	**36EUE05NE**		60	**37EUE05NED**		60A/600V	**37EUE05NEF**		50	**37EUE05NEP**	
	40	2	13–52	B	**36FUF05NE**		100	**37FUF05NED**		100A/600V	**37FUF05NEF**		50	**37FUF05NEP**	
	60	(2½)	25–100	B	**36GUG05NE**		100	**37GUG05NED**		100A/600V	**37GUG05NEF**		100	**37GUG05NEP**	
	75	3	25–100	B	**36HUG05NE**		200	**37HUG05NED**		200A/600V	**37HUG05NEF**		125	**37HUG05NEP**	
	100	(3½)	50–200	B	**36IUH05NE**		200	**37IUH05NED**		200A/600V	**37IUH05NEF**		150	**37IUH05NEP**	
	150	4	50–200	B	**36JUH05NE**		400	**37JUH05NED**		400A/600V	**37JUH05NEF**		250	**37JUH05NEP**	
	200	5	55–250	—	**36LPS05NE**		400	**37LPS05NED**		400A/600V	**37LPS05NEF**		250	**37LPS05NEP**	
	300	5	55–250	—	**36LPU05NE**		600	**37LPU05NED**		600A/600V	**37LPU05NEF**		400	**37LPU05NEP**	
	700	6	160–630	—	**37MPX05NF**		1600	**37MPX05NED**		1600A/600V	**37MPX05NEF**		1600	**37MPX05NEP**	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

Ordering Information

- ► Field Modification Kits see page 17-102.
- ► Factory Modifications see page 17-114.
- ► Dimensions see page 17-150.
- ► Wiring Diagrams see page 17-165.
- ► Replacement Parts see page 17-120.

Coil and Control Voltage

The coil voltage will always match the motor voltage. As standard, a CPT is supplied and 120V control voltage is utilized. To change to 120V voltage (CPT not supplied), change the 9th character to "F". To change to 24VAC voltage (CPT not supplied), change the 9th character to "J".

NEMA 1 General Purpose Enclosures

			Overload Relay		Non-Combination		Combination Non-Fusible Disconnect			Combination Fusible Disconnect			Combination Circit Breaker		
Motor Voltage	Max Hp	NEMA Size (1/2 Size)	Amp Range	Frame Size	Catalog Number	List Price $	Disc. Amp Rating	Catalog Number	List Price $	Fuse Clip Amp/Volt Rating	Catalog Number	List Price $	Circuit Breaker Amps	Catalog Number	List Price $
200	10	1	10–40	A1	**36DUEC6BD**		60	**37DUEC6BDD**		60A/250V	**37DUEC6BDF**		50	**37DUEC6BDP**	
	15	(1¾)	10–40	A1	**36EUEC6BD**		100	**37EUEC6BDD**		100A/250V	**37EUEC6BDF**		100	**37EUEC6BDP**	
	20	2	13–52	B	**36FUFC6BD**		100	**37FUFC6BDD**		100A/250V	**37FUFC6BDF**		100	**37FUFC6BDP**	
	30	(2½)	25–100	B	**36GUGC6BD**		200	**37GUGC6BDD**		200A/250V	**37GUGC6BDF**		125	**37GUGC6BDP**	
	40	3	25–100	B	**36HUGC6BD**		200	**37HUGC6BDD**		200A/250V	**37HUGC6BDF**		150	**37HUGC6BDP**	
	50	(3½)	50–200	B	**36IUHC6BD**		200	**37IUHC6BDD**		200A/250V	**37IUHC6BDF**		250	**37IUHC6BDP**	
	60	4	50–200	B	**36JUHC6BD**		400	**37JUHC6BDD**		400A/250V	**37JUHC6BDF**		250	**37JUHC6BDP**	
	75	5	55–250	—	**36LPSC6BD**		400	**37LPSC6BDD**		400A/250V	**37LPSC6BDF**		400	**37LPSC6BDP**	
	150	5	55–250	—	**36LPUC6BD**		600	**37LPUC6BDD**		600A/250V	**37LPUC6BDF**		600	**37LPUC6BDP**	
	300	6	160–630	—	**36MPXC6BD**		1200	**37MPXC6BDD**		1200A/250V	**37MPXC6BDF**		1200	**37MPXC6BDP**	
230	10	1	10–40	A1	**36DUEC2BG**		60	**37DUEC2BGD**		60A/250V	**37DUEC2BGF**		50	**37DUEC2BGP**	
	15	(1¾)	10–40	A1	**36EUEC2BG**		60	**37EUEC2BGD**		60A/250V	**37EUEC2BGF**		50	**37EUEC2BGP**	
	25	2	13–52	B	**36FUFC2BG**		100	**37FUFC2BGD**		100A/250V	**37FUFC2BGF**		100	**37FUFC2BGP**	
	30	(2½)	25–100	B	**36GUGC2BG**		200	**37GUGC2BGD**		200A/250V	**37GUGC2BGF**		100	**37GUGC2BGP**	
	50	3	25–100	B	**36HUGC2BG**		200	**37HUGC2BGD**		200A/250V	**37HUGC2BGF**		150	**37HUGC2BGP**	
	60	(3½)	50–200	B	**36IUHC2BG**		200	**37IUHC2BGD**		200A/250V	**37IUHC2BGF**		250	**37IUHC2BGP**	
	75	4	50–200	B	**36JUHC2BG**		400	**37JUHC2BGD**		400A/250V	**37JUHC2BGF**		250	**37JUHC2BGP**	
	100	5	55–250	—	**36LPSC2BG**		400	**37LPSC2BGD**		400A/250V	**37LPSC2BGF**		400	**37LPSC2BGP**	
	150	5	55–250	—	**36LPUC2BG**		600	**37LPUC2BGD**		600A/250V	**37LPUC2BGF**		600	**37LPUC2BGP**	
	350	6	160–630	—	**36MPXC2BG**		1200	**37MPXC2BGD**		1200A/250V	**37MPXC2BGF**		1200	**37MPXC2BGP**	
460	15	1	5.5-22	A1	**36DUDC4BH**		30	**37DUDC4BHD**		30A/600V	**37DUDC4BHF**		30	**37DUDC4BHP**	
	30	(1¾)	10–40	A1	**36EUEC4BH**		60	**37EUEC4BHD**		60A/600V	**37EUEC4BHF**		50	**37EUEC4BHP**	
	40	2	13–52	B	**36FUFC4BH**		100	**37FUFC4BHD**		100A/600V	**37FUFC4BHF**		100	**37FUFC4BHP**	
	60	(2½)	25–100	B	**36GUGC4BH**		200	**37GUGC4BHD**		200A/600V	**37GUGC4BHF**		100	**37GUGC4BHP**	
	75	3	25–100	B	**36HUGC4BH**		200	**37HUGC4BHD**		200A/600V	**37HUGC4BHF**		125	**37HUGC4BHP**	
	100	(3½)	50–200	B	**36IUHC4BH**		200	**37IUHC4BHD**		200A/600V	**37IUHC4BHF**		150	**37IUHC4BHP**	
	150	4	50–200	B	**36JUHC4BH**		400	**37JUHC4BHD**		400A/600V	**37JUHC4BHF**		250	**37JUHC4BHP**	
	200	5	55–250	—	**36LPSC4BH**		400	**37LPSC4BHD**		400A/600V	**37LPSC4BHF**		400	**37LPSC4BHP**	
	300	5	55–250	—	**36LPUC4BH**		600	**37LPUC4BHD**		600A/600V	**37LPUC4BHF**		600	**37LPUC4BHP**	
	700	6	160–630	—	**36MPXC4BH**		1600	**37MPXC4BHD**		1600A/600V	**37MPXC4BHF**		1200	**37MPXC4BHP**	
575	15	1	5.5-22	A1	**36DUDC5BE**		30	**37DUDC5BED**		30A/600V	**37DUDC5BEF**		30	**37DUDC5BEP**	
	30	(1¾)	10–40	A1	**36EUEC5BE**		60	**37EUEC5BED**		60A/600V	**37EUEC5BEF**		50	**37EUEC5BEP**	
	40	2	13–52	B	**36FUFC5BE**		100	**37FUFC5BED**		100A/600V	**37FUFC5BEF**		50	**37FUFC5BEP**	
	60	(2½)	25–100	B	**36GUGC5BE**		100	**37GUGC5BED**		100A/600V	**37GUGC5BEF**		100	**37GUGC5BEP**	
	75	3	25–100	B	**36HUGC5BE**		200	**37HUGC5BED**		200A/600V	**37HUGC5BEF**		125	**37HUGC5BEP**	
	100	(3½)	50–200	B	**36IUHC5BE**		200	**37IUHC5BED**		200A/600V	**37IUHC5BEF**		150	**37IUHC5BEP**	
	150	4	50–200	B	**36JUHC5BE**		400	**37JUHC5BED**		400A/600V	**37JUHC5BEF**		250	**37JUHC5BEP**	
	200	5	55–250	—	**36LPSC5BE**		400	**37LPSC5BED**		400A/600V	**37LPSC5BEF**		250	**37LPSC5BEP**	
	300	5	55–250	—	**36LPUC5BE**		600	**37LPUC5BED**		600A/600V	**37LPUC5BEF**		400	**37LPUC5BEP**	
	700	6	160–630	—	**37MPXC5BF**		1600	**37MPXC5BED**		1600A/600V	**37MPXC5BEF**		1600	**37MPXC5BEP**	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

Ordering Information

- ► Field Modification Kits see page 17-102.
- ► Factory Modifications see page 17-114.
- ► Dimensions see page 17-150.
- ► Wiring Diagrams see page 17-165.
- ► Replacement Parts see page 17-120.

Coil and Control Voltage

The coil voltage will always match the motor voltage. As standard, a CPT is supplied and 120V control voltage is utilized. To change to 120V voltage (CPT not supplied), change the 9th character to "F". To change to 24VAC voltage (CPT not supplied), change the 9th character to "J".

NEMA 4 Painted Enclosures

Motor Voltage	Max Hp	NEMA Size (1/2 Size)	Overload Relay		Non-Combination		Combination Non-Fusible Disconnect			Combination Fusible Disconnect			Combination Circit Breaker		
			Amp Range	Frame Size	Catalog Number	List Price $	Disc. Amp Rating	Catalog Number	List Price $	Fuse Clip Amp/Volt Rating	Catalog Number	List Price $	Circuit Breaker Amps	Catalog Number	List Price $
200	10	1	10–40	A1	**36DUEC6ED**		60	**37DUEC6EDD**		60A/250V	**37DUEC6EDF**		50	**37DUEC6EDP**	
	15	(1¾)	10–40	A1	**36EUEC6ED**		100	**37EUEC6EDD**		100A/250V	**37EUEC6EDF**		100	**37EUEC6EDP**	
	20	2	13–52	B	**36FUFC6ED**		100	**37FUFC6EDD**		100A/250V	**37FUFC6EDF**		100	**37FUFC6EDP**	
	30	(2½)	25–100	B	**36GUGC6ED**		200	**37GUGC6EDD**		200A/250V	**37GUGC6EDF**		125	**37GUGC6EDP**	
	40	3	25–100	B	**36HUGC6ED**		200	**37HUGC6EDD**		200A/250V	**37HUGC6EDF**		150	**37HUGC6EDP**	
	50	(3½)	50–200	B	**36IUHC6ED**		200	**37IUHC6EDD**		200A/250V	**37IUHC6EDF**		250	**37IUHC6EDP**	
	60	4	50–200	B	**36JUHC6ED**		400	**37JUHC6EDD**		400A/250V	**37JUHC6EDF**		250	**37JUHC6EDP**	
	75	5	55–250	—	**36LPSC6ED**		400	**37LPSC6EDD**		400A/250V	**37LPSC6EDF**		400	**37LPSC6EDP**	
	150	5	55–250	—	**36LPUC6ED**		600	**37LPUC6EDD**		600A/250V	**37LPUC6EDF**		600	**37LPUC6EDP**	
	300	6	160–630	—	**36MPXC6ED**		1200	**37MPXC6EDD**		1200A/250V	**37MPXC6EDF**		1200	**37MPXC6EDP**	
230	10	1	10–40	A1	**36DUEC2EG**		60	**37DUEC2EGD**		60A/250V	**37DUEC2EGF**		50	**37DUEC2EGP**	
	15	(1¾)	10–40	A1	**36EUEC2EG**		60	**37EUEC2EGD**		60A/250V	**37EUEC2EGF**		50	**37EUEC2EGP**	
	25	2	13–52	B	**36FUFC2EG**		100	**37FUFC2EGD**		100A/250V	**37FUFC2EGF**		100	**37FUFC2EGP**	
	30	(2½)	25–100	B	**36GUGC2EG**		200	**37GUGC2EGD**		200A/250V	**37GUGC2EGF**		100	**37GUGC2EGP**	
	50	3	25–100	B	**36HUGC2EG**		200	**37HUGC2EGD**		200A/250V	**37HUGC2EGF**		150	**37HUGC2EGP**	
	60	(3½)	50–200	B	**36IUHC2EG**		200	**37IUHC2EGD**		200A/250V	**37IUHC2EGF**		250	**37IUHC2EGP**	
	75	4	50–200	B	**36JUHC2EG**		400	**37JUHC2EGD**		400A/250V	**37JUHC2EGF**		250	**37JUHC2EGP**	
	100	5	55–250	—	**36LPSC2EG**		400	**37LPSC2EGD**		400A/250V	**37LPSC2EGF**		400	**37LPSC2EGP**	
	150	5	55–250	—	**36LPUC2EG**		600	**37LPUC2EGD**		600A/250V	**37LPUC2EGF**		600	**37LPUC2EGP**	
	350	6	160–630	—	**36MPXC2EG**		1200	**37MPXC2EGD**		1200A/250V	**37MPXC2EGF**		1200	**37MPXC2EGP**	
460	15	1	5.5-22	A1	**36DUDC4EH**		30	**37DUDC4EHD**		30A/600V	**37DUDC4EHF**		30	**37DUDC4EHP**	
	30	(1¾)	10–40	A1	**36EUEC4EH**		60	**37EUEC4EHD**		60A/600V	**37EUEC4EHF**		50	**37EUEC4EHP**	
	40	2	13–52	B	**36FUFC4EH**		100	**37FUFC4EHD**		100A/600V	**37FUFC4EHF**		100	**37FUFC4EHP**	
	60	(2½)	25–100	B	**36GUGC4EH**		200	**37GUGC4EHD**		200A/600V	**37GUGC4EHF**		100	**37GUGC4EHP**	
	75	3	25–100	B	**36HUGC4EH**		200	**37HUGC4EHD**		200A/600V	**37HUGC4EHF**		125	**37HUGC4EHP**	
	100	(3½)	50–200	B	**36IUHC4EH**		200	**37IUHC4EHD**		200A/600V	**37IUHC4EHF**		150	**37IUHC4EHP**	
	150	4	50–200	B	**36JUHC4EH**		400	**37JUHC4EHD**		400A/600V	**37JUHC4EHF**		250	**37JUHC4EHP**	
	200	5	55–250	—	**36LPSC4EH**		400	**37LPSC4EHD**		400A/600V	**37LPSC4EHF**		400	**37LPSC4EHP**	
	300	5	55–250	—	**36LPUC4EH**		600	**37LPUC4EHD**		600A/600V	**37LPUC4EHF**		600	**37LPUC4EHP**	
	700	6	160–630	—	**36MPXC4EH**		1600	**37MPXC4EHD**		1600A/600V	**37MPXC4EHF**		1200	**37MPXC4EHP**	
575	15	1	5.5-22	A1	**36DUDC5EE**		30	**37DUDC5EED**		30A/600V	**37DUDC5EEF**		30	**37DUDC5EEP**	
	30	(1¾)	10–40	A1	**36EUEC5EE**		60	**37EUEC5EED**		60A/600V	**37EUEC5EEF**		50	**37EUEC5EEP**	
	40	2	13–52	B	**36FUFC5EE**		100	**37FUFC5EED**		100A/600V	**37FUFC5EEF**		50	**37FUFC5EEP**	
	60	(2½)	25–100	B	**36GUGC5EE**		100	**37GUGC5EED**		100A/600V	**37GUGC5EEF**		100	**37GUGC5EEP**	
	75	3	25–100	B	**36HUGC5EE**		200	**37HUGC5EED**		200A/600V	**37HUGC5EEF**		125	**37HUGC5EEP**	
	100	(3½)	50–200	B	**36IUHC5EE**		200	**37IUHC5EED**		200A/600V	**37IUHC5EEF**		150	**37IUHC5EEP**	
	150	4	50–200	B	**36JUHC5EE**		400	**37JUHC5EED**		400A/600V	**37JUHC5EEF**		250	**37JUHC5EEP**	
	200	5	55–250	—	**36LPSC5EE**		400	**37LPSC5EED**		400A/600V	**37LPSC5EEF**		250	**37LPSC5EEP**	
	300	5	55–250	—	**36LPUC5EE**		600	**37LPUC5EED**		600A/600V	**37LPUC5EEF**		400	**37LPUC5EEP**	
	700	6	160–630	—	**37MPXC5EF**		1600	**37MPXC5EED**		1600A/600V	**37MPXC5EEF**		1600	**37MPXC5EEP**	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

Ordering Information

- ► Field Modification Kits see page 17-102.
- ► Factory Modifications see page 17-114.
- ► Dimensions see page 17-150.
- ► Wiring Diagrams see page 17-165.
- ► Replacement Parts see page 17-120.

Coil and Control Voltage

The coil voltage will always match the motor voltage. As standard, a CPT is supplied and 120V control voltage is utilized. To change to 120V voltage (CPT not supplied), change the 9th character to "F". To change to 24VAC voltage (CPT not supplied), change the 9th character to "J".

NEMA 4/4X Stainless Steel Enclosures

			Overload Relay		Non-Combination		Combination Non-Fusible Disconnect			Combination Fusible Disconnect			Combination Circit Breaker		
Motor Voltage	Max Hp	NEMA Size (1/2 Size)	Amp Range	Frame Size	Catalog Number	List Price $	Disc. Amp Rating	Catalog Number	List Price $	Fuse Clip Amp/Volt Rating	Catalog Number	List Price $	Circuit Breaker Amps	Catalog Number	List Price $
	10	1	10–40	A1	**36DUEC6WD**		60	**37DUEC6WDD**		60A/250V	**37DUEC6WDF**		50	**37DUEC6WDP**	
	15	(1¾)	10–40	A1	**36EUEC6WD**		100	**37EUEC6WDD**		100A/250V	**37EUEC6WDF**		100	**37EUEC6WDP**	
	20	2	13–52	B	**36FUFC6WD**		100	**37FUFC6WDD**		100A/250V	**37FUFC6WDF**		100	**37FUFC6WDP**	
200	30	(2½)	25–100	B	**36GUGC6WD**		200	**37GUGC6WDD**		200A/250V	**37GUGC6WDF**		125	**37GUGC6WDP**	
	40	3	25–100	B	**36HUGC6WD**		200	**37HUGC6WDD**		200A/250V	**37HUGC6WDF**		150	**37HUGC6WDP**	
	50	(3½)	50–200	B	**36IUHC6WD**		200	**37IUHC6WDD**		200A/250V	**37IUHC6WDF**		250	**37IUHC6WDP**	
	60	4	50–200	B	**36JUHC6WD**		400	**37JUHC6WDD**		400A/250V	**37JUHC6WDF**		250	**37JUHC6WDP**	
	10	1	10–40	A1	**36DUEC2WG**		60	**37DUEC2WGD**		60A/250V	**37DUEC2WGF**		50	**37DUEC2WGP**	
	15	(1¾)	10–40	A1	**36EUEC2WG**		60	**37EUEC2WGD**		60A/250V	**37EUEC2WGF**		50	**37EUEC2WGP**	
	25	2	13–52	B	**36FUFC2WG**		100	**37FUFC2WGD**		100A/250V	**37FUFC2WGF**		100	**37FUFC2WGP**	
230	30	(2½)	25–100	B	**36GUGC2WG**		200	**37GUGC2WGD**		200A/250V	**37GUGC2WGF**		100	**37GUGC2WGP**	
	50	3	25–100	B	**36HUGC2WG**		200	**37HUGC2WGD**		200A/250V	**37HUGC2WGF**		150	**37HUGC2WGP**	
	60	(3½)	50–200	B	**36IUHC2WG**		200	**37IUHC2WGD**		200A/250V	**37IUHC2WGF**		250	**37IUHC2WGP**	
	75	4	50–200	B	**36JUHC2WG**		400	**37JUHC2WGD**		400A/250V	**37JUHC2WGF**		250	**37JUHC2WGP**	
	15	1	5.5-22	A1	**36DUDC4WH**		30	**37DUDC4WHD**		30A/600V	**37DUDC4WHF**		30	**37DUDC4WHP**	
	30	(1¾)	10–40	A1	**36EUEC4WH**		60	**37EUEC4WHD**		60A/600V	**37EUEC4WHF**		50	**37EUEC4WHP**	
	40	2	13–52	B	**36FUFC4WH**		100	**37FUFC4WHD**		100A/600V	**37FUFC4WHF**		100	**37FUFC4WHP**	
460	60	(2½)	25–100	B	**36GUGC4WH**		200	**37GUGC4WHD**		200A/600V	**37GUGC4WHF**		100	**37GUGC4WHP**	
	75	3	25–100	B	**36HUGC4WH**		200	**37HUGC4WHD**		200A/600V	**37HUGC4WHF**		125	**37HUGC4WHP**	
	100	(3½)	50–200	B	**36IUHC4WH**		200	**37IUHC4WHD**		200A/600V	**37IUHC4WHF**		150	**37IUHC4WHP**	
	150	4	50–200	B	**36JUHC4WH**		400	**37JUHC4WHD**		400A/600V	**37JUHC4WHF**		250	**37JUHC4WHP**	
	15	1	5.5-22	A1	**36DUDC5WE**		30	**37DUDC5WED**		30A/600V	**37DUDC5WEF**		30	**37DUDC5WEP**	
	30	(1¾)	10–40	A1	**36EUEC5WE**		60	**37EUEC5WED**		60A/600V	**37EUEC5WEF**		50	**37EUEC5WEP**	
	40	2	13–52	B	**36FUFC5WE**		100	**37FUFC5WED**		100A/600V	**37FUFC5WEF**		50	**37FUFC5WEP**	
575	60	(2½)	25–100	B	**36GUGC5WE**		100	**37GUGC5WED**		100A/600V	**37GUGC5WEF**		100	**37GUGC5WEP**	
	75	3	25–100	B	**36HUGC5WE**		200	**37HUGC5WED**		200A/600V	**37HUGC5WEF**		125	**37HUGC5WEP**	
	100	(3½)	50–200	B	**36IUHC5WE**		200	**37IUHC5WED**		200A/600V	**37IUHC5WEF**		150	**37IUHC5WEP**	
	150	4	50–200	B	**36JUHC5WE**		400	**37JUHC5WED**		400A/600V	**37JUHC5WEF**		250	**37JUHC5WEP**	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

Ordering Information

- ► Field Modification Kits see page 17-102.
- ► Factory Modifications see page 17-114.
- ► Dimensions see page 17-150.
- ► Wiring Diagrams see page 17-165.
- ► Replacement Parts see page 17-120.

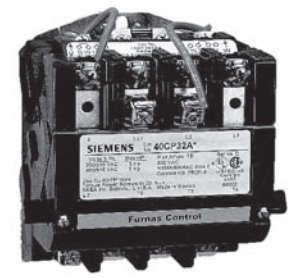
Coil and Control Voltage

The coil voltage will always match the motor voltage. As standard, a CPT is supplied and 120V control voltage is utilized. To change to 120V voltage (CPT not supplied), change the 9th character to "F". To change to 24VAC voltage (CPT not supplied), change the 9th character to "J".

NEMA 12, NEMA 3/3R

Motor Voltage	Max Hp	NEMA Size (1/2 Size)	Overload Relay		Non-Combination		Combination Non-Fusible Disconnect			Combination Fusible Disconnect			Combination Circit Breaker		
			Amp Range	Frame Size	Catalog Number	List Price $	Disc. Amp Rating	Catalog Number	List Price $	Fuse Clip Amp/Volt Rating	Catalog Number	List Price $	Circuit Breaker Amps	Catalog Number	List Price $
200	10	1	10–40	A1	**36DUEC6ND**		60	**37DUEC6NDD**		60A/250V	**37DUEC6NDF**		50	**37DUEC6NDP**	
	15	(1¾)	10–40	A1	**36EUEC6ND**		100	**37EUEC6NDD**		100A/250V	**37EUEC6NDF**		100	**37EUEC6NDP**	
	20	2	13–52	B	**36FUFC6ND**		100	**37FUFC6NDD**		100A/250V	**37FUFC6NDF**		100	**37FUFC6NDP**	
	30	(2½)	25–100	B	**36GUGC6ND**		200	**37GUGC6NDD**		200A/250V	**37GUGC6NDF**		125	**37GUGC6NDP**	
	40	3	25–100	B	**36HUGC6ND**		200	**37HUGC6NDD**		200A/250V	**37HUGC6NDF**		150	**37HUGC6NDP**	
	50	(3½)	50–200	B	**36IUHC6ND**		200	**37IUHC6NDD**		200A/250V	**37IUHC6NDF**		250	**37IUHC6NDP**	
	60	4	50–200	B	**36JUHC6ND**		400	**37JUHC6NDD**		400A/250V	**37JUHC6NDF**		250	**37JUHC6NDP**	
	75	5	55–250	—	**36LPSC6ND**		400	**37LPSC6NDD**		400A/250V	**37LPSC6NDF**		400	**37LPSC6NDP**	
	150	5	55–250	—	**36LPUC6ND**		600	**37LPUC6NDD**		600A/250V	**37LPUC6NDF**		600	**37LPUC6NDP**	
	300	6	160–630	—	**36MPXC6ND**		1200	**37MPXC6NDD**		1200A/250V	**37MPXC6NDF**		1200	**37MPXC6NDP**	
230	10	1	10–40	A1	**36DUEC2NG**		60	**37DUEC2NGD**		60A/250V	**37DUEC2NGF**		50	**37DUEC2NGP**	
	15	(1¾)	10–40	A1	**36EUEC2NG**		60	**37EUEC2NGD**		60A/250V	**37EUEC2NGF**		50	**37EUEC2NGP**	
	25	2	13–52	B	**36FUFC2NG**		100	**37FUFC2NGD**		100A/250V	**37FUFC2NGF**		100	**37FUFC2NGP**	
	30	(2½)	25–100	B	**36GUGC2NG**		200	**37GUGC2NGD**		200A/250V	**37GUGC2NGF**		100	**37GUGC2NGP**	
	50	3	25–100	B	**36HUGC2NG**		200	**37HUGC2NGD**		200A/250V	**37HUGC2NGF**		150	**37HUGC2NGP**	
	60	(3½)	50–200	B	**36IUHC2NG**		200	**37IUHC2NGD**		200A/250V	**37IUHC2NGF**		250	**37IUHC2NGP**	
	75	4	50–200	B	**36JUHC2NG**		400	**37JUHC2NGD**		400A/250V	**37JUHC2NGF**		250	**37JUHC2NGP**	
	100	5	55–250	—	**36LPSC2NG**		400	**37LPSC2NGD**		400A/250V	**37LPSC2NGF**		400	**37LPSC2NGP**	
	150	5	55–250	—	**36LPUC2NG**		600	**37LPUC2NGD**		600A/250V	**37LPUC2NGF**		600	**37LPUC2NGP**	
	350	6	160–630	—	**36MPXC2NG**		1200	**37MPXC2NGD**		1200A/250V	**37MPXC2NGF**		1200	**37MPXC2NGP**	
460	15	1	5.5-22	A1	**36DUDC4NH**		30	**37DUDC4NHD**		30A/600V	**37DUDC4NHF**		30	**37DUDC4NHP**	
	30	(1¾)	10–40	A1	**36EUEC4NH**		60	**37EUEC4NHD**		60A/600V	**37EUEC4NHF**		50	**37EUEC4NHP**	
	40	2	13–52	B	**36FUFC4NH**		100	**37FUFC4NHD**		100A/600V	**37FUFC4NHF**		100	**37FUFC4NHP**	
	60	(2½)	25–100	B	**36GUGC4NH**		200	**37GUGC4NHD**		200A/600V	**37GUGC4NHF**		100	**37GUGC4NHP**	
	75	3	25–100	B	**36HUGC4NH**		200	**37HUGC4NHD**		200A/600V	**37HUGC4NHF**		125	**37HUGC4NHP**	
	100	(3½)	50–200	B	**36IUHC4NH**		200	**37IUHC4NHD**		200A/600V	**37IUHC4NHF**		150	**37IUHC4NHP**	
	150	4	50–200	B	**36JUHC4NH**		400	**37JUHC4NHD**		400A/600V	**37JUHC4NHF**		250	**37JUHC4NHP**	
	200	5	55–250	—	**36LPSC4NH**		400	**37LPSC4NHD**		400A/600V	**37LPSC4NHF**		400	**37LPSC4NHP**	
	300	5	55–250	—	**36LPUC4NH**		600	**37LPUC4NHD**		600A/600V	**37LPUC4NHF**		600	**37LPUC4NHP**	
	700	6	160–630	—	**36MPXC4NH**		1600	**37MPXC4NHD**		1600A/600V	**37MPXC4NHF**		1200	**37MPXC4NHP**	
575	15	1	5.5-22	A1	**36DUDC5NE**		30	**37DUDC5NED**		30A/600V	**37DUDC5NEF**		30	**37DUDC5NEP**	
	30	(1¾)	10–40	A1	**36EUEC5NE**		60	**37EUEC5NED**		60A/600V	**37EUEC5NEF**		50	**37EUEC5NEP**	
	40	2	13–52	B	**36FUFC5NE**		100	**37FUFC5NED**		100A/600V	**37FUFC5NEF**		50	**37FUFC5NEP**	
	60	(2½)	25–100	B	**36GUGC5NE**		100	**37GUGC5NED**		100A/600V	**37GUGC5NEF**		100	**37GUGC5NEP**	
	75	3	25–100	B	**36HUGC5NE**		200	**37HUGC5NED**		200A/600V	**37HUGC5NEF**		125	**37HUGC5NEP**	
	100	(3½)	50–200	B	**36IUHC5NE**		200	**37IUHC5NED**		200A/600V	**37IUHC5NEF**		150	**37IUHC5NEP**	
	150	4	50–200	B	**36JUHC5NE**		400	**37JUHC5NED**		400A/600V	**37JUHC5NEF**		250	**37JUHC5NEP**	
	200	5	55–250	—	**36LPSC5NE**		400	**37LPSC5NED**		400A/600V	**37LPSC5NEF**		250	**37LPSC5NEP**	
	300	5	55–250	—	**36LPUC5NE**		600	**37LPUC5NED**		600A/600V	**37LPUC5NEF**		400	**37LPUC5NEP**	
	700	6	160–630	—	**37MPXC5NF**		1600	**37MPXC5NED**		1600A/600V	**37MPXC5NEF**		1600	**37MPXC5NEP**	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).



Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see pages 17-131 open and 17-141 enclosed.
- Wiring Diagrams see page 17-166.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24	J
120	F
110–120/220–240①	A
200–208	D
220–240	G
277	L
220–240/440–480①	C
440–480	H
575–600	E

For other voltages and frequencies, see Factory Modifications page 17-114.

Open Type & Standard Width Enclosure, 3-Phase, 3-Pole

Max Hp							Enclosure									
							Open Type④		NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight Corrosion Resistant 304 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	Contactor Amp Rating	NEMA Size	Half Size	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
1½	1½	2	2	9	00	—	40BP32A*		40BP32B*		Use Size 0	—	Use Size 0	—	Use Size 0	—
3	3	5	5	18	0	—	40CP32A*		40CP32B*		40CP32W*		40CP32F*		40CP320*	
7½	7½	10	10	27	1	—	40DP32A*		40DP32B*		40DP32W*		40DP32F*		40DP320*	
10	10	15	15	40	—	1¾	40EP32A*		40EP32B*		40EP32W*		40EP32F*		40EP320*	
10	15	25	25	45	2	—	40FP32A*		40FP32B*		40FP32W*		40FP32F*		40FP320*	
15	20	30	30	60	—	2½	40GP32A*		40GP32B*		40GP32W*		40GP32F*		40GP320*	
25	30	50	50	90	3	—	40HP32A*		40HP32B*		40HP32W*		40HP32F*		40HP320*	
30	40	75	75	115	—	3½	40IP32A*		40IP32B*		40IP32W*		40IP32F*		40IP320*	
40	50	100	100	135	4	—	40JG32A*		40JG32B*		40JG32W*		40JG32F*		40JG320*	
75	100	200	200	270	5	—	40LP32A*		40LP32B*		—	—	—	—	40LP320*	
150	200	400	400	540	6	—	40MP32A*		40MP32B*		—	—	—	—	40MP320*	
—	300	600	600	810	7②⑤	—	40NH32A*		40NH32B*		—	—	—	—	40NH320*	
—	450	900	900	1215	8③⑤	—	40PH32A*		40PH32B*		—	—	—	—	40PH320*	

Extra Wide Enclosure, 3-Phase, 3-Pole

Max Hp							Enclosure					
							NEMA 1④ General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight Corrosion Resistant 304 Stainless Steel		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	Contactor Amp Rating	NEMA Size	Half Size	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
1½	1½	2	2	9	00	—	40BP82B*		Use Size 0	—	Use Size 0	—
3	3	5	5	18	0	—	40CP82B*		40CP82W*		40CP820*	
7½	7½	10	10	27	1	—	40DP82B*		40DP82W*		40DP820*	
10	10	15	15	40	—	1¾	40EP82B*		40EP82W*		40EP820*	
10	15	25	25	45	2	—	40FP82B*		40FP82W*		40FP820*	
15	20	30	30	60	—	2½	40GP82B*		40GP82W*		40GP820*	
25	30	50	50	90	3	—	40HP82B*		40HP82W*		40HP820*	
30	40	75	75	115	—	3½	40IP82B*		40IP82W*		40IP820*	
40	50	100	100	135	4	—	40JG82B*		40JG82W*		40JG820*	

Note: Hp's shown above are based on the overload amp range for the FLA's (per the National Electric Code) of typical industrial motors. All starter sizes carry one maximum Hp rating.

① Dual voltage coils not available in size 5-8 starters.

② Only available
F coil 100-250V AC 50/60Hz, or DC
H coil 150-500V AC 50/60Hz, or DC

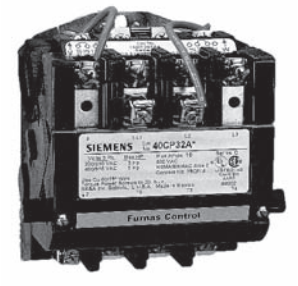
③ Only available
F coil100-250V AC 50/60Hz, or DC

④

Standard Auxiliary Contacts			
Type	Size (3rd Character)	Configuration	Internal / External
All FVNR Starters & Contactors	B Thru E	1N.O.	Internal
	F Thru J	1N.O.	External
	L Thru M	2N.O., 2N.C.	External
	N Thru P	1N.O., 1N.C.	External

⑤ Lugs are not included, refer to page 17-106.

Heavy Duty Contactors



Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see pages 17-131 open and 17-141 enclosed.
- Wiring Diagrams see page 17-166.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24	J
120	F
110–120/220–240①	A
200–208	D
220–240	G
277	L
220–240/440–480①	C
440–480	H
575–600	E

For other voltages and frequencies, see Factory Modifications page 17-114.

Open Type & Standard Width Enclosure, Single Phase, 2-Pole②③

Max Hp					Enclosure									
					Open Type④		NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight Corrosion Resistant		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
115 Volts	208/230 Volts	Contactor Amp Rating	NEMA Size	Half Size	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
⅓	1	9	00	—	**40BP12A***		**40BP12B***		Use Size 0	—	Use Size 0	—	Use Size 0	—
1	2	18	0	—	**40CP12A***		**40CP12B***		**40CP12W***		**40CP12F***		**40CP120***	
2	3	27	1	—	**40DP12A***		**40DP12B***		**40DP12W***		**40DP12F***		**40DP120***	
3	5	35	1P	—	**40EP12A***		**40EP12B***		**40EP12W***		**40EP12F***		**40EP120***	
3	7½	45	2	—	**40FP12A***		**40FP12B***		**40FP12W***		**40FP12F***		**40FP120***	
5	10	60	—	2½	**40GP12A***		**40GP12B***		**40GP12W***		**40GP12F***		**40GP120***	
7½	15	90	3	—	**40HP12A***		**40HP12B***		**40HP12W***		**40HP12F***		**40HP120***	

Open Type & Standard Width Enclosure, 4-Pole

Max Hp							Enclosure									
							Open Type		NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight Corrosion Resistant		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	Contactor Amp Rating	NEMA Size	Half Size	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
⅓	1½	2	2	9	00	—	**40BP22A***		**40BP22B***		Use Size 0	—	Use Size 0	—	Use Size 0	—
2	3	5	5	18	0	—	**40CP22A***		**40CP22B***		**40CP22W***		**40CP22F***		**40CP220***	
3	7½	10	10	27	1	—	**40DP22A***		**40DP22B***		**40DP22W***		**40DP22F***		**40DP220***	
5	10	15	15	40	—	1¾	**40EP22A***		**40EP22B***		**40EP22W***		**40EP22F***		**40EP220***	

Vacuum Contactors, 3-Phase, 3-Pole①

Max Hp				Contactor Amp Rating	NEMA Size	Open Type	
200V	230V	460V	575V			Catalog Number	List Price $
40	50	100	100	135	4	**40JV32A***	
75	100	200	200	270	5	**40LV32A***	
150	200	400	400	540	6	**40MV32A***	

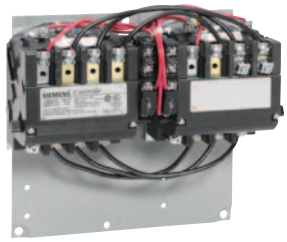
Note: Hp's shown above are based on the overload amp range for the FLA's (per the National Electric Code) of typical industrial motors. All starter sizes carry one maximum Hp rating.

① Dual voltage coils not available for vacuum contactors. Refer to Page 17-114 for a complete list of available coil voltages.

② To order single phase contactor in an extra wide enclosure, order the enclosure kit from Page 17-111 and the open style contactor as separate items.

③ Coils D, F, or G will be wired for incoming voltage. J coil will be wired for separate source. Coils E, H, and L do not apply to single phase starters.

④ 1 NO Auxiliary.



Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see pages 17-132 open and 17-145 enclosed.
- Wiring Diagrams see page 17-166.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24	J
120	F
110–120/220–240①	A
200–208	D
220–240	G
277	L
220–240/440–480①	C
440–480	H
575–600	E

For other voltages and frequencies, see Factory Modifications page 17-114.

Open Type & Standard Width Enclosure, 3-Phase, 3-Pole

Max Hp				Cont-actor Amp Rating	NEMA Size	Half Size	Enclosure									
							Open Type⑤		NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight Corrosion Resistant 304 Stainless Steel		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts				Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
½	½	2	2	9	00	—	**43BP32A***		**43BP32B***		Use Size 0	—	Use Size 0	—	Use Size 0	—
3	3	5	5	18	0	—	**43CP32A***		**43CP32B***		**43CP32W***		**43CP32F***		**43CP320***	
7½	7½	10	10	27	1	—	**43DP32A***		**43DP32B***		**43DP32W***		**43DP32F***		**43DP320***	
10	10	15	15	40	—	1¾	**43EP32A***		**43EP32B***		**43EP32W***		**43EP32F***		**43EP320***	
10	15	25	25	45	2	—	**43FP32A***		**43FP32B***		**43FP32W***		**43FP32F***		**43FP320***	
15	20	30	30	60	—	2½	**43GP32A***		**43GP32B***		**43GP32W***		**43GP32F***		**43GP320***	
25	30	50	50	90	3	—	**43HP32A***		**43HP32B***		**43HP32W***		**43HP32F***		**43HP320***	
30	40	75	75	115	—	3½	**43IP32A***		**43IP32B***		**43IP32W***		**43IP32F***		**43IP320***	
40	50	100	100	135	4	—	**43JG32A***		**43JG32B***		**43JG32W***		**43JG32F***		**43JG320***	
75	100	200	200	270	5	—	**43LP32A***		**43LP32B***		—	—	—	—	**43LP320***	
100	200	400	400	540	6	—	**43MP32A***		**43MP32B***		—	—	—	—	**43MP320***	
—	300	600	600	810	7③	—	**43NH32A***		**43NH32B***		—	—	—	—	**43NH320***	
—	450	900	900	1215	8④	—	**43PH32A***		—	—		—	—	—	—	—

Open Type & Standard Width Enclosure, Single Phase, 3-Wire, 2-Pole②

Max Hp		Cont-actor Amp Rating	NEMA Size	Enclosure									
				Open Type		NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight Corrosion Resistant		NEMA 4X Fiberglass Watertight, Dust-tight Corrosion Resistant		NEMA 3/3R/4/12 Watertight, Dust-tight, Weatherproof	
115 Volts	208/ 230 Volts			Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
⅓	1	9	00	**43BP12A***		**43BP12B***		Use Size 0	—	Use Size 0	—	Use Size 0	—
1	2	18	0	**43CP12A***		**43CP12B***		**43CP12W***		**43CP12F***		**43CP120***	
2	3	27	1	**43DP12A***		**43DP12B***		**43DP12W***		**43DP12F***		**43DP120***	
3	5	35	1P	**43EP12A***		**43EP12B***		**43EP12W***		**43EP12F***		**43EP120***	

Note: Hp's shown above are based on the overload amp range for the FLA's (per the National Electric Code) of typical industrial motors. All starter sizes carry one maximum Hp rating.

① Dual voltage coils not available in size 5–8 starters.

② Coils D, F, or G will be wired for incoming voltage. J coil will be wired for separate source. Coils E, H, and L do not apply to single phase starters.

③ Only available
F coil 100-250V AC 50/60Hz, or DC
H coil 150-500V AC 50/60Hz, or DC

④ Only available
F coil 100-250V AC 50/60Hz, or DC

⑤ Auxiliary contacts
43B-43E 4th pole built-in
43F-43J 2 NO & 2 NC

Class 42 & 45 Product Nomenclature

Class 45
DP Contactor

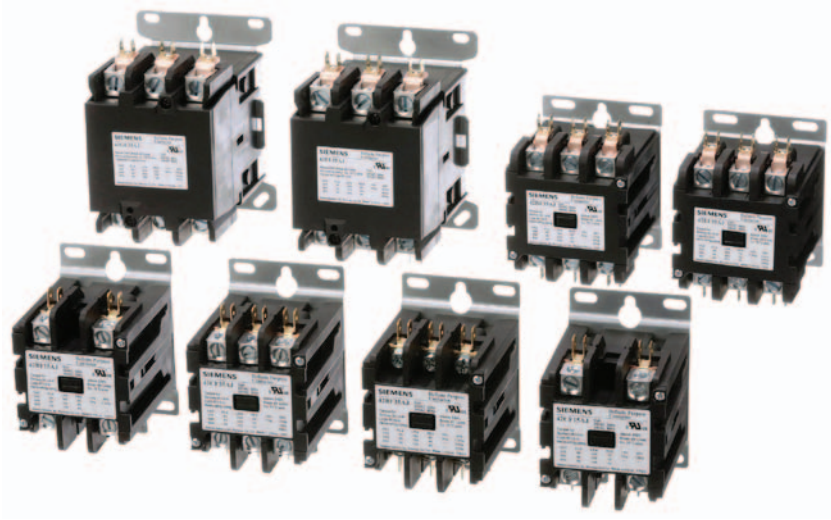
Information shown on nomenclature sheets is for reference only to identify devices from existing catalog numbers. This information is not to be used for the creation of new catalog numbers.

45	C	G	2	0	A	J	A
CLASS	**AMP RATING**	**MODEL**	**POWER POLES**	**NC POWER POLES**	**ENCLOSURE**	**COIL**	**STD FEATURES**
45 DP Contactor	**E** 30 **G** 40	**G**	**1** 1 power pole **2** 2 power poles	**0** None	**A** Open	**F** 120V, 60 HZ 110V, 50 HZ **G** 208-240V, 60 HZ 190-220V, 50 HZ **H** 440-480V, 60 HZ 380-440V, 50 HZ **J** 24V, 60 HZ 24V, 50 HZ **L** 277V, 60 HZ	**A** Jumper Bar * Class F coil standard. Binding head screws (30A)/ lugs (40A) and quad quick connect standard. * Contact cover comes standard.

Class 42
DP Contactor

Information shown on nomenclature sheets is for reference only to identify devices from existing catalog numbers. This information is not to be used for the creation of new catalog numbers.

42	B	F	3	5	A	J
CLASS	**AMP RATING**	**MODEL**	**POWER POLES**	**CONTROL CIRCUIT**	**ENCLOSURE**	**COIL**
42 DP Contactor	**B** 30 **C** 40 **D** 50 **E** 60 **F** 75 **G** 90	**F** **E*** *75-90 amp only	**1** 2 power poles **3** 3 power poles	**5** Without auxiliary contact	**A** Open	**F** 110V, 50 HZ 120V, 60 HZ **G** 190-220V, 50 HZ 208-240V, 60 HZ **J** 24V, 50 HZ 24V, 60 HZ **H** 380-440V, 50 HZ 440-480V, 60 HZ **L** 277V, 60 HZ



Class 45

45EG10AJA

45GG10AJA

45EG20AJ

45GG20AJ

Features

- Power Terminations:
  - Quad Quick Connects
  - 30A: Screws
  - ≥40A: Box Lugs
- Compact Size
- Durable Metal Back Plate
- Enclosed Body and Coil
- One Pole Version Includes Shunt Bar
- Quiet Operation
- Weld-Resistant Silver Cadmium Oxide Contacts
- Visual Contact Position Indication
- Class F Coil Insulation

Class 42

42BF35AJ

42CF35AJ

42CF15AJ

42FE35AJ

Features

- Power Terminations:
  - Quick Connects
  - 30A: Screws
  - ≥40A: Box Lugs
- Compact Size
- Durable Metal Back Plate
- Quiet Operation
- Weld-Resistant Silver Cadmium Oxide Contacts
- Visual Contact Position Indication
- Class F Coil Insulation
- Snap-On Auxiliary Contacts
- Replacement Coils Available

Approvals & Standards:

- c UL us
- ARI 780 & 790
- Canadian Heater Rated
- SCCR 600 VAC
- UL File E14900

Ordering Information

- Use complete catalog number. Replace the (●) with letter from the coil table on this page
- For additional information see www.usa.siemens.com/controls

Coil Selection (●)

60Hz Voltage	50Hz Voltage	Letter
24	24	J
110–120	110	F
208–240	190–220	G
277	240	L
440–480	380–440	H①

① Not available on Class 42 2-pole units

Contactors

Class 45 Contactors

FLA	Locked Rotor Amps 240V	277V	480V	600V	Non Inductive Amps	Poles	Catalog Number
30	180	180	—	—	40	1	**45EG10A●A**
40	240	240	—	—	50	1	**45GG10A●A**
30	180	—	150	120	40	2	**45EG20A●**
40	240	—	200	160	50	2	**45GG20A●**

Class 42 Contactors

FLA	Locked Rotor Amps 240V	480V	600V	Non Inductive Amps	Horsepower 1 PH 120 V	1 PH 240 V	3 PH 240V	3 PH 480V	3 PH 600V	Poles	Catalog Number
30	180	150	120	40	2	3	7.5	—	—	2	**42BF15A●**
40	240	200	160	50	3	5	10	—	—	2	**42CF15A●**
30	180	150	120	40	—	3	7.5	10	15	3	**42BF35A●**
40	240	200	160	50	—	5	10	15	20	3	**42CF35A●**
50	300	250	200	63	—	5	15	20	25	3	**42DF35A●**
60	360	300	240	75	—	7.5	20	25	30	3	**42EF35A●**
75	450	375	300	94	—	15	25	40	40	3	**42FE35A●**
90	540	450	360	120	—	15	30	50	50	3	**42GE35A●**

Accessories

Auxiliary Contacts

Description	Class	Contactor FLA	Auxiliary Contact Ratings	Auxiliary Contacts	Catalog Number
Snap-on Side Mounted Auxiliary Contacts **49ACR0**	42	30-60	NEMA A600 10A 600VAC	1 NO	**49ACR0**
				1 NC	**49ACRC**
				1 NO & 1 NC	**49ACR6**
				2 NO	**49ACR7**
				2 NC	**49ACR8**
			11A 1/2HP 125-250VAC, 0.6A 125VDC, 0.3A 250VDC	1 SPDT	**49D36098001**
				2 SPDT	**49D36098003**
	42	75-90	NEMA A600 10A 600V	1 NO	**49D22125001**
				1 NC	**49D22125002**
			11A 1/2HP 125-250VAC, 0.6A 125VDC, 0.3A 250VDC	1 SPDT	**49CE42SPDT**

Replacement Coils

Class 42

Description	Third Character of Cat. No.	Fourth Character of Cat. No.	Volts 60 Hz	Volts 50 Hz	Catalog Number
75D70646AF	B, C	F	24	24	**75D70646AJ**
			110-120	110	**75D70646AF**
			208-240	190-220	**75D70646AG**
			277	240	**75D70646AL**
			440-480	380-440	**75D70646AH**
75D70550AF	D, E	F	24	24	**75D70550AJ**
			110-120	110	**75D70550AF**
			208-240	190-220	**75D70550AG**
			277	240	**75D70550AL**
			440-480	380-440	**75D70550AH**
75D54772AF	F, G	E	24	24	**75D54772AJ**
			110-120	110	**75D54772AF**
			208-240	190-220	**75D54772AG**
			277	240	**75D54772AL**
			440-480	380-440	**75D54772AH**

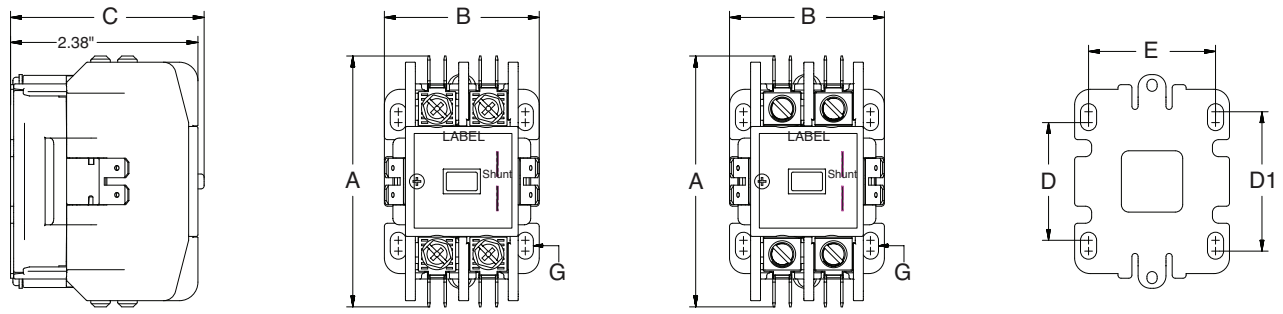
Catalog Numbers

Poles	Amps	Coil Volts	SIEMENS	ABB	Allen Bradley	Arrow Hart	Eaton Cutler Hammer	Fasco	General Electric	Joslyn Clark	Products Unlimited	Square D	Steveco
1	30	24	**45EG10AJA**	DP30C1P-F	400-DP30NJ1	C301NU10	C25CNB130T	1S30-A	CR453CC3HAA	A77-306653A-3	3100-15Q2	8910DP31V14	94388
		120	**45EG10AFA**	DP30C1P-1	400-DP30ND1	C301NU20	C25CNB130A	1S30-B	CR453CC3AAA	A77-306653A-1	3100-15T2	8910DP31V02	94389
		208/240	**45EG10AGA**	DP30C1P-2	400-DP30NA1	C301NU30	C25CNB130B	1S30-C	CR453CC3BAA	A77-3066531-2	3100-15U2	8910DP31V09	94390
	40	24	**45GG10AJA**	—	—	—	C25CNB140T	—	—	—	3100-15Q19	8910DP41V14	—
		120	**45GG10AFA**	—	—	—	C25CNB140A	—	—	—	3100-15T19	8910DP41V02	—
		208/240	**45GG10AGA**	—	—	—	C25CNB140B	—	—	—	3100-15U19	8910DP41V09	—
2	30	24	**45EG20AJ**	—	400-DP30NJ2	C302U10	C25BNB230T	2S30-A	CR453CC2HAA	A77-306657A-3	3100-20Q6	8910DPA32V14	90244
		120	**45EG20AF**	—	400-DP30ND2	C302U20	C25BNB230A	2S30-B	CR453CC2AAA	A77-306657A-1	3100-20T6	8910DPA32V02	90245
		208/240	**45EG20AG**	—	400-DP30NA2	C302U30	C25BNB230B	2S30-C	CR453CC2BAA	A77-306657A-2	3100-20U6	8910DPA32V09	90246
		277	**45EG20AL**	—	400-DP30NF2	C302050	C25BNB230H	—	CR453CC2FAA	—	3100-20V6	8910DPA32V04	—
	40	24	**45GG20AJ**	—	—	CA01NU10	C25BNB240T	—	CR453CE2HBB	—	3100-20Q18	8910DP42V14	—
		120	**45GG20AF**	—	—	CA01NU20	C25BNB240A	—	CR453CE2ABB	—	3100-20T18	8910DP42V02	—
		208/240	**45GG20AG**	—	—	CA01NU30	C25BNB240B	—	CR453CE2BBB	—	3100-20U18	8910DP42V09	—
3	30	24	**42BF35AJ**	DP30C3P-F	400-DP30NJ3	ACC330UM10	C25DND330T	3M30-A	CR453AC3HAA	A77-309044A-3	3100-30Q9	8910DPA33V14	90163
		120	**42BF35AF**	DP30C3P-1	400-DP30ND3	ACC330UM20	C25DND330A	3M30-B	CR453AC3AAA	A77-309044A-1	3100-30T99	8910DPA33V02	90164
		208/240	**42BF35AG**	DP30C3P-2	400-DP30NA3	ACC330UM30	C25DND330B	3M30-C	CR453AC3BAA	A77-309044A-2	3100-30U9	8910DPA33V03	90165
	40	24	**42CF35AJ**	DP40C4P-F	400-DP40NJ3	ACC430UM10	C25DNF340T	3M40-A	CR453AD3HBB	A77-309046A-3	3100-30Q10	8910DPA43V14	90170
		120	**42CF35AF**	DP40C4P-1	400-DP40ND3	ACC430UM20	C25DNF340A	3M40-B	CR453AD3ABB	A77-309046A-1	3100-30T10	8910DPA43V02	90171
		208/240	**42CF35AG**	DP40C4P-2	400-DP40NA3	ACC430UM30	C25DNF340B	3M40-C	CR453AD3BBB	A77-309046A-2	3100-30U10	8910DPA43V09	90172
	50	24	**42DF35AJ**	—	400-DP50NJ3	ACC530U10	C25FNF350T	3L50-A	CR353FE3BH1	A77-288514A-3	3100-30Q16	8910DPA53V14	92459
		120	**42DF35AF**	—	400-DP50ND3	ACC530U20	C25FNF350A	3L50-B	CR353FE3BA1	A77-288514A-1	3100-30T16	8910DPA53V02	92460
		208/240	**42DF35AG**	—	400-DP50NA3	ACC530U30	C25FNF350B	3L50-C	CR353FE3BB1	A77-288514A-2	3100-30U16	8910DPA53V09	92461
	60	24	**42EF35AJ**	DP60C3P-F	400-DP60NJ3	ACC630U10	C25FNF360T	3L60-A	CR353FF3BH1	A77-288517A-3	3100-30Q17	8910DPA63V14	92462
		120	**42EF35AF**	DP60C3P-1	400-DP60ND3	ACC630U20	C25FNF360A	3L60-B	CR353FF3BA1	A77-288517A-1	3100-30T17	8910DPA63V02	92463
		208/240	**42EF35AG**	DP60C3P-2	400-DP60NA3	ACC630U30	C25FNF360B	3L60-C	CR353FF3BB1	A77-288517A-2	3100-30U17	8910DPA63V09	92464
	75	24	**42FE35AJ**	—	400-DP75NJ3	ACC730U10	C25FNF375T	—	CR353EG3BH1	A77-288520A-3	3186-30I75	8910DPA73V14	92465
		120	**42FE35AF**	—	400-DP75ND3	ACC730U20	C25FNF375A	—	CR353EG3BA1	A77-288520A-1	3186-30J75	8910DPA73V02	92467
		208/240	**42FE35AG**	—	400-DP75NA3	ACC730U30	C25FNF375B	—	CR353EG3BB1	A77-288520A-2	3186-30K75	8910DPA73V09	92468
	90	24	**42GE35AJ**	—	—	—	C25GNF390T	—	CR353EH3BH1	—	3186-30I90	8910DPA93V14	92469
		120	**42GE35AF**	—	—	ACC930U20	C25GNF390A	—	CR353EH3BA1	—	3186-30J90	8910DPA93V02	—
		208/240	**42GE35AG**	—	—	ACC930U30	C25GNF390B	—	CR353EH3BB1	—	3186-30K90	8910DPA93V09	—

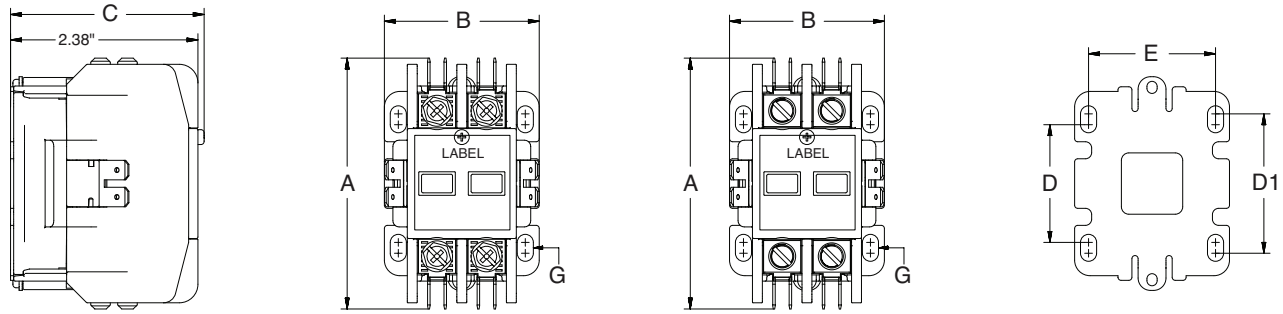
This cross reference does not purport to cover all details or variations in equipment, nor to provide for every possible contingency to be met in connection with installation, operation, or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to the local Siemens Industry, Inc. sales office.

The contents of this cross reference shall not become part or modify any prior or existing agreement, commitment or relationship. The sales contract contains the entire obligation of Siemens Industry, Inc. The warranty contained in the contract between the parties is the sole warranty of Siemens Industry, Inc. Any statements contained herein do not create new warranties or modify the existing warranty.

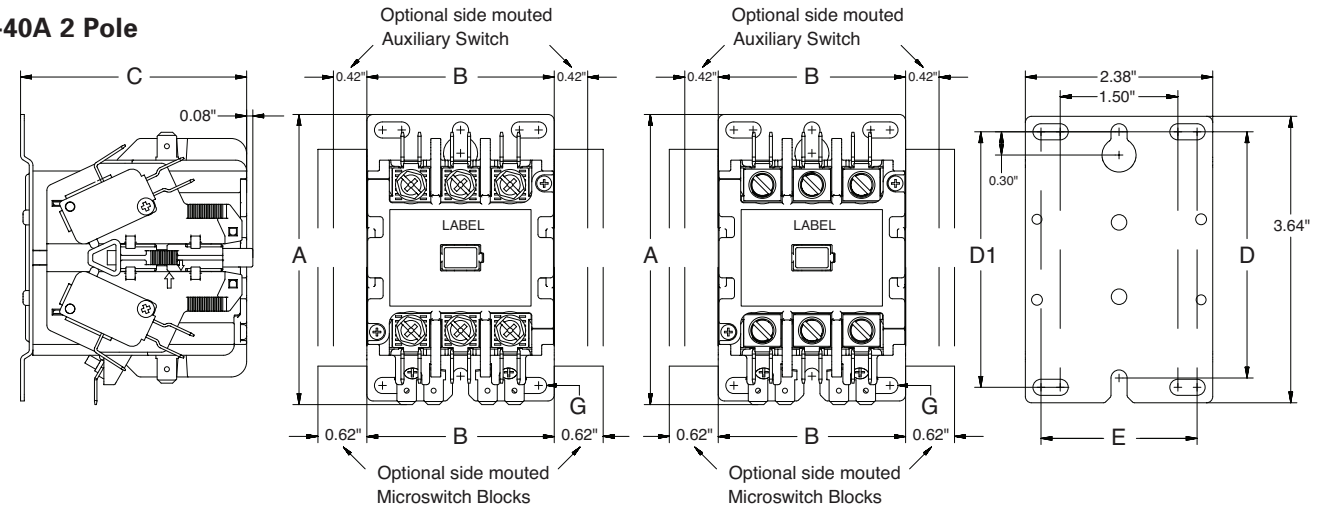
30-40A 1 Pole with Shunt



30-40A 2 Pole



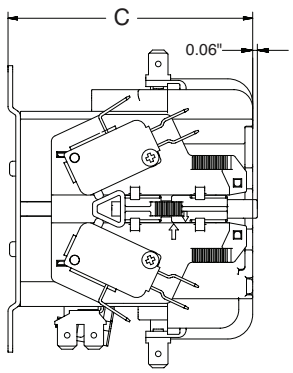
30-40A 2 Pole

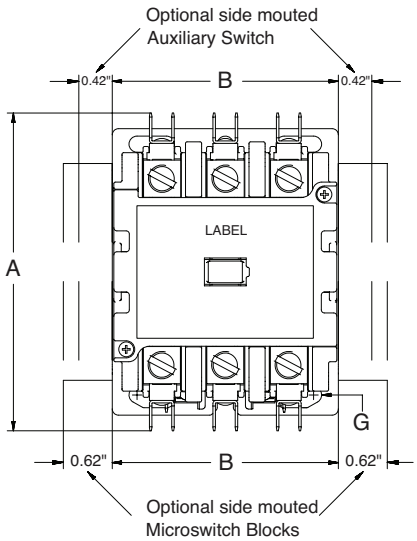


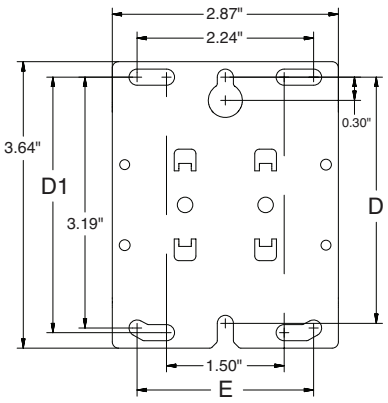
Catalog No.	FLA	Poles	Dimensions						Mounting Screw G	Max Wire Size
			A	B	C	D	D1	E		
45EG10A*A	30	1	3.19	1.97	2.46	1.5	1.77	1.61	10	8
45GG10A*A	40	1	3.19	1.97	2.46	1.5	1.77	1.61	10	4
45EG20A*A	30	2	3.19	1.97	2.46	1.5	1.77	1.61	10	8
45GG20A*A	40	2	3.19	1.97	2.46	1.5	1.77	1.61	10	4
42BF35A*	30	3	3.69	2.38	2.87	3.13	3.25	1.98	10	8
42CF35A*	40	3	3.69	2.38	2.87	3.13	3.25	1.98	10	4
42BF15A* **42CF15A***	30-40	2(at 3P)*	3.69	2.38	2.87	3.13	3.25	1.98	10	4

Note - 2* Pole is a 3 pole body with center contacts removed.

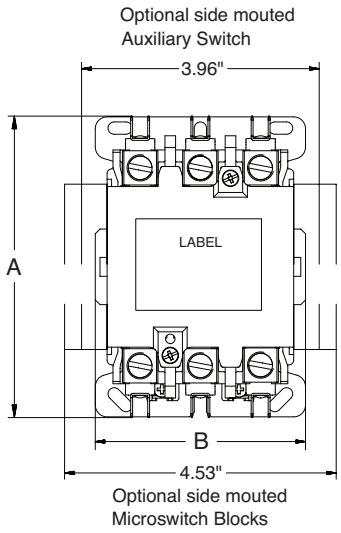
50-60A 3 Pole

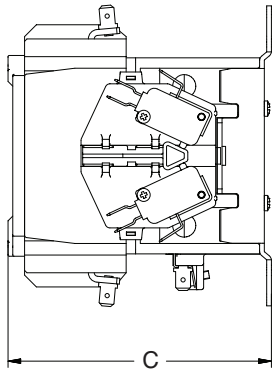


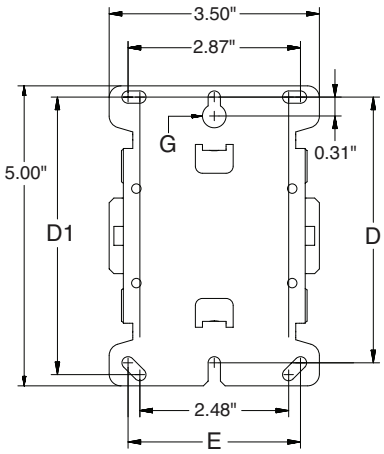




75-90A 3 Pole







Catalog No.	FLA	Poles	Dimensions						Mounting Screw G	Max Wire Size
			A	B	C	D	D1	E		
42DF35A* 42EF35A*	50-60	3	4.04	2.87	3.11	3.13	3.25	2.24	10	2
42FE35A* 42GE35A*	75-90	3	5.02	3.5	4.39	4.43	4.63	2.87	10	1/10

Class
48 — Overload

Size
A — Frame A
B — Frame B

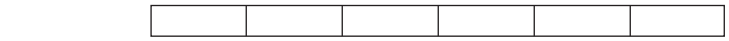
Model
T — ESP200

Current Range
A — 0.25–1①
B — 0.75–3.4①
C — 3–12①
D — 5.5–22①
E — 10–40
F — 13–52
G — 25–100
H — 50–200
J — 100–300 (3.33-10 current range with 300:5 CT and 1 loop with frame A1 (3-12A)-device)
K — 133–400 (3.33-10 current range with 400:5 CT and 1 loop with frame A1 (3-12A)-device)
L — 200–600 (3.33-10 current range with 600:5 CT and 1 loop with frame A1 (3-12A)-device)
M — 250–750 (3.33-10 current range with 750:5 CT and 1 loop with frame A1 (3-12A)-device)
N — 400–1200 (3.33-10.17 currant range with 1200:5 CT and 1 loop with frame A1 (3-12A)-device)

No. of Poles
3 — 3 Phase
1 — Single Phase

Reset
S — Selectable (Man/Auto)

Trip Curve
00 — Class 5, 10, 20 or 30 Selectable



Class
958 — Overload

Amp Range
E — 10–40
G — 25–100
H — 50–200

Model
B — ESP200

No. of Poles
3 — 3 phase

Type
S — Selectable (Man/Auto)

Trip Curve
A — 958

Class
958L — Overload

Amp Range
D — 5.5–22
E — 10–40
F — 13–52
G — 25–100
H — 50–200

Model
B — ESP200

No. of Poles
3 — 3 phase

Type
S — Selectable (Man/Auto)

Trip Curve
A — 958L

① Ranges available in Single or 3-phase.

Overload Relays

Features	Benefits
▪ Trip Classes - 5, 10, 20, or 30 Selectable by DIP-switches	▪ Field changeable reduces time and inventory. Suitable for light, normal and heavy starting conditions
▪ Phase Loss Protection - Trips in less than 3 Seconds	▪ Protects motor burn out and minimizes motor heating up
▪ Phase Unbalance - Trips based on Trip Class selected	▪ Minimizes temperature rise of the motor on a asymmetrical three-phase-system
▪ Ground Fault - Trips 60% of Motor Current	▪ Provides optimum system protection of motors against high-resistance short-circuits or ground faults due to moisture, condensation, damage of insulation or any other reason
▪ Trip Indicator - Visible	▪ Save time, faster to identify overload Trip
▪ Ambient Insensitive	▪ Prevents nuisance tripping
▪ No Heaters Required	▪ Saves cost and eliminates time for installation of heaters
▪ Self-Powered - No outside source required	▪ Reduce cost for external power supply
▪ FLA dial with wide Adjustment - 4:1 ratio	▪ Provides wide range, reduces inventory
▪ Self Protected in short circuit condition (when used with proper fuses or motor starter protector)	▪ Unlike bimetal overloads, this eliminates replacement of the overload heaters after short circuit
▪ Test Button - Tests Electronics	▪ Tests the complete electronic functions including the trip mechanism. Increases up time
▪ Thermal Memory	▪ Prevents re-starting motor when it is still hot
▪ Conformally coated circuit board	▪ Resists against environmental conditions
▪ 1 NO and 1NC Contacts Standard. B600, R300	▪ Makes it easier for user to wire local contacts
▪ Operating Temperature: -25 °C - 65 °C	▪ Wide operating temperature range prevents nuisance tripping with temperature changes
▪ Repeat Accuracy <1%.	▪ For more precise settings and reduced nuisance tripping
▪ Removable Terminal Block	▪ Terminal Block can be removed without removing wires. Saves time for replacements
▪ Automatic reset	▪ Auto. Reset is 3 minutes after tripping, allowing motor to cool down before re-start. If Manual Reset is selected, overload can be reset immediately
▪ Remote reset	▪ As an alternative to the mechanical RESET options, an electrical remote RESET can be used by applying 24 V DC to terminals A3 and A4
▪ DIN Rail Mounted	▪ Reduces installation time
▪ Touch - Safe Terminals	▪ Protects against accidental touching of live circuits
▪ UL listed CSA certified	▪ Third party approval standard

ESP200 Solid State Overload

958 or 958L Solid State Overload

Applications

ESP200 Solid State Overloads

Designed for a wide variety of applications. The field selectable Trip Class 5, 10, 20 or 30 can easily be set by 2 DIP switches. This eliminates the guess factor of an application requirements and provides reduced inventory for multiple applications. The inherent benefits of the ESP200 ultimately results in cost savings for the user.

ESP200 has a 4:1 current adjustment range with a fine adjustment dial labeled in full load amps. The heaterless overload minimizes the heat trapped in the enclosures, reduces cost for ventilation or cooling. Easily accessible Reset button, provides visible and audible indications to ensure the tripped overload is ready to re-start.

Designed to replace thermal, or ESP100 overload relays for any application. It has the same dimensions and footprint of the ESP100 overload relays. It can be directly coupled to the contactors or remotely mounted. In addition to the NEMA contactor applications, it also can be used with other types of controllers for applications requiring DP or IEC contactors. As a retrofit for other brands, it is used with a plate available for retrofitting competitive products.

958 ESP200 Special Use Solid State Overloads

This overload is specifically designed for special applications, to provide excellent protection of hermetically sealed and artificially cooled motors that require ambient insensitive and quick trip response times. Combined with a series lockout relay, it provides unsurpassed protection for hermetically sealed compressor motors in air conditioning applications. The combination of high trip speed, current adjustment, and ease of installation makes it suitable for these applications. The trip curves are customized to provide proper overload protection for these loads without causing nuisance tripping.

It has selectable manual or automatic reset mode, and provides ground fault selection to protect equipment from damage in case of a fault.

958L ESP200 Oil Field Solid State Overloads

Specifically designed for the oil market and the cycling loads experienced with these types of pumping applications. These overload relays provide protection for standard motors, oil well pump motors, multi-torque connections, and ultra-high slip motors.

Rotors can be damaged in less than 15 seconds during motor stall conditions if electrical power is not removed. To prevent damage during motor stall, the 958L solid state overload removes the power in 7 seconds at 250% lock rotor current. Therefore, the motor casing and the rotor will be protected from being damage saving the user money and time.

3-Phase, 48ATC3S00

Ordering Information

- For CT's see Accessories page 17-65.
- Dimensions see page 17-133.
- To retrofit or direct mount to a contactor, order 49ASMP1, 2, or 3 separately. See Retrofit Plates below.
- For remote mounting of frame size A order 49ASMS1 terminals separately, see page 17-106.

Solid State—Class 48

Current Adjustment Range	Phase	Frame Size	Catalog Number	MRPD/MLFB	List Price $
0.25–1	3	"A"	**48ATA3S00**	**3UB81134AB2**	
0.75–3.4	3	"A"	**48ATB3S00**	**3UB81134BB2**	
3–12	3	"A1"	**48ATC3S00**	**3UB81234CW2**	
5.5–22	3	"A1"	**48ATD3S00**	**3UB81234DW2**	
10–40	3	"A1"	**48ATE3S00**	**3UB81234EW2**	
13–52	3	"B"	**48BTF3S00**	**3UB81334FW2**	
25–100	3	"B"	**48BTG3S00**	**3UB81334GW2**	
50–200	3	"B"	**48BTH3S00**	**3UB81334HW2**	
100–300	3	"A1" ②	**48ATJ3S00**	**3UB81234JW2**	
133–400	3	"A1" ⑧	**48ATK3S00**	**3UB81234KW2**	
200–600	3	"A1" ④	**48ATL3S00**	**3UB81234LW2**	
250–750	3	"A1" ⑦	**48ATM3S00**	**3UB81234MW2**	
400–1220	3	"A1" ⑤	**48ATN3S00**	**3UB81234NW2**	
0.25–1	1	"A"	**48ATA1S00**	**3UB88134AB2**	
0.75–3.4	1	"A"	**48ATB1S00**	**3UB88134BB2**	
3–12	1	"A1"	**48ATC1S00**	**3UB88234CW2**	
5.5–22	1	"A1"	**48ATD1S00**	**3UB88234DW2**	
25-100	1	"B"	**48BTG1S00**	**3UB88334GW2**	

Solid State—3RB206③⑥, 3-Phase, Manual/Auto Reset

For Contactor Size	Setting Range Amps	Class 10 Catalog Number	List Price $	Class 20 Catalog Number	List Price $
5	55 - 250	**3RB2066-1GC2**		**3RB2066-2GC2**	
6	160 - 630	**3RB2066-1MC2**		**3RB2066-2MC2**	

Retrofit Plates for Contactors, Class 48

Replacement for Starter Sizes	ESP200 Overload Frame Size①	Retrofit Plate Suffix	Plate Kit Separate	Price Adder $
Size 00–1¾	A or A1	1P	**49ASMP1**	
Size 2, 2½	B	2P	**49ASMP2**	
Size 3, 3½	B	3P	**49ASMP3**	
Size 4	B	4P	**49ASMP3**	

① To determine frame size of replacement solid state overload, refer to retrofit plates table above.
② Requires use of 300:5 Current Transformers–3 of **97CT005**.
③ Product Category: IEC.
④ Requires use of 600:5 Current Transformers–3 of **97CT008**.
⑤ Requires use of 1200:5 Current Transformers–3 of **97CT012**.
⑥ Overload has busbar connections.
⑦ Requires use of 750:5 Current Transformers–3 of **97CT009**.
⑧ Requires use of 400:5 Current Transformers–3 of **97CT006**.

Class 958, 958L

Ordering Information

► Dimensions see page 17-133.

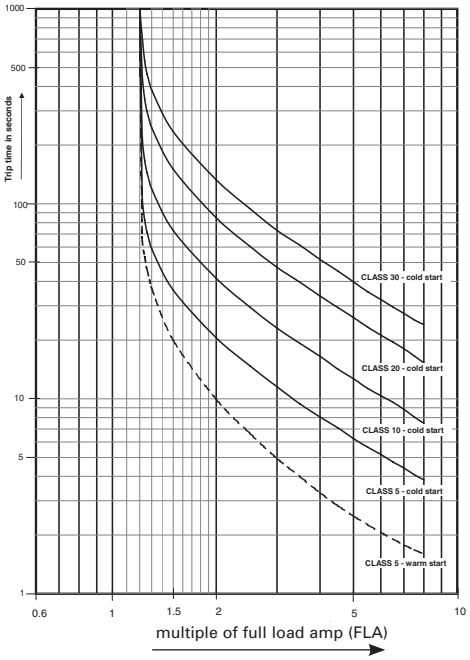
Current Transformers

Rating	Catalog No.	List Price $
150:5	**97CT002**	
200:5	**97CT003**	
250:5	**97CT004**	
300:5	**97CT005**	
400:5	**97CT006**	
600:5	**97CT008**	
750:5	**97CT009**	
1200:5	**97CT012**	

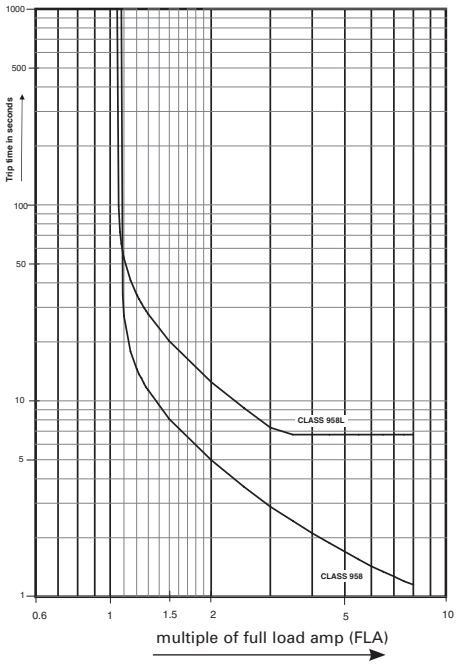
Solid State—Class 958 and 958L

Current Adjustment Range	Phase	Frame Size	Catalog Number	MRPD/MLFB	List Price $
10–40	3	"A1"	**958EB3SA**	**3UB85235EW2**	
25–100	3	"B"	**958GB3SA**	**3UB85335GW2**	
50–200	3	"B"	**958HB3SA**	**3UB85335HW2**	
5.5–22	3	"A1"	**958LDB3SA**	**3UB85236DW2**	
10–40	3	"A1"	**958LEB3SA**	**3UB85236EW2**	
13–52	3	"B"	**958LFB3SA**	**3UB85336FW2**	
25–100	3	"B"	**958LGB3SA**	**3UB85336GW2**	
50–200	3	"B"	**958LHB3SA**	**3UB85336HW2**	

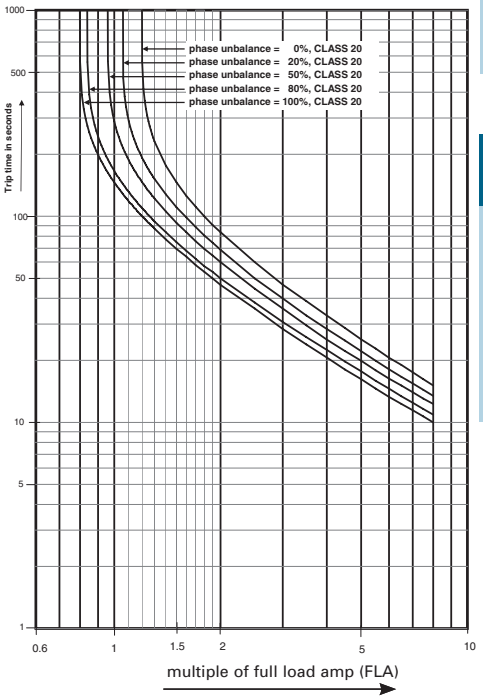
Time - Current - Characteristics CLASS 48



Time - Current - Characteristics CLASS 958, 958L



Trip - curve depending on unbalance CLASS 20



① Temperature rating −25° to +60°C.

Features

- Heavy Duty NEMA Starters
- Solid State Overload Relays
- Fusible or MCP
- Heavy Duty Disconnect Handle
- Flexibility with Field Modifications
- Alternator Transfer on De-energization
- UL Listed for Outdoor Use
- UL Listed file #E14900 (class 83); file #E185287 (class 84)
- CSA certified file #LR 6535 (class 83 & 84)

Application

Duplex pump controls are designed to perform one or both of two distinct functions: duplexing and alternation. The duplexing function provides capacity for system peaking or above normal demand without having the full motor capacity spinning at all times. It also provides standby capacity for use when one of the motors or pumps is disabled. The duplexing function is also referred to as lead/lag or main/standby. When two pumps or compressors are controlled by a duplex controller, they are started in sequence as necessary to attain preset values of pressure, flow or liquid level.

Two field devices such as pressure switches or float switches provide electrical signals to the duplex controller. One remote device is set to initiate the starting of the lead motor. This motor is rated to handle normal system demand. The second motor is usually the same rating and is referred to as the lag motor. It is only energized when the system demand is greater than the capacity of the lead motor. The lag motor is started when the second remote device is signalling for more output than the lead motor can produce.

The alternation function reverses the lead and lag mode for the two motors in a duplex system. Upon alternation the first motor as described above becomes the lag motor and the second motor assumes the lead function. The alternation is usually programmed to occur at any time both pumps come to rest. The alternation function equalizes wear on the two machines and extends the life of seals and bearings.

Enclosure Types

Duplex controllers are available in NEMA 1, 12/3/3R, 4 (painted) and 4/4X (stainless) enclosures. Enclosures protect personnel from contact with live parts and depending upon the construction, protect the control in varying degrees from physical damage and harmful atmospheres. All enclosures are supplied with corrosion resistant finishes.

Heavy Duty Starters

These Duplex controllers use the same starters described in the heavy duty starter section of this catalog.

Siemens Type ETI Circuit Breaker

The ETI circuit breaker is a device designed specifically for application in motor circuits. The ETI is a magnetic only protective device designed to provide protection against short circuit current.

The instantaneous-only type ETI circuit breaker employs adjustable magnetic trip settings to allow broader application ranges and a higher degree of motor short circuit protection.

Features

Two control transformers may be provided for low voltage control to safeguard personnel from high voltage. One transformer is required for each starter to provide independent control circuits.

A Hand-Off-Auto selector switch for each starter may be mounted in the enclosure door or furnished separately for remote control. Test push buttons or pilot lights may also be installed on the enclosure.

Solid-state Overload Relays are supplied as standard.

Heavy Duty Disconnect Switches

The disconnect switch that goes the distance in durability, performance and reliability has the following advantages:

- Visible blades for the highest level of safety
- Double break switching action to reduce arcing, increase lifetime and eliminate the "electric hinge"
- More rugged positive action switch
- Oversized lugs are standard
- Line side shield to help guard personnel from contact with live parts
- Higher horsepower rating for design E high efficiency motors
- UL listed for Ilsco, Burndy and T&B crimp type lugs
- The 200A switch accepts up to 300 MCM versus 250 MCM wire size

Its rugged construction - with a high fault withstand rating of 100kA at 600 VAC when fused with class R rated fuses - meets the most stringent industry standards set forth by the automotive, petro-chemical, and pulp and paper industries. UL recognized and CSA certified, our disconnect switches are available either non-fusible or fusible with class R and class J fuse clips.

Duplex Heavy Duty Controllers

Ordering Information

- Standard duplex controllers include an alternator indicated by characters "92" within the catalog number. The standard coil voltage supplied with the alternator is 120V separate control. This is the only control voltage available with the alternator.
- To omit the alternator, change the character string within the catalog number from "92" to "95". All coil voltages listed in the coil table are valid with non-alternator controllers.
- To change the coil voltage for non-alternator controllers, change the 9th character in the catalog number with a letter shown in the coil table.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-151.
- Wiring Diagrams see page 17-167.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24①	J
120	F
200–208①	D
220–240①	G
277①	L
440–480①	H
550–600①	E

Non-Combination (with Solid-State Overload)

Max Hp						Overload		Enclosure							
								NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant 304 Stainless Steel		NEMA 4 Painted Watertight, Dust-tight		NEMA 12 NEMA 3/3R Industrial Use Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Amp Range	Frame Size	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
⅛	⅛	⅛	½	0	—	0.25–1	A	**83CUA92BF**		**83CUA92WF**		**83CUA92EF**		**83CUA920F**	
½	¾	1½	2	0	—	0.75–3.4	A	**83CUB92BF**		**83CUB92WF**		**83CUB92EF**		**83CUB920F**	
2	2	5	5	0	—	3–12	A1	**83CUC92BF**		**83CUC92WF**		**83CUC92EF**		**83CUC920F**	
3	3	—	—	0	—	5.5–22	A1	**83CUD92BF**		**83CUD92WF**		**83CUD92EF**		**83CUD920F**	
⅛	⅛	⅛	½	1	—	0.25–1	A	**83DUA92BF**		**83DUA92WF**		**83DUA92EF**		**83DUA920F**	
½	¾	1½	2	1	—	0.75–3.4	A	**83DUB92BF**		**83DUB92WF**		**83DUB92EF**		**83DUB920F**	
2	2	5	5	1	—	3–12	A1	**83DUC92BF**		**83DUC92WF**		**83DUC92EF**		**83DUC920F**	
3	3	10	10	1	—	5.5–22	A1	**83DUD92BF**		**83DUD92WF**		**83DUD92EF**		**83DUD920F**	
7½	7½	—	—	1	—	10–40	A1	**83DUE92BF**		**83DUE92WF**		**83DUE92EF**		**83DUE920F**	
10	10	15	15	—	1¼	10–40	A1	**83EUE92BF**		**83EUE92WF**		**83EUE92EF**		**83EUE920F**	
10	15	25	25	2	—	13–52	B	**83FUF92BF**		**83FUF92WF**		**83FUF92EF**		**83FUF920F**	
15	20	30	30	—	2½	25–100	B	**83GUG92BF**		**83GUG92WF**		**83GUG92EF**		**83GUG920F**	
25	30	50	50	3	—	25–100	B	**83HUG92BF**		**83HUG92WF**		**83HUG92EF**		**83HUG920F**	
30	40	75	75	—	3½	50–200	B	**83IUH92BF**		**83IUH92WF**		**83IUH92EF**		**83IUH920F**	
40	50	100	100	4	—	50–200	B	**83JUH92BF**		**83JUH92WF**		**83JUH92EF**		**83JUH920F**	

Note: Hp's shown above are based on the overload amp range for the FLA's (per the National Electric Code) of typical industrial motors. All starter sizes carry one maximum Hp rating.

① Not available on standard alternator style ('92' in the catalog number).

Ordering Information

- Standard duplex controllers include an alternator indicated by characters "92" within the catalog number. The standard coil voltage supplied with the alternator is 120V separate control. This is the only control voltage available with the alternator.
- To omit the alternator, change the character string within the catalog number from "92" to "95". All coil voltages listed in the coil table are valid with non-alternator controllers.
- To change the coil voltage for non-alternator controllers, change the 10th character in the catalog number with a letter shown in the coil table.
- For factory installed fusible disconnect, see page 17-115.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-151.
- Wiring Diagrams see page 17-167.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24①	J
120	F
200–208①	D
220–240①	G
277①	L
440–480①	H
550–600①	E

Two Disconnect Switches with Solid-State Overload

Max Hp						Overload		Disc. Amp Range	Enclosure							
									NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant 304 Stainless Steel		NEMA 4 Painted Watertight, Dust-tight		NEMA 12 NEMA 3/3R Industrial Use Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Amp Range	Frame Size		Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
⅛	⅛	⅓	½	0	—	0.25–1	A	30	**84CUA92BDF**		**84CUA92WDF**		**84CUA92EDF**		**84CUA920DF**	
½	¾	1½	2	0	—	0.75–3.4	A	30	**84CUB92BDF**		**84CUB92WDF**		**84CUB92EDF**		**84CUB920DF**	
2	2	5	5	0	—	3–12	A1	30	**84CUC92BDF**		**84CUC92WDF**		**84CUC92EDF**		**84CUC920DF**	
3	3	—	—	0	—	5.5–22	A1	30	**84CUD92BDF**		**84CUD92WDF**		**84CUD92EDF**		**84CUD920DF**	
⅛	⅛	⅓	½	1	—	0.25–1	A	30	**84DUA92BDF**		**84DUA92WDF**		**84DUA92EDF**		**84DUA920DF**	
½	¾	1½	2	1	—	0.75–3.4	A	30	**84DUB92BDF**		**84DUB92WDF**		**84DUB92EDF**		**84DUB920DF**	
2	2	5	5	1	—	3–12	A1	30	**84DUC92BDF**		**84DUC92WDF**		**84DUC92EDF**		**84DUC920DF**	
3	3	10	10	1	—	5.5–22	A1	30	**84DUD92BDF**		**84DUD92WDF**		**84DUD92EDF**		**84DUD920DF**	
7½	7½	—	—	1	—	10–40	A1	30	**84DUE92BDF**		**84DUE92WDF**		**84DUE92EDF**		**84DUE920DF**	
10	10	15	15	—	1¼	10–40	A1	60	**84EUE92BDF**		**84EUE92WDF**		**84EUE92EDF**		**84EUE920DF**	
10	15	25	25	2	—	13–52	B	60	**84FUF92BDF**		**84FUF92WDF**		**84FUF92EDF**		**84FUF920DF**	
15	20	30	30	—	2½	25–100	B	100	**84GUG92BDF**		**84GUG92WDF**		**84GUG92EDF**		**84GUG920DF**	
20	25	50	50	3	—	25–100	B	100	**84HUG92BDF**		**84HUG92WDF**		**84HUG92EDF**		**84HUG920DF**	
30	40	75	75	—	3½	50–200	B	200	**84IUH92BDF**		**84IUH92WDF**		**84IUH92EDF**		**84IUH920DF**	
40	50	100	100	4	—	50–200	B	200	**84JUH92BDF**		**84JUH92WDF**		**84JUH92EDF**		**84JUH920DF**	

Note: Hp's shown above are based on the overload amp range for the FLA's (per the National Electric Code) of typical industrial motors. All starter sizes carry one maximum Hp rating.

① Not available on standard alternator style ('92' in the catalog number).

Ordering Information

- Standard duplex controllers include an alternator indicated by characters "92" within the catalog number. The standard coil voltage supplied with the alternator is 120V separate control. This is the only control voltage available with the alternator.
- To omit the alternator, change the character string within the catalog number from "92" to "95". All coil voltages listed in the coil table are valid with non-alternator controllers.
- To change the coil voltage for non-alternator controllers, change the 10th character in the catalog number with a letter shown in the coil table.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-151.
- Wiring Diagrams see page 17-167.
- Replacement Parts see page 17-120.

Coil Table

60Hz Voltage	Letter
24①	J
120	F
200–208①	D
220–240①	G
277①	L
440–480①	H
550–600①	E

2 Motor Circuit Protectors (with Solid-State Overload)

Max Hp						Overload			Enclosure							
									NEMA 1 General Purpose		NEMA 4/4X Stainless Watertight, Dust-tight, Corrosion Resistant , 304 Stainless Steel,		NEMA 4 Painted Watertight, Dust-tight		NEMA 12 NEMA 3/3R Industrial Use, Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Amp Range	Frame Size	Motor Circuit Interrupter ETI	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
½	½	½	½	0	—	0.25–1	A	3	**84CUA92BMF**		**84CUA92WMF**		**84CUA92EMF**		**84CUA920MF**	
½	¾	1½	2	0	—	0.75–3.4	A	3	**84CUB92BMF**		**84CUB92WMF**		**84CUB92EMF**		**84CUB920MF**	
2	2	5	5	0	—	3–12	A1	10	**84CUC92BMF**		**84CUC92WMF**		**84CUC92EMF**		**84CUC920MF**	
3	3	—	—	0	—	5.5–22	A1	25	**84CUD92BMF**		**84CUD92WMF**		**84CUD92EMF**		**84CUD920MF**	
½	½	½	½	1	—	0.25–1	A	3	**84DUA92BMF**		**84DUA92WMF**		**84DUA92EMF**		**84DUA920MF**	
½	¾	1½	2	1	—	0.75–3.4	A	3	**84DUB92BMF**		**84DUB92WMF**		**84DUB92EMF**		**84DUB920MF**	
2	2	5	5	1	—	3–12	A1	10	**84DUC92BMF**		**84DUC92WMF**		**84DUC92EMF**		**84DUC920MF**	
3	3	10	10	1	—	5.5–22	A1	25	**84DUD92BMF**		**84DUD92WMF**		**84DUD92EMF**		**84DUD920MF**	
7½	7½	—	—	1	—	10–40	A1	30	**84DUE92BMF**		**84DUE92WMF**		**84DUE92EMF**		**84DUE920MF**	
—	—	15	15	—	1¼	10–40	A1	40	**84EUE92BMF**		**84EUE92WMF**		**84EUE92EMF**		**84EUE920MF**	
10	15	25	25	2	—	13–52	B	50	**84FUF92BMF**		**84FUF92WMF**		**84FUF92EMF**		**84FUF920MF**	
15	20	30	30	—	2½	25–100	B	100	**84GUG92BMF**		**84GUG92WMF**		**84GUG92EMF**		**84GUG920MF**	
20	25	50	50	3	—	25–100	B	100	**84HUG92BMF**		**84HUG92WMF**		**84HUG92EMF**		**84HUG920MF**	
30	40	75	75	—	3½	50–200	B	125	**84IUH92BMF**		**84IUH92WMF**		**84IUH92EMF**		**84IUH920MF**	
40	50	100	100	4	—	50–200	B	150	**84JUH92BMF**		**84JUH92WMF**		**84JUH92EMF**		**84JUH920MF**	

Note: Hp's shown above are based on the overload amp range for the FLA's (per the National Electric Code) of typical industrial motors. All starter sizes carry one maximum Hp rating.

① Not available on standard alternator style ('92' in the catalog number).

Features

The Class 82 Slim Line NEMA Pump was designed specifically for the agricultural market. It is well suited for irrigation and similar pumping applications and is built to withstand the harsh elements of the outdoors

Typical applications include:

- Crop irrigation
- Sprinklers, misters and soakers
- Watering for livestock and other dairy applications
- Ground dewatering for excavation and construction sites

Why you should use the Class 82 Pump Panel

- Simplicity and its compact lightweight design makes this an attractive solution to your budgeting challenges.
- The contactor is NEMA rated to provide reliable motor control and protection expected in the most demanding applications.
- The ESP200 solid-state overload relay has a protective coating on the circuit board which gives it superior protection against high humidity, condensation and corrosive environments.
- Its size and weight is about half that of the Class 87 which increases the ease of installation.

Catalog Numbering System

82	A	D	C	6	F	B	H

Series

A = Standard size enclosure
B = Extra large enclosure (starter size 1 only)

Starter Size

D = 1
F = 2

OLR Current Range

B = 0.75-3.4A
C = 3-12A
D = 5.5-22A
E = 10-40A
F = 13-52A

Cover Control

6 = HOA selector switch with Start push button

Disconnect Type

F = Fusible disconnect

Disconnect & Fuse Clip Rating

A = 30A/250V
B = 30A/600V
C = 60A/250V
D = 60A/600V

Coil Voltage

F = 110VAC 50HZ / 120VAC 60HZ
G = 220VAC 50HZ / 240VAC 60HZ
H = 480VAC 60HZ

Pump Control Panels

Ordering Information

- Field Modification Kits (see accessories on this page)
- Factory Modifications (NA)
- Dimensions see page 17-150
- Wiring Diagram see page 17-169
- Replacement Parts (refer to instruction sheet A5E35327591A)

Coil Table

50/60Hz Voltage	Letter
110VAC 50HZ / 120VAC 60HZ	F
220VAC 50HZ / 240VAC 60HZ	G①
480VAC 60HZ	H②

Product Selection

Max Hp Rating Motor Voltage		NEMA Size	Overload Relay Amp Range	Disc. Amp Rating	Fuse Clip Amp/Volts	HOA & Start Push Button		HOA & Start Push Button (Extra wide Encl)	
230	460					Catalog Number	List Price $	Catalog Number	List Price $
—	1	1	0.75–3.4	30	30A/600V	**82ADB6FB***		**82BDB6FB*③**	
—	5	1	3–12	30	30A/600V	**82ADC6FB***		**82BDC6FB*③**	
—	10	1	5.5–22	30	30A/600V	**82ADD6FB***		**82BDD6FB*③**	
—	10	1	10–40	30	30A/600V	**—**		**82BDE6FB*③**	
2	—	1	3–12	30	30A/250V	**82ADC6FA***		**82BDC6FA*③**	
3	—	1	5.5–22	30	30A/250V	**82ADD6FA***		**82BDD6FA*③**	
7 1/2	—	1	10–40	30	30A/250V	**82ADE6FA***		**82BDE6FA*③**	
—	25	2	13-52	60	60A/600V	**82AFF6FD*③**		—	
15	—	2	13-52	60	60A/250V	**82AFF6FC*③**		—	

Replace the (*) with a letter from the coil table.
③ Available in May 2017.

Accessories

Image	Description	Catalog Number	List Price
	3/4" type 3R conduit hub	**ECHS075**	
	1" type 3R conduit hub	**ECHS100**	
	1 1/4" type 3R conduit hub	**ECHS125**	
	1 1/2" type 3R conduit hub	**ECHS150**	
	Disconnect switch auxiliary contacts 2 NO/2 NC DPDT (NEMA A600)	**HA261234**	
	Fuse puller kit for 30A switch (1 kit required per switch)	**HP61**	
	30A, 240V Class R Fuse Clip Kits	**HR21**	
	30A, 600V Class R Fuse Clip Kits	**HR612**	

Image	Description	Catalog Number	List Price
	Contactor auxiliary contacts, side mounted 1 NO/NC (NEMA A300/ Q300)	**3RH29111DA11**	
	ESP200 tamper resistance cover	**49ASTC1**	

① G coil is not available with a 600v disconnect
② H coil is not available with a 250v disconnect

Class 82 Technical information

General Technical Data:	
Weight	Size 1 (Standard Encl.) 23lbs. Size 1 (Extra Wide Encl.) 47lbs. Size 2 (Standard Encl.) 47lbs.
Height x Width x Depth	Size 1 (Standard Encl.) 26 x 12 x 5in. Size 1 (Extra Wide Encl.) 35 x 17 x 6in. Size 2 (Standard Encl.) 35 x 17 x 6in.
Maximum altitude	6560 ft.
Ambient (outside enclosure) storage temperature	(-30 to 65)°C / (-22 to 149)°F
Ambient (outside enclosure) operating temperature	(-20 to 40)°C / (-4 to 104)°F
Country of origin	Mexico
Horsepower Rating:	
See selection table above	See selection table above
Contactor:	
Number of NO main contacts	3
Amp rating	32A, 50A
Mechanical operating cycles	10,000,000
Internal / Standard Auxiliary Contact:	
Number of NC / NO auxiliary contacts	1NC / 1NO
NEMA contact rating designation	A600 AC / Q600 DC
Optional auxiliary contacts available	Yes
Coil:	
Voltage	220/230V 50/60Hz, 460V 60Hz, or 110/120V 50/60Hz
Apparent pull-in / holding power	81 VA / 10.5 VA
Normal coil operating limits (% of rated voltage)	80% - 110% at 60Hz
Pick-up time / Drop-out time	8-40 / 4-16 msec
Overload Relay:	
Current range	0.75 - 3.4 or 3 - 12 or 5.5 - 22 or 10 - 40 Amps or 13 - 52 Amps
Trip Class	Class 5 / 10 (factory set) / 20 / 30
Trip detection	Overload, phase failure, phase unbalance, ground fault
Phase failure sensitivity	Trip time after phase loss: < 3 sec
Repeat accuracy	Within 1%
Reset options	Manual, automatic and remote
External reset	Yes
Test function	Electronics and manual actuation
Conformal coating on printed circuit board	Yes
Number of NC / NO auxiliary contacts	1NC /1NO
Rating of auxiliary contacts	B600 AC / R300 DC
Single contact isolation	600 V
Dual contact isolation	300 V differing polarity / 600 V common polarity

Class 82 Technical information

Disconnect Switch:	
Rating	30 A with 30A/600 or 30A/250 V Class H fuse clips 60 A with 60A/600 or 60A/250 V Class H fuse clips
Fuse type accepted	Class H, J or R
Enclosure:	
Type	NEMA Type 3/3R enclosure
Rating	Weather proof for outdoor use
Standard Control Devices:	
Hand-Off-Auto selector switch	3SU1 30mm, round, metal with matte finish
Start push button	3SU1 30mm, round, metal with matte finish
Mounting / Wiring:	
Mounting orientation	Vertical
Mounting type	Pole and surface
Disconnect line side connection type / torque	Box lug / 35 lb in (14 - 10); 40 lb in (8); 45 lb in (6 - 4) AWG
Disconnect line side solid and stranded conductors	1x(14 - 2 AWG) 60/75°C AL or CU
Power terminal block connection type / torque	Screw / 24 - 32 lb - in
Power terminal block solid and stranded conductors	1x(18 - 2 AWG) 75°C CU
Control terminal block connection type / torque	Screw / 12 - 18 lb - in
Control terminal block solid and stranded conductors	1x(22 - 8 AWG) 75°C CU
Coil connection type / torque	Screw / 7 - 10 lb in
Coil solid and standed conductors	2x(16 - 12 AWG) CU 60/75°C
Main auxiliary contact connection type / torque	Screw / 7 - 10 lb in
Main auxiliary contact solid and stranded conductors	2x(20 - 16), 2x(18 - 14) 75°C CU
OLR auxiliary contact connection type / torque	Screw / 7 - 10 lb in
OLR auxiliary contact solid and starnded conductors	2x(20 - 14 AWG) CU 60/75°C
Short Circuit Current Rating:	
Fuses	10kA@600V (Class H or K); 85kA@600V (Class R or J)
Certificates / Approvals:	
cULus	UL (file no. E185287)
UL rated Service Entrance Equipment	ISO 9001 certification

Features

- Fully Gasketed NEMA 3R Rainproof Enclosures
- 100,000 Amp Interrupting Capacity with Class R Fuses
- Heavy Duty NEMA Starters
- Solid State Overload Relays
- Heavy Duty Disconnect Handle
- Available in Reduced Voltage Versions
- Bold Pilot Legend on Front
- Generous Accessory Space
- Copper Grounding Lug For Three #6 Wires
- UL Listed for Outdoor Use and Service Equipment File #E185287

Application

Heavy duty pump control panels are designed to withstand the most demanding environments. Typical applications include irrigation, agriculture, petrochemical, wastewater treatment and wherever motor control is challenged by harsh elements.

Installation is easy. Panels are factory wired to provide flexible control and protect against short circuits and overloads. Ample space is provided for field modifications and installation of accessories.

The pump control panels feature a full sized removable auxiliary panel for the mounting of accessories. The fusible version features fuse clips for full sized RK5 or compact class J fuses and accessory mounting space for the most commonly used accessories.

Class 87 pump panels become jockey pump panels with the addition of a pressure switch. The jockey pump's primary function is to maintain water pressure at a preset level and thus compensate for possible shortage of water in the pumping system. When the water pressure drops below the preset level, the pressure switch energizes the starter which in turn activates the jockey pump. The water pressure is then brought back up to the desired level. This insures the maintenance of proper water pressure at all times.

Features

Specified by Fortune 500 companies, Siemens NEMA starters offer prolonged service under severe duty conditions. NEMA rated, these starters utilize large silver cadmium oxide contacts and wide copper heat sinks to ensure rapid heat dissipation and maximum electrical life.

ESP200 solid state overload relay
Refer to the section on Class 48 overload relays for features and benefits. Pump panels are factory set at trip Class 10.

HOA and Start Pushbutton

Every pump panel comes with an HOA and a start pushbutton.

Half Size Starters

Siemens motor matched starters feature all the rugged performance characteristics of our NEMA rated starter sizes, but are fractionally sized to more closely match your exact motor rating. As a result, significant economic savings are made possible without sacrificing the reliability you expect from a heavy duty starter.

These additional starter sizes have the reserve capacity to handle occasional plugging and jogging without de-rating the device.

Siemens motor matched can save hundreds, even thousands of dollars per project.

Siemens motor matched starters comply with NEMA, UL and CSA standards.

Panels are predrilled for easy repositioning of the fuse trailer block to accommodate 250 and 600 volt fuses and full sized RK or compact J fuses. Circuit breakers are also available.

Heavy Duty Fusible Disconnect Switch

The disconnect switch has the following advantages:

- Visible blades for the highest level of safety
- Double Break Switching Action to reduce arcing, increase lifetime and eliminate the "electric hinge"
- Oversized lugs are standard
- Line side shield to help guard personnel from contact with live parts

Motor Circuit Protector

The motor circuit protector provides fast, accurate fault clearing that will minimize damage to the motor and control apparatus and protect branch circuit conductors. Continuous current ratings and adjustable trip ranges meet NEC requirements for full load and locked rotor currents. The adjustable instantaneous trip point can be set precisely to assure fault protection and eliminate nuisance tripping.

Removable Door

Enclosure door may be lifted off to make wiring easier.

Mounting Flanges

Convenient flanges at top and bottom of the enclosure provide easy mounting. They fit pole or flat surfaces using keyhole slots.

Quarter Turn Latches

Quarter turns are utilized to secure the door.

Wind Catches

A wind catch is provided to prevent the door from slamming shut (or open) due to high wind conditions.

Safety Disconnect Handle

Up to three padlocks can be used to lock the disconnect in the OFF position. Maintenance work can be performed without hazard to personnel.

External Reset

The overload relay may be quickly reset by means of a button on the front of the enclosure.

Ground Lugs

Insures proper connecting of ground wires and lightning arresters.

UL Listed

Assures proper construction throughout control panel.

Reduced Voltage

Available in part winding, wye delta and auto transformer types, these controls may be necessary where the power company limits the amount of current drawn from its lines, or where starting torque must be reduced.

Fully gasketed NEMA 3/12 weatherproof enclosures are supplied with Class 88 reduced voltage starters.

Part Winding Starters apply starting current in timed steps to minimize voltage fluctuations.

Auto Transformer Starters maintain a closed circuit during transition and eliminate voltage or current surges. They draw less current than part winding starters and are well suited for starting motors over 20 Hp.

Wye Delta starters and motors are used in areas where the power supply is inadequate to supply full starting current without objectionable voltage drop or for applications where low starting torque is required. Centrifugal pumps and similar apparatus requiring a low starting torque are typical applications. Both ends of all three windings of the wye delta motor are brought out so that they may be accessible for reconnecting from wye to delta.

Auxiliary Equipment

Pilot Lights are easily installed on the enclosure. Oil Tight and Heavy Duty, they meet NEMA A600 requirements.

Lightning Arresters protect the control panel from lightning induced surges.

Undervoltage and Phase Sensing Relays protect the pump against low voltage, voltage imbalance, loss of phase and phase reversal.

Anti-Backspin Timers prevent the motor from starting during motor/shaft backspin.

Class 87 NEMA Vacuum Starter Pump Control Panels

The Siemens vacuum starter pump controllers are designed for the harshest environments. Typical environments include chemical, petrochemical, waste water treatment and mining. Contaminations present in these severe environments are detrimental to conventional air-break contacts decreasing their life expectancy and reliability. The Siemens vacuum starter pump controllers are well suited for these environments because the contacts are contained in hermetically sealed contact tubes. This prevents contaminates in the atmosphere from affecting the operation of the contacts. Additionally, neither arcs nor arcing gases are produced which dramatically increases the electrical endurance of the contacts.

Pump Control Panels

Standard Pump Panel with Solid State Overload, Class 87

Selection

Ordering Information

- ▶ Field Modification Kits see page 17-102.
- ▶ Factory Modifications see page 17-114.
- ▶ Dimensions see page 17-152.
- ▶ Wiring Diagrams see page 17-169.
- ▶ Replacement Parts see page 17-120.
- ▶ Sizes 1-4 will be supplied standard with a 240/480 volt coil. To change the coil voltage, change the 8th character in the catalog number to the letter shown in the coil table.
- ▶ Sizes 5 & 6 will be supplied standard with a 480 volt coil. To change the coil voltage, change the 8th character in the catalog number to the letter shown in the coil table.

Coil Table

60Hz Voltage	Letter
24	J
120	F
110–120/220–240	A①
200–208	D
220–240	G
220–240/440–480	C①
277	L
440–480	H
550–600	E

Fusible Disconnect

Max Hp				NEMA Size	Half Size	Overload		Disc. Amp Range	Fuse Clip Amp / Volts	Catalog Number	List Price $
200 Volts	230 Volts	460 Volts	575 Volts			Amp Range	Frame Size				
—	—	1	1	1	—	0.75–3.4②	A	30	30A/600V	**87DUB6FC**	
—	—	5	5	1	—	3–12	A1	30	30A/600V	**87DUC6FC**	
—	—	10	10	1	—	5.5–22	A1	30	30A/600V	**87DUD6FC**	
—	—	10	10	1	—	5.5–22	A1	60	60A/600V	**87DUD60C**	
—	—	15	15	—	1¾	10–40	A1	30	30A/600V	**87EUE6FC**	
—	—	15	15	—	1¾	10–40	A1	60	60A/600V	**87EUE60C**	
—	—	25	25	2	—	13–52	B	60	60A/600V	**87FUF6FC**	
—	—	25	25	2	—	13–52	B	100	100A/600V	**87FUF60C**	
—	—	30	30	—	2½	25–100	B	60	60A/600V	**87GUG6FC**	
—	—	30	30	—	2½	25–100	B	100	100A/600V	**87GUG60C**	
—	—	50	50	3	—	25–100	B	100	100A/600V	**87HUG6FC**	
—	—	50	50	3	—	25–100	B	200	200A/600V	**87HUG60C**	
—	—	75	75	—	3½	50–200	B	200	200A/600V	**87IUH6FC**	
—	—	100	100	4	—	50–200	B	200	200A/600V	**87JUH6FC**	
—	—	200	200	5	—	55–250	—	400	400A/600V	**87LPU6FH**	
—	—	250	—	6	—	160–630	—	600	600A/600V	**87MSW6FH**	
2	2	—	—	1	—	3–12	A1	30	30A/250V	**87DUC6LC**	
3	3	—	—	1	—	5.5–22	A1	30	30A/250V	**87DUD6LC**	
7½	7½	—	—	1	—	10–40	A1	30	30A/250V	**87DUE6LC**	
7½	7½	—	—	1	—	10–40	A1	60	60A/250V	**87DUE6PC**	
10	10	—	—	—	1¾	10–40	A1	60	60A/250V	**87EUE6LC**	
10	15	—	—	2	—	13–52	B	60	60A/250V	**87FUF6LC**	
10	15	—	—	2	—	13–52	B	100	100A/250V	**87FUF6PC**	
15	20	—	—	—	2½	25–100	B	60	60A/250V	**87GUG6LC**	
15	20	—	—	—	2½	25–100	B	100	100A/250V	**87GUG6PC**	
20	30	—	—	3	—	25–100	B	100	100A/250V	**87HUG6LC**	
25	30	—	—	3	—	25–100	B	200	200A/250V	**87HUG6PC**	
30	40	—	—	—	3½	50–200	B	200	200A/250V	**87IUH6LC**	
40	50	—	—	4	—	50–200	B	200	200A/250V	**87JUH6LC**	
75	100	—	—	5	—	55–250	—	400	400A/250V	**87LPU6LG**	

Circuit Breaker

Max Hp				NEMA Size	Half Size	Overload		Motor Circuit Interrupter ETI Amps	Catalog Number	List Price $
200 Volts	230 Volts	460 Volts	575 Volts			Amp Range	Frame Size			
½	½	1	1	1	—	0.75–3.4②	A	3	**87DUB6MC**	
2	2	5	5	1	—	3–12	A1	10	**87DUC6MC**	
3	3	10	10	1	—	5.5–22	A1	25	**87DUD6MC**	
7½	7½	10	—	1	—	10–40	A1	30	**87DUE6MC**	
—	—	15	15	—	1¾	10–40	A1	40	**87EUE6MC**	
10	15	25	25	2	—	13–52	B	50	**87FUF6MC**	
15	20	30	30	—	2½	25–100	B	100	**87GUG6MC**	
25	30	50	50	3	—	25–100	B	100	**87HUG6MC**	
30	40	75	75	—	3½	50–200	B	125	**87IUH6MC**	
40	50	100	100	4	—	50–200	B	150	**87JUH6MC**	
50	75	150	200	5	—	55–250	—	250	**87LPT6MH**	
75	100	200	200	5	—	55–250	—	400	**87LPU6MH**	
100	125	250	300	6	—	160–630	—	400	**87MSW6MH**	
150	200	400	400	6	—	160–630	—	600	**87MSX6MH**	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

① Not available on Size 5 and larger.
② For an overload amp range of 0.25-1A, change the 5th character from a 'B' to an 'A'.
③ A version with coil code A is also stocked via Controls Express.

Ordering Information

- ► Field Modification Kits see page 17-102.
- ► Factory Modifications see page 17-114.
- ► Dimensions see page 17-152.
- ► Wiring Diagrams see page 17-169.
- ► Replacement Parts see page 17-120.
- ► Replace the (*) in the catalog number with a letter from the coil table.
- ► Refer to page 17-38 for information on the 958L OLR

Coil Table

60Hz Voltage	Letter
24	J
120	F
200–208	D
220–240	G
277	L
440–480	H
550–600	E

Vacuum Break Pump Control Panels (Vacuum Contactor with Trip Class 10 Solid-State Overload Relay)

Max Hp		NEMA Size	Overload Relay Range	Fusible Disconnect		Circuit Breaker	
480 Volts	575 Volts			Fuse Clip Amps/Volts	Catalog Number	MCI Amps	Catalog Number
100	100	4	50-200A①	200A/600V	**87JCN6F***	250A	**87JCN6M***
100	100	4	55-250A	200A/600V	**87JCM6F***	250A	**87JCM6M***
200	200	5	55-250A	400A/600V	**87LCU6F***	400A	**87LCT6M***
250	300	6	160-630A	—	—	400A	**87MCW6M***
400	400	6	160-630A	—	—	600A	**87MCX6M***

Oil Well Pump Control Panels (Open Air Contactor with 958L Solid-State Overload Relay)

Max Hp		NEMA Size	Overload Relay Range	Fusible Disconnect		Circuit Breaker	
480 Volts	575 Volts			Fuse Clip Amps/Volts	Catalog Number	MCI Amps	Catalog Number
25	25	2	13-52	60A/600V	**87FPI6F***	50	**87FPI6M***
50	50	3	25-100	100A/600V	**87HPK6F***	100	**87HPK6M***
100	100	4	50-200	200A/600V	**87JPM6F***	150	**87JPM6M***

Note: Hp's shown above are based on the overload amp range for the FLA's (per the National Electric Code) of typical industrial motors. All starter sizes carry one maximum Hp rating.

① ESP200 overload relay.

Reduced Voltage Pump Panels

Auto Transformer

Part Winding

Ordering Information

- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-152.
- Wiring Diagrams see pages 17-162 and 17-163.
- Replacement Parts see page 17-120.

Coil & Control Voltage

The coil voltage on the contactors will be the motor voltage. A CPT will be supplied to provide the control voltage. The control voltage will be 120V.

To change the control voltage to customer supplied (no CPT included), change the 9th character to the following:

for 24V , use "**J**"

for 120V, use "**F**"

Auto Transformer Type

Motor Voltage	Max Hp	Overload		NEMA Size	Half Size	Fusible Disconnect			Circuit Breaker		
		Amp Range	Frame Size			Fuse Clip Size Amps/Volts	Catalog Number	List Price $	Circuit Breaker Amps	Catalog Number	List Price $
230	15	13–52	B	2	—	60A/250V	**88FUFT2FG**		50	**88FUFT2MG**	
	20	25–100	B	—	2½	100A/250V	**88GUGT2FG**		100	**88GUGT2MG**	
	30	25–100	B	3	—	100A/250V	**88HUGT2FG**		100	**88HUGT2MG**	
	40	50–200	B	—	3½	200A/250V	**88IUHT2FG**		125	**88IUHT2MG**	
	50	50–200	B	4	—	200A/250V	**88JUHT2FG**		150	**88JUHT2MG**	
	75	55–250	—	5	—	—	**—**		250	**88LPST2MG**	
	100	55–250	—	5	—	400A/250V	**88LPUT2FG**		400	**88LPUT2MG**	
	200	160–630	—	6	—	—	**—**		600	**88MSXT2MG**	
460	25	13–52	B	2	—	60A/600V	**88FUFT4FH**		50	**88FUFT4MH**	
	30	25–100	B	—	2½	60A/600V	**88GUGT4FH**		50	**88GUGT4MH**	
	50	25–100	B	3	—	100A/600V	**88HUGT4FH**		100	**88HUGT4MH**	
	75	50–200	B	—	3½	200A/600V	**88IUHT4FH**		125	**88IUHT4MH**	
	100	50–200	B	4	—	200A/600V	**88JUHT4FH**		150	**88JUHT4MH**	
	150	55–250	—	5	—	—	**—**		250	**88LPST4MH**	
	200	55–250	—	5	—	400A/600V	**88LPST4FH**		400	**88LPUT4MH**	
	250	160–630	—	6	—	—	**—**		400	**88MSVT4MH**	
	400	160–630	—	6	—	600A/600V	**88MSXT4FH**		600	**88MSXT4MH**	

Part Winding 2 Step

Motor Voltage	Max Hp	Overload		NEMA Size	Half Size	Fusible Disconnect			Circuit Breaker		
		Amp Range	Frame Size			Fuse Clip Size Amps/Volts	Catalog Number	List Price $	Circuit Breaker Amps	Catalog Number	List Price $
230	20	10–40	A1	—	1¾	100A/250V	**88EUEP2FG**		100	**88EUEP2MG**	
	25	13–52	B	2	—	100A/250V	**88FUFP2FG**		100	**88FUFP2MG**	
	40	25–100	B	—	2½	200A/250V	**88GUGP2FG**		100	**88GUGP2MG**	
	50	25–100	B	3	—	200A/250V	**88HUGP2FG**		150	**88HUGP2MG**	
	60	50–200	B	—	3½	200A/250V	**88IUHP2FG**		250	**88IUHP2MG**	
	75	50–200	B	4	—	400A/250V	**88JUHP2FG**		250	**88JUHP2MG**	
	125	55–250	—	5	—	—	**—**		400	**88LPSP2MG**	
	150	55–250	—	5	—	600A/250V	**88LPUP2FG**		600	**88LPUP2MG**	
460	30	10–40	A1	—	1¾	100A/600V	**88EUEP4FH**		100	**88EUEP4MH**	
	40	13–52	B	2	—	100A/600V	**88FUFP4FH**		100	**88FUFP4MH**	
	60	25–100	B	—	2½	200A/600V	**88GUGP4FH**		100	**88GUGP4MH**	
	75	25–100	B	3	—	200A/600V	**88HUGP4FH**		150	**88HUGP4MH**	
	100	50–200	B	—	3½	200A/600V	**88IUHP4FH**		250	**88IUHP4MH**	
	150	50–200	B	4	—	400A/600V	**88JUHP4FH**		250	**88JUHP4MH**	
	250	55–250	—	5	—	—	**—**		400	**88LPSP4MH**	
	350	55–250	—	5	—	600A/600V	**88LPUP4FH**		600	**88LPUP4MH**	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

Reduced Voltage Pump Panels

Ordering Information

- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-152.
- Wiring Diagrams see pages 17-164 and 17-165.
- Replacement Parts see page 17-120.

Coil & Control Voltage

The coil voltage on the contactors will be the motor voltage. A CPT will be supplied to provide the control voltage. The control voltage will be 120V.

To change the control voltage to customer supplied (no CPT included), change the 9th character to the following:

for 24V , use "**J**"

for 120V, use "**F**"

Wye Delta

Motor Voltage	Max Hp	Overload		NEMA Size	Half Size	Fuse Clip Size Amps/Volts	Motor Circuit Interruter ETI Amps	Open Transition				Closed Transition			
								Fusible Disconnect		Circuit Breaker		Fusible Disconnect		Circuit Breaker	
		Amp Range	Frame Size					Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
200	10	10–40	A1	1	—	60A/250V	50	**88DUE06FD**		**88DUE06MD**		**88DUEC6FD**		**88DUEC6MD**	
	15	10–40	A1	—	1¾	100A/250V	100	**88EUE06FD**		**88EUE06MD**		**88EUEC6FD**		**88EUEC6MD**	
	20	13–52	B	2	—	100A/250V	100	**88FUF06FD**		**88FUF06MD**		**88FUFC6FD**		**88FUFC6MD**	
	30	25–100	B	—	2½	200A/250V	125	**88GUG06FD**		**88GUG06MD**		**88GUGC6FD**		**88GUGC6MD**	
	40	25–100	B	3	—	200A/250V	150	**88HUG06FD**		**88HUG06MD**		**88HUGC6FD**		**88HUGC6MD**	
	50	50–200	B	—	3½	200A/250V	250	**88IUH06FD**		**88IUH06MD**		**88IUHC6FD**		**88IUHC6MD**	
	60	50–200	B	4	—	400A/250V	250	**88JUH06FD**		**88JUH06MD**		**88JUHC6FD**		**88JUHC6MD**	
	75	55–250	—	5	—	400A/250V	400	**88LPS06FD**		**88LPS06MD**		**88LPSC6FD**		**88LPSC6MD**	
	150	55–250	—	5	—	600A/250V	600	**88LPU06FD**		**88LPU06MD**		**88LPUC6FD**		**88LPUC6MD**	
	300	160–630	—	6	—	—	800	—		**88MSX06MD**		—		**88MSXC6MD**	
230	10	10–40	A1	1	—	60A/250V	50	**88DUE02FG**		**88DUE02MG**		**88DUEC2FG**		**88DUEC2MG**	
	15	10–40	A1	—	1¾	60A/250V	50	**88EUE02FG**		**88EUE02MG**		**88EUEC2FG**		**88EUEC2MG**	
	25	13–52	B	2	—	100A/250V	100	**88FUF02FG**		**88FUF02MG**		**88FUFC2FG**		**88FUFC2MG**	
	30	25–100	B	—	2½	200A/250V	100	**88GUG02FG**		**88GUG02MG**		**88GUGC2FG**		**88GUGC2MG**	
	50	25–100	B	3	—	200A/250V	150	**88HUG02FG**		**88HUG02MG**		**88HUGC2FG**		**88HUGC2MG**	
	60	50–200	B	—	3½	200A/250V	250	**88IUH02FG**		**88IUH02MG**		**88IUHC2FG**		**88IUHC2MG**	
	75	50–200	B	4	—	400A/250V	250	**88JUH02FG**		**88JUH02MG**		**88JUHC2FG**		**88JUHC2MG**	
	100	55–250	—	5	—	400A/250V	400	**88LPS02FG**		**88LPS02MG**		**88LPSC2FG**		**88LPSC2MG**	
	150	55–250	—	5	—	600A/250V	600	**88LPU02FG**		**88LPU02MG**		**88LPUC2FG**		**88LPUC2MG**	
	350	160–630	—	6	—	—	1200	—		**88MSX02MG**		—		**88MSXC2MG**	
460	15	5.5-22	A1	1	—	30A/600V	30	**88DUD04FH**		**88DUD04MH**		**88DUDC4FH**		**88DUDC4MH**	
	30	10–40	A1	—	1¾	60A/600V	50	**88EUE04FH**		**88EUE04MH**		**88EUEC4FH**		**88EUEC4MH**	
	40	13–52	B	2	—	100A/600V	100	**88FUF04FH**		**88FUF04MH**		**88FUFC4FH**		**88FUFC4MH**	
	60	25–100	B	—	2½	200A/600V	100	**88GUG04FH**		**88GUG04MH**		**88GUGC4FH**		**88GUGC4MH**	
	75	25–100	B	3	—	200A/600V	125	**88HUG04FH**		**88HUG04MH**		**88HUGC4FH**		**88HUGC4MH**	
	100	50–200	B	—	3½	200A/600V	150	**88IUH04FH**		**88IUH04MH**		**88IUHC4FH**		**88IUHC4MH**	
	150	50–200	B	4	—	400A/600V	250	**88JUH04FH**		**88JUH04MH**		**88JUHC4FH**		**88JUHC4MH**	
	200	55–250	—	5	—	400A/600V	400	**88LPS04FH**		**88LPS04MH**		**88LPSC4FH**		**88LPSC4MH**	
	300	55–250	—	5	—	600A/600V	600	**88LPU04FH**		**88LPU04MH**		**88LPUC4FH**		**88LPUC4MH**	
	700	160–630	—	6	—	—	1200	—		**88MSX04MH**		—		**88MSXC4MH**	
575	15	5.5-22	A1	1	—	30A/600V	30	**88DUD05FE**		**88DUD05ME**		**88DUDC5FE**		**88DUDC5ME**	
	30	10–40	A1	—	1¾	60A/600V	50	**88EUE05FE**		**88EUE05ME**		**88EUEC5FE**		**88EUEC5ME**	
	40	13–52	B	2	—	100A/600V	50	**88FUF05FE**		**88FUF05ME**		**88FUFC5FE**		**88FUFC5ME**	
	60	25–100	B	—	2½	200A/600V	100	**88GUG05FE**		**88GUG05ME**		**88GUGC5FE**		**88GUGC5ME**	
	75	25–100	B	3	—	200A/600V	125	**88HUG05FE**		**88HUG05ME**		**88HUGC5FE**		**88HUGC5ME**	
	100	50–200	B	—	3½	200A/600V	150	**88IUH05FE**		**88IUH05ME**		**88IUHC5FE**		**88IUHC5ME**	
	150	50–200	B	4	—	400A/600V	250	**88JUH05FE**		**88JUH05ME**		**88JUHC5FE**		**88JUHC5ME**	
	200	55–250	—	5	—	400A/600V	400	**88LPS05FE**		**88LPU05ME**		**88LPSC5FE**		**88LPSC5ME**	
	300	55–250	—	5	—	600A/600V	400	**88LPU05FE**		**88LPU05ME**		**88LPUC5FE**		**88LPUC5ME**	
	700	160–630	—	6	—	—	1200	—		**88MSX05ME**		—		**88MSXC5ME**	

Note: All starter sizes carry one maximum Hp rating (per the National Electric Code).

Notes

Simplicity and compact lightweight design makes Class LE lighting contactors an attractive solution to your budgeting challenges.

- Used in applications where it is not critical that contacts remain closed if control power is lost
- Rated for tungsten lighting (incandescent filament), ballast lighting (fluorescent, HID, metal halide, mercury vapor, quartz halogen and sodium-lamp), resistive and general use loads
- Contacts are rated 20 - 400 amps at 600 volts
- 3 and 4 pole (up to 12 pole for 30 and 60 amp contactors)
- Most contactors have built-in auxiliary contacts for convenient 3-wire control
- Combination lighting contactors are UL Listed for Service Entrance
- Wide range of coil voltages from 24 to 600 VAC 50/60Hz
- Compact design allows for smaller panels and more wiring room
- Finger and back-of-hand safe terminals
- Panel and DIN rail mounting
- Full line of enclosures including NEMA 1, 3/3R, 4, 4/4X stainless steel and 12
- Available in combination form with choice of non-fusible disconnect, fusible disconnect or circuit breaker
- Full line of factory and field modifications

Catalog Numbering System

LE [ ] [ ] [ ] [ ] 0 [ ] [ ] [ ]

Disconnect Type
B = Combination Circuit Breaker
D = Combination Non-Fused Disconnect
F = Combination Fusible Disconnect
N = Non-Combination

Disconnect Rating
0 = N/A
A = 30A/250V Disconnect
B = 30A/600V Disconnect
C = 60A/250V Disconnect
D = 60A/600V Disconnect
E = 100A/250V Disconnect
F = 100A/600V Disconnect
G = 200A/250V Disconnect
H = 200A/600V Disconnect
J = 400A/250V Disconnect
K = 400A/600V Disconnect
T = 20A Circuit Breaker
V = 30A Circuit Breaker
Y = 60A Circuit Breaker
Z = 100A Circuit Breaker

Enclosure Type
0 = Open
1 = NEMA 1
2 = NEMA 12/3R
4 = NEMA 4/4X SS

Contactor Rating (Amp)
B = 20
C = 30
D = 60
E = 100
F = 200
G = 300
H = 400

N.C. Poles
0 = None

N.O. Poles
03 = Three
04 = Four
06 = Six
09 = Nine
12 = Twelve

Coil Voltage (AC 60Hz)
024 = 24
120 = 120
208 = 208
240 = 240
277 = 277
347 = 347
480 = 480
600 = 600

Series
A = 200 – 400A Contactors
B = 20 & 30A Contactors
C = 60 & 100A Contactors

Ordering Information

- Replace *** with a number from the coil table.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-135 for open, page 17-153 for enclosed.
- Wiring Diagram see page 17-170.
- Replacement Parts see page 17-123.

Coil Table

VAC 60Hz	***
24	024
120	120
208	208
240	240
277	277
347 ①	347
480	480
600	600

Replace the (***) with a number from the coil table.

Non-Combination Contactor

Max. Amp Rating	Number of Poles	Normally Closed Contacts	Normally Open Contacts	Enclosure Type			
				Open	1	3/3R/12	4/4X 304 S.S.
				Catalog Number			
20	3	0	3	LEN00B003***B	LEN01B003***B	LEN02B003***B	LEN04B003***B
	4	0	4	LEN00B004***B	LEN01B004***B	LEN02B004***B	LEN04B004***B
30	3	0	3	LEN00C003***B	LEN01C003***B	LEN02C003***B	LEN04C003***B
	4	0	4	LEN00C004***B	LEN01C004***B	LEN02C004***B	LEN04C004***B
	6	0	6	LEN00C006***B	LEN01C006***B	LEN02C006***B	LEN04C006***B
	9	0	9	LEN00C009***B	LEN01C009***B	LEN02C009***B	LEN04C009***B
	12	0	12	LEN00C012***B	LEN01C012***B	LEN02C012***B	LEN04C012***B
60	3	0	3	LEN00D003***C	LEN01D003***C	LEN02D003***C	LEN04D003***C
	6	0	6	LEN00D006***C	LEN01D006***C	LEN02D006***C	LEN04D006***C
	9	0	9	LEN00D009***C	LEN01D009***C	LEN02D009***C	LEN04D009***C
	12	0	12	LEN00D012***C	LEN01D012***C	LEN02D012***C	LEN04D012***C
100	3	0	3	LEN00E003***C	LEN01E003***C	LEN02E003***C	LEN04E003***C
200	3	0	3	LEN00F003***A	LEN01F003***A	LEN02F003***A	LEN04F003***A
300	3	0	3	LEN00G003***A	LEN01G003***A	LEN02G003***A	LEN04G003***A
400	3	0	3	LEN00H003***A	LEN01H003***A	LEN02H003***A	LEN04H003***A

① Not available on 60 - 400A contactors.

Contactor	LEN00B003	LEN00B004	LEN00C003	LEN00C004
General technical data:				
Finger-safe (main circuit / control circuit)	yes / yes	yes / yes	yes / yes	yes / yes
Altitude (m)	2,000	2,000	2,000	2,000
Ambient storage temperature (°C)	-55 to 80	-55 to 80	-55 to 80	-55 to 80
Ambient operating temperature (°C)	0 to 40	0 to 40	0 to 40	0 to 40
Humidity (% non-condensing)	10 to 95	10 to 95	10 to 95	10 to 95
Shock resistance at rectangular impulse (g/ms)	6.7 / 5, 4.2 / 10	6.7 / 5, 4.2 / 10	7.5 / 5, 4.7 / 10	7.5 / 5, 4.7 / 10
Shock resistance at sine pulse (g/ms)	10.5 / 5, 6.6 / 10	10.5 / 5, 6.6 / 10	11.8 / 5, 7.4 / 10	11.8 / 5, 7.4 / 10
Mechanical operating cycles as operating time:				
of contactor	30,000,000	30,000,000	10,000,000	10,000,000
of contactor with additional aux contacts	10,000,000	10,000,000	10,000,000	10,000,000
Main circuit:				
Number of NC / NO main contacts	0NC / 3NO	0NC / 4NO	0NC / 3NO	0NC / 4NO
Typical power loss per conductor (W)	0.7	0.7	0.9	0.9
Off-load operating frequency (cycles per hour)	10,000	10,000	5,000	5,000
Current ratings:				
Tungsten (poles per phase)	**20A @277V 1p 1ph 20A @480V 2p 1ph 20A @480V 3p 3ph**	**20A @277V 1p 1ph 20A @480V 2p 1ph 20A @480V 3p 3ph**	**30A @277V 1p 1ph 30A @480V 2p 1ph 30A @480V 3p 3ph**	**30A @277V 1p 1ph 30A @480V 2p 1ph 30A @480V 3p 3ph**
Ballast (poles per phase)	**20A @347V 1p 1ph 20A @600V 2p 1ph 20A @600V 3p 3ph**	**20A @347V 1p 1ph 20A @600V 2p 1ph 20A @600V 3p 3ph**	**30A @347V 1p 1ph 30A @600V 2p 1ph 30A @660V 3p 3ph**	**30A @347V 1p 1ph 30A @600V 2p 1ph 30A @600V 3p 3ph**
General and resistive (poles per phase)	**20A @600V 1p 1ph 20A @600V 2p 1ph 20A @600V 3p 3ph**	**20A @600V 1p 1ph 20A @600V 2p 1ph 20A @600V 3p 3ph**	**30A @600V 1p 1ph 30A @600V 2p 1ph 30A @600V 3p 3ph**	**30A @600V 1p 1ph 30A @600V 2p 1ph 30A @600V 3p 3ph**
Coil ratings:				
Nominal voltage	2)	2)	2)	2)
Inrush / sealed power (VA)	31.7 / 4.8	31.7 / 4.8	87 / 9.4	87 / 9.4
Coil voltage tolerance factor	0.8 - 1.1	0.8 - 1.1	0.8 - 1.1	0.8 - 1.1
Internal/standard auxiliary contact:				
Number of NC / NO auxiliary contacts	0NC / 1NO	NA①	1NC / 1NO	1NC / 1NO
Rating	A600 / Q600	NA	A600 / Q600	A600 / Q600
Installation/mounting/dimensions:				
Mounting orientation	vertical	vertical	vertical	vertical
Type of mounting: screw / DIN rail	yes / yes	yes / yes	yes / yes	yes / yes
Height x Width x Depth (mm)	57.5 x 45 x 73	57.5 x 45 x 73	85 x 45 x 97	85 x 60 x 97
Minimum clearance to sides (mm)	0	0	0	0
Minimum clearance to earthed parts (mm)	6	6	6	6
Connection type / torque for main circuit terminals	screw / 7-10 lb in	screw / 7-10 lb in	screw / 18-22 lb in	screw / 18-22 lb in
Connection type / torque for control circuit terminals	screw / 7-10 lb in	screw / 7-10 lb in	screw / 7-10 lb in	screw / 7-10 lb in
Solid and stranded conductors for main contacts (AWG)	2x(20-16), 2x(18-14), 2x(12)	2x(20-16), 2x(18-14), 2x(12)	2x(6-12), 2x(14-8)	2x(6-12), 2x(14-8)
Solid and stranded conductors for control circuit (AWG)	2x(20-16), 2x(18-14)	2x(20-16), 2x(18-14)	2x(20-16), 2x(18-14)	2x(20-16), 2x(18-14)
Conductor type for main and control circuits	75°C CU	75°C CU	75°C CU	75°C CU
Short circuit current rating of main circuit:				
Short circuit current rating	5kA @ 600V	5kA @ 600V	5kA @ 600V	5kA @ 600V
Max fuse / circuit breaker (Amp)	30 / 25	30 / 25	60 / 40	60 / 40
Certificates:	**cULus**	**cULus**	**cULus**	**cULus**

① Must use an external (optional) auxiliary contact.
2) Refer to catalog selection tables for coil voltages.

LEN00D003	LEN00E003	LEN00F003	LEN00G003	LEN00H003
no / yes	no / yes	no / yes	no / yes	no / yes
2,000	2,000	2,000	2,000	2,000
-55 to 80	-55 to 80	-55 to 80	-55 to 80	-55 to 80
0 to 40	0 to 40	0 to 40	0 to 40	0 to 40
10 to 95	10 to 95	10 to 95	10 to 95	10 to 95
11.8 / 5, 7.4 / 10	6.7 / 5, 4 / 10	8.5 / 5, 4.2 / 10	8.5 / 5, 4.2 / 10	8.5 / 5, 4.2 / 10
18.5 / 5, 10 / 10	10.6 / 5, 6.3 / 10	13.4 / 5, 6.5 / 10	13.4 / 5, 6.5 / 10	13.4 / 5, 6.5 / 10
Mechanical operating cycles as operating time:				
10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
Main circuit:				
0NC / 3NO	0NC / 3NO	0NC / 3NO	0NC / 3NO	0NC / 3NO
3.8	5.3	13	18	35
5,000	5,000	2,000	2,000	2,000
Current ratings:				
60A @277V 1p 1ph 60A @480V 2p 1ph 60A @480V 3p 3ph	**100A @277V 1p 1ph 100A @480V 2p 1ph 100A @480V 3p 3ph**	**200A @277V 1p 1ph 200A @480V 2p 1ph 200A @480V 3p 3ph**	**300A @277V 1p 1ph 300A @480V 2p 1ph 300A @480V 3p 3ph**	**400A @277V 1p 1ph 400A @480V 2p 1ph 400A @480V 3p 3ph**
60A @347V 1p 1ph 60A @600V 2p 1ph 60A @600V 3p 3ph	**100A @347V 1p 1ph 100A @600V 2p 1ph 100A @600V 3p 3ph**	**200A @600V 1p 1ph 200A @600V 2p 1ph 200A @600V 3p 3ph**	**300A @600V 1p 1ph 300A @600V 2p 1ph 300A @600V 3p 3ph**	**400A @600V 1p 1ph 400A @600V 2p 1ph 400A @600V 3p 3ph**
60A @347V 1p 1ph 60A @600V 2p 1ph 60A @600V 3p 3ph	**100A @347V 1p 1ph 100A @600V 2p 1ph 100A @600V 3p 3ph**	**200A @600V 1p 1ph 200A @600V 2p 1ph 200A @600V 3p 3ph**	**300A @600V 1p 1ph 300A @600V 2p 1ph 300A @600V 3p 3ph**	**400A@600V 1p 1ph 400A @600V 2p 1ph 400A @600V 3p 3ph**
Coil ratings:				
2)	2)	2)	2)	2)
188 / 16.5	326 / 22	300 / 5.8	590 / 6.7	830 / 9.2
0.8 - 1.1	0.8 - 1.1	0.8 - 1.1	0.8 - 1.1	0.8 - 1.1
Internal/standard auxiliary contact:				
1NC / 1NO	1NC / 1NO	2NC / 2NO	2NC / 2NO	2NC / 2NO
A600 / P600	A600 / P600	A300 / Q300	A300 / Q300	A300 / Q300
Installation/mounting/dimensions:				
vertical	vertical	vertical	vertical	vertical
yes / yes	yes / yes	yes / no	yes / no	yes / no
113 x 55 x 130	140 x 70 x 152	172 x 120 x 180	210 x 145 x 202	214 x 160 x 225
6	6	10	10	10
6	6	10	10	10
screw / 26-39 lb in	screw / 26-39 lb in	screw / 90-110 lb in	screw / 180-195 lb in	screw / 180-195 lb in
screw / 7-10 lb in	screw / 7-10 lb in	screw / 7-10 lb in	screw / 7-10 lb in	screw / 7-10 lb in
2 x (18 ... 2), 1 x (18 ... 1)	2 x (18 ... 2), 1 x (18 ... 1)	2x(6-3/0)	2x(2/0-500MCM)	2x(2/0-500MCM)
2x (20 ... 16), 2x (18 ... 14)	2 x (18 ... 2), 1 x (18 ... 1)	2x(18-14)	2x(18-14)	2x(18-14)
75°C CU	75°C CU	75°C CU	75°C CU	75°C CU
Short circuit current rating of main circuit:				
5kA @ 600V	10kA @ 600V	10kA @ 600V	18kA @ 600V	18kA @ 600V
100 / 80	200 / 125	400 / 250	600 / 400	800 / 500
cULus	**cULus**	**cULus**	**cULus**	**cULus**

Ordering Information

- Replace *** with a number from the coil table.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-153.
- Wiring Diagram see page 17-170.
- Replacement Parts see page 17-123.

Coil Table

VAC 60Hz	***
24	024
120	120
208	208
240	240
277	277
347①	347
480	480
600	600

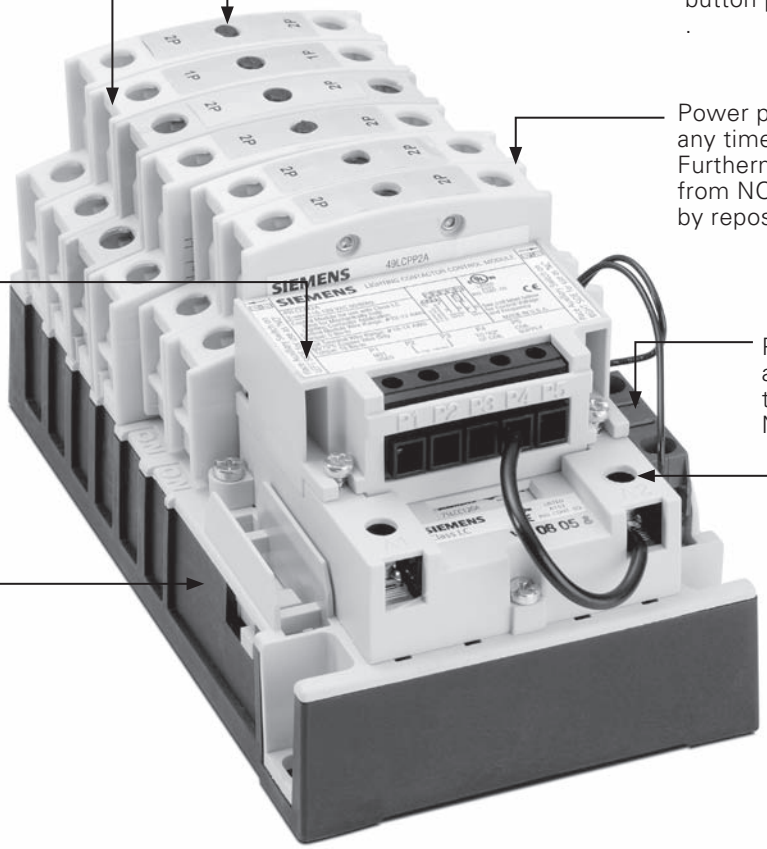
Replace the (***) with a number from the coil table.

Combination Contactor

Disconnect Type	Max. Amp Rating	Number of NO Poles	Disc. Amp Rating	Disc Amp/ Fuse Clip Rating	Circuit Breaker Rating	Enclosure Type 1 Catalog Number	Enclosure Type 3/3R/12, 4② Catalog Number	Enclosure Type 4/4X 304 S.S. Catalog Number
Non-Fusible	20	3	30A	—	—	**LEDB1B003***B**	**LEDB2B003***B**	**LEDB4B003***B**
	30	3	30A	—	—	**LEDB1C003***B**	**LEDB2C003***B**	**LEDB4C003***B**
	60	3	60A	—	—	**LEDD1D003***B**	**LEDD2D003***B**	**LEDD4D003***B**
	100	3	100A	—	—	**LEDF1E003***B**	**LEDF2E003***B**	**LEDF4E003***B**
	200	3	200A	—	—	**LEDH1F003***A**	**LEDH2F003***A**	**LEDH4F003***A**
	300	3	400A	—	—	**LEDK1G003***A**	**LEDK2G003***A**	**LEDK4G003***A**
Fusible	20	3	—	30A/250V	—	**LEFA1B003***B**	**LEFA2B003***B**	**LEFA4B003***B**
		3	—	30A/600V	—	**LEFB1B003***B**	**LEFB2B003***B**	**LEFB4B003***B**
	30	3	—	30A/250V	—	**LEFA1C003***B**	**LEFA2C003***B**	**LEFA4C003***B**
		3	—	30A/600V	—	**LEFB1C003***B**	**LEFB2C003***B**	**LEFB4C003***B**
	60	3	—	60A/250V	—	**LEFC1D003***B**	**LEFC2D003***B**	**LEFC4D003***B**
		3	—	60A/600V	—	**LEFD1D003***B**	**LEFD2D003***B**	**LEFD4D003***B**
	100	3	—	100A/250V	—	**LEFE1E003***B**	**LEFE2E003***B**	**LEFE4E003***B**
		3	—	100A/600V	—	**LEFF1E003***B**	**LEFF2E003***B**	**LEFF4E003***B**
	200	3	—	200A/250V	—	**LEFG1F003***A**	**LEFG2F003***A**	**LEFG4F003***A**
		3	—	200A/600V	—	**LEFH1F003***A**	**LEFH2F003***A**	**LEFH4F003***A**
	300	3	—	400A/250V	—	**LEFJ1G003***A**	**LEFJ2G003***A**	**LEFJ4G003***A**
		3	—	400A/600V	—	**LEFK1G003***A**	**LEFK2G003***A**	**LEFK4G003***A**
Circuit Breaker	20	3	—	—	20A	**LEBT1B003***B**	**LEBT2B003***B**	**LEBT4B003***B**
	30	3	—	—	30A	**LEBV1C003***B**	**LEBV2C003***B**	**LEBV4C003***B**
	60	3	—	—	60A	**LEBY1D003***B**	**LEBY2D003***B**	**LEBY4D003***B**
	100	3	—	—	100A	**LEBZ1E003***B**	**LEBZ2E003***B**	**LEBZ4E003***B**

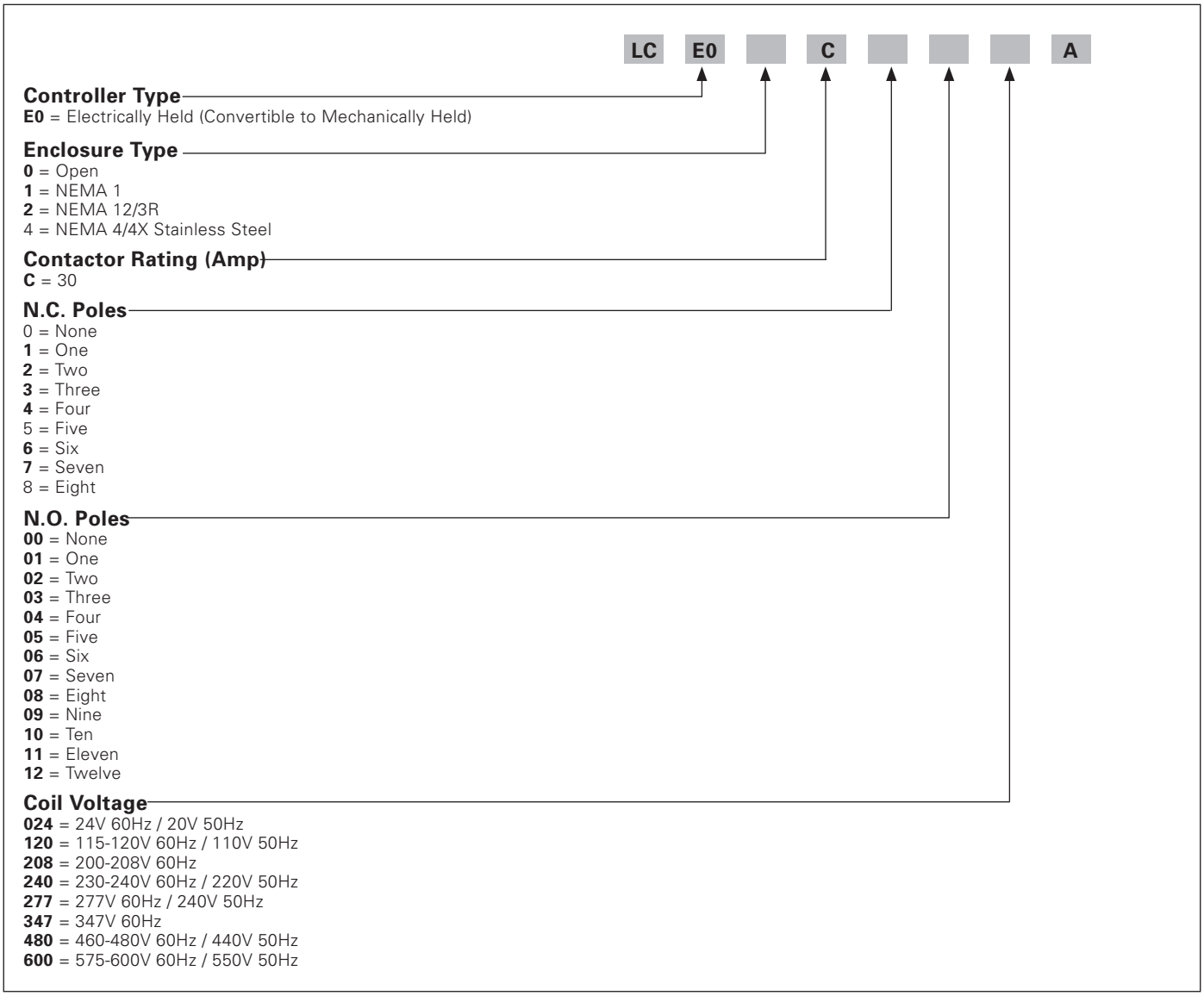
① Not available on 200 - 400A contactors.
② Type 4 painted enclosure through 100 Amp only.

Class LC lighting contactors deliver unprecedented versatility in application, simplicity in configuration and performance in operation. Ingenious design, rugged construction and a host of truly useful features make them uniquely appealing to all those who use them.



- Used in all applications where either electrically or mechanically held contactors are specifically suited and also ideal for maximum flexibility and future expansion
- Rated for tungsten lighting (incandescent filament), ballast lighting (fluorescent, HID, metal halide, mercury vapor, quartz halogen and sodium-lamp), resistive and general use loads
- Contacts are rated up to 30 amps at 600 volts
- Up to 12 poles (maximum of 8 normally closed)
- Wide range of coil voltages from 24 to 600 VAC 50/60Hz
- Can be ordered as either electrically or mechanically held and can also be converted from electrically to mechanically held in the field with a simple conversion kit
- Modular design enables you to stock the building block components to assemble all configurations of both the electrically and mechanically held contactors thus dramatically reducing inventory
- Full line of enclosures including NEMA 1, 3/3R, 4, 4/4X stainless steel and 12
- Full line of factory and field modifications

Catalog Numbering System



Ordering Information

- To order standard electrically held contactor, simply select catalog number from tables below.
- To order mechanically held contactor, select catalog number from tables below and specify conversion module from factory modification section from page 17-117.
- To convert standard electrically held contactor to mechanically held in the field, select catalog number from tables below and select conversion module kit from field modification section on page 17-104.
- Replace *** with a number from the coil table.
- Field Modification Kits see page 17-102.
- Factory Modifications see page 17-114.
- Dimensions see page 17-134 open, page 17-153 enclosed.
- Wiring Diagrams see page 17-170.
- Replacement Parts see page 17-123.

Coil Table

VAC 60Hz	***
24	024
120	120
208	208
240	240
277	277
347	347
480	480
600	600

Replace the (***) with a number from the coil table.

Non-Combination Contactor (30 Amp max.)

No. of Poles		Enclosure Type			
		Open	1	3/3R/12	4/4X 304 S.S.
N.C.	N.O.	Catalog Number			
2	0	LCE00C200***A	LCE01C200***A	LCE02C200***A	LCE04C200***A
3		LCE00C300***A	LCE01C300***A	LCE02C300***A	LCE04C300***A
4		LCE00C400***A	LCE01C400***A	LCE02C400***A	LCE04C400***A
5		LCE00C500***A	LCE01C500***A	LCE02C500***A	LCE04C500***A
6		LCE00C600***A	LCE01C600***A	LCE02C600***A	LCE04C600***A
7		LCE00C700***A	LCE01C700***A	LCE02C700***A	LCE04C700***A
8		LCE00C800***A	LCE01C800***A	LCE02C800***A	LCE04C800***A
1	1	LCE00C101***A	LCE01C101***A	LCE02C101***A	LCE04C101***A
2		LCE00C201***A	LCE01C201***A	LCE02C201***A	LCE04C201***A
3		LCE00C301***A	LCE01C301***A	LCE02C301***A	LCE04C301***A
4		LCE00C401***A	LCE01C401***A	LCE02C401***A	LCE04C401***A
5		LCE00C501***A	LCE01C501***A	LCE02C501***A	LCE04C501***A
6		LCE00C601***A	LCE01C601***A	LCE02C601***A	LCE04C601***A
7		LCE00C701***A	LCE01C701***A	LCE02C701***A	LCE04C701***A
8		LCE00C801***A	LCE01C801***A	LCE02C801***A	LCE04C801***A
0	2	LCE00C002***A	LCE01C002***A	LCE02C002***A	LCE04C002***A
1		LCE00C102***A	LCE01C102***A	LCE02C102***A	LCE04C102***A
2		LCE00C202***A	LCE01C202***A	LCE02C202***A	LCE04C202***A
3		LCE00C302***A	LCE01C302***A	LCE02C302***A	LCE04C302***A
4		LCE00C402***A	LCE01C402***A	LCE02C402***A	LCE04C402***A
5		LCE00C502***A	LCE01C502***A	LCE02C502***A	LCE04C502***A
6		LCE00C602***A	LCE01C602***A	LCE02C602***A	LCE04C602***A
7		LCE00C702***A	LCE01C702***A	LCE02C702***A	LCE04C702***A
8		LCE00C802***A	LCE01C802***A	LCE02C802***A	LCE04C802***A
0	3	LCE00C003***A	LCE01C003***A	LCE02C003***A	LCE04C003***A
1		LCE00C103***A	LCE01C103***A	LCE02C103***A	LCE04C103***A
2		LCE00C203***A	LCE01C203***A	LCE02C203***A	LCE04C203***A
3		LCE00C303***A	LCE01C303***A	LCE02C303***A	LCE04C303***A
4		LCE00C403***A	LCE01C403***A	LCE02C403***A	LCE04C403***A
5		LCE00C503***A	LCE01C503***A	LCE02C503***A	LCE04C503***A
6		LCE00C603***A	LCE01C603***A	LCE02C603***A	LCE04C603***A
7		LCE00C703***A	LCE01C703***A	LCE02C703***A	LCE04C703***A
8		LCE00C803***A	LCE01C803***A	LCE02C803***A	LCE04C803***A

Non-Combination Contactor (30 Amp max.)

No. of Poles		Enclosure Type			
		Open	1	3/3R/12	4/4X 304 S.S.
N.C.	N.O.	Catalog Number			
0	4	LCE00C004***A	LCE01C004***A	LCE02C004***A	LCE04C004***A
1		LCE00C104***A	LCE01C104***A	LCE02C104***A	LCE04C104***A
2		LCE00C204***A	LCE01C204***A	LCE02C204***A	LCE04C204***A
3		LCE00C304***A	LCE01C304***A	LCE02C304***A	LCE04C304***A
4		LCE00C404***A	LCE01C404***A	LCE02C404***A	LCE04C404***A
5		LCE00C504***A	LCE01C504***A	LCE02C504***A	LCE04C504***A
6		LCE00C604***A	LCE01C604***A	LCE02C604***A	LCE04C604***A
7		LCE00C704***A	LCE01C704***A	LCE02C704***A	LCE04C704***A
8		LCE00C804***A	LCE01C804***A	LCE02C804***A	LCE04C804***A
0	5	LCE00C005***A	LCE01C005***A	LCE02C005***A	LCE04C005***A
1		LCE00C105***A	LCE01C105***A	LCE02C105***A	LCE04C105***A
2		LCE00C205***A	LCE01C205***A	LCE02C205***A	LCE04C205***A
3		LCE00C305***A	LCE01C305***A	LCE02C305***A	LCE04C305***A
4		LCE00C405***A	LCE01C405***A	LCE02C405***A	LCE04C405***A
5		LCE00C505***A	LCE01C505***A	LCE02C505***A	LCE04C505***A
6		LCE00C605***A	LCE01C605***A	LCE02C605***A	LCE04C605***A
0	6	LCE00C006***A	LCE01C006***A	LCE02C006***A	LCE04C006***A
1		LCE00C106***A	LCE01C106***A	LCE02C106***A	LCE04C106***A
2		LCE00C206***A	LCE01C206***A	LCE02C206***A	LCE04C206***A
3		LCE00C306***A	LCE01C306***A	LCE02C306***A	LCE04C306***A
4		LCE00C406***A	LCE01C406***A	LCE02C406***A	LCE04C406***A
5		LCE00C506***A	LCE01C506***A	LCE02C506***A	LCE04C506***A
6		LCE00C606***A	LCE01C606***A	LCE02C606***A	LCE04C606***A
0	7	LCE00C007***A	LCE01C007***A	LCE02C007***A	LCE04C007***A
1		LCE00C107***A	LCE01C107***A	LCE02C107***A	LCE04C107***A
2		LCE00C207***A	LCE01C207***A	LCE02C207***A	LCE04C207***A
3		LCE00C307***A	LCE01C307***A	LCE02C307***A	LCE04C307***A
4		LCE00C407***A	LCE01C407***A	LCE02C407***A	LCE04C407***A
0	8	LCE00C008***A	LCE01C008***A	LCE02C008***A	LCE04C008***A
1		LCE00C108***A	LCE01C108***A	LCE02C108***A	LCE04C108***A
2		LCE00C208***A	LCE01C208***A	LCE02C208***A	LCE04C208***A
3		LCE00C308***A	LCE01C308***A	LCE02C308***A	LCE04C308***A
4		LCE00C408***A	LCE01C408***A	LCE02C408***A	LCE04C408***A
0	9	LCE00C009***A	LCE01C009***A	LCE02C009***A	LCE04C009***A
1		LCE00C109***A	LCE01C109***A	LCE02C109***A	LCE04C109***A
2		LCE00C209***A	LCE01C209***A	LCE02C209***A	LCE04C209***A
0	10	LCE00C010***A	LCE01C010***A	LCE02C010***A	LCE04C010***A
1		LCE00C110***A	LCE01C110***A	LCE02C110***A	LCE04C110***A
2		LCE00C210***A	LCE01C210***A	LCE02C210***A	LCE04C210***A
0	11	LCE00C011***A	LCE01C011***A	LCE02C011***A	LCE04C011***A
0	12	LCE00C012***A	LCE01C012***A	LCE02C012***A	LCE04C012***A

General technical data:	
Finger-safe (main circuit / control circuit)	yes / yes
Degree of pollution	3
Altitude (m)	2,000
Ambient storage temperature (°C)	-30 to 65
Ambient operating temperature (°C)	-25 to 40
Humidity (% non-condensing)	no data
Shock resistance at rectangular impulse (g/ms)	no data
Shock resistance at sine pulse (g/ms)	no data
Rated impulse voltage resistance (kV)	no data
Rated insulation voltage (V)	600
Mechanical operating cycles as operating time:	
of contactor	100,000
of contactor with additional aux contacts	100,000
Main circuit:	
Number of main contacts	2 - 12 (maximum of 8 NC)
Typical power loss per conductor (W)	no data
Off-load operating frequency (cycles per hour)	60 for continued operation
Current ratings:	
Tungsten (poles per phase)	20A @277V 1p 1ph 20A @480V 2p 1ph 20A @480V 3p 3ph
Ballast (poles per phase)	30A @347V 1p 1ph 30A @600V 2p 1ph 30A @600V 3p 3ph
General and resistive (poles per phase)	30A @600V 1p 1ph 30A @600V 2p 1ph 30A @600V 3p 3ph
Coil ratings:	
Nominal voltage	(refer to coil voltage table)
Inrush / sealed power (VA)	248 / 28
Coil voltage tolerance factor	0.85 - 1.1
External/optional auxiliary contact:	
Number of NC / NO auxiliary contacts	2NC / 2NO max
Rating	A600, 24VDC, 24VAC
Installation/mounting/dimensions:	
Mounting orientation	vertical
Type of mounting: screw / DIN rail	yes / no
Height x Width x Depth (mm)	188 x 106 x 98
Minimum clearance to sides (mm)	12.7
Minimum clearance to earthed parts (mm)	12.7
Connection type / torque:	
Main contact terminals	screw / 35 lb in
Coil terminals	screw / 15 lb in
Auxiliary contact terminals	screw / 7-12 lb in
Control module terminals	screw / 5 lb in
Solid and stranded conductors (AWG):	
Main contact terminals	1x(14-8), #8 solid or stranded 2x(14-8), #8 stranded only
Coil terminals	2x(18-14)
Auxiliary contact terminals	2x(22-12)
Control module terminals	1x(22-12)
Conductor type for main / control circuits	75°C CU / 60-75°C CU
Short circuit current rating of main circuit:	
Short circuit current rating	(see SCCR tables)
Certificates:	**cUL**

Coil voltages:
24V 60Hz / 20V 50Hz
115-120V 60Hz / 110V 50Hz
200-208V 60Hz
230-240V 60Hz / 220V 50Hz
277V 60Hz / 240V 50Hz
347V 60Hz
460-480V 60Hz / 440V 50Hz
575-600V 60Hz / 550V 50Hz

Short circuit current ratings with fuses:			
Max. Volt.	**Fuse**	**Max. Device Rating (Amps)**	**SCCR (kA)**
600	RK fuse	60	5

Short circuit current ratings with circuit breakers:			
Max. Volt.	**Siemens Listed Circuit Breaker**	**Max. Device Rating (Amps)**	**SCCR (kA)**
600	NGG3B040L	40	5
480	HEG3B040L	40	5
480	ED63B040L	40	5
480	NGG3B040L	40	5

Conversion module:		
Input Volt. (AC)	**Steady State Current @ Rated Volts (mA)**	**Max. VA**
24	80	5
115-120	83	12
200-277	91	30

Conversion module:	
Min. pulse duration (3-wire module)	250ms
Max. allowable leakage current	1.8 mA
EMI	35 V/m
Surge transient peak	6 kV
Frequency range	40-70 Hz

CLM 20 Amp

CLM 100 Amp

Mechanically Latched Lighting and Heating Contactor

The CLM Lighting Contactors can be used with metal halide, mercury vapor, quartz halogen, tungsten and fluorescent lighting. They provide reliable and convenient lighting control in numerous applications, such as industrial plants, schools, hospitals, office buildings, shopping centers, airports, stadiums . . . literally everywhere lighting is required.

The CLMs are listed under UL 508 with no derating when used open or enclosed. Combination lighting contactors are listed for UL service entrance.
UL listed File #E60310
CSA Certified File LR 6535

Type CLM 20 Amp Lighting Contactor Solid State Control Modules

The CLM 20 amp lighting contactor is an electromagnetically operated, mechanically latched three wire control contactor. The most commonly used method of control is a three position momentary contact switch with a center-off position. The controlling device must be able to make the coil inrush current but need not break it. The coil current is interrupted by the control contacts within the CLM contactor. Power for the control line may come from a separate source or directly from the line side of the CLM contactor. The CLM contactor can also be controlled by devices such as:

- Break-glass control stations
- Timers having single pole, double throw contacts
- Photo-electric cells①
- Energy management systems①
- Microprocessors①
- Occupancy sensors①

Control modules make it possible to use a controlling device that does not have enough current-carrying capacity to control the CLM contactor directly. Control modules are also used when the control station is to be located at a distance greater than the allowable contactor line run.

Another use for control modules occurs when the controlling device is only available as a single pole single-throw contact necessitating a two wire control line.

Still another application for control modules is when start-stop three wire control is needed.

Control modules also can make it possible to operate the CLM coil from its own incoming line at one voltage while providing the control at a second, perhaps lower voltage.

Two Wire Control Module (Accessory 47)

The advantages of two wire controls are:

1. Control station can have lower ampacity rating.
2. Control station can be located an extended distance from the CLM contactor.
3. Control module can frequently be controlled directly from microprocessor.
4. Control devices can be two wire single pole, single-throw types.
5. Control voltage may be different than the CLM coil circuit and at a lower voltage level.

Note: If the control power to the solid state control module is lost while the module is energized the lighting contactor will open. If the line power to the lighting contactor is lost while the contactor is energized the contactor will not change state with return of line voltage. Power will be restored to the load if the control module is still energized. Control station should be the maintained type.

Three Wire Control Module (Accessory 48)

1. The accessory 48 consists of two relays with contacts appropriately interconnected which provides for an interlocking that prevents both relays from being energized simultaneously.

2. This module has similar characteristics to the two wire module (Accessory 47) except there is no change of switch contact position upon loss of control line power. Control stations should be the momentary type.

Stop-Start Control Module (Accessory 49)

Stop-start three wire maintained control is an arrangement used mostly when controlling motors, but can be used in lighting applications.

Any number of momentary contact control stations consisting of normally open start buttons and normally closed stop buttons can be used. Start buttons are connected in parallel and stop buttons in series.

Operation (Magnetic Latch)

A permanent magnet is built into the contactor structure of the 30A, 60A, 100A, and 200A contactors that will maintain the contactor in its energized state indefinitely without using control power. When energized, a DC current is applied that produces a magnetic field that reinforces the polarity of the permanent magnet, and the contactor pulls in immediately. The current to the coil is disconnected by the coil clearing interlock. In order to drop out the contactor, it is necessary to apply a field through the OFF coil in the reverse direction to the permanent magnet. This momentarily cancels the magnetic attraction and the contactor drops out. Coil and module failures are possible when used with solid state relays and PLC outputs. 24-volt systems are ok to use, but 120 volts and above should be discouraged. If higher values cannot be avoided, an interposing relay should be used.

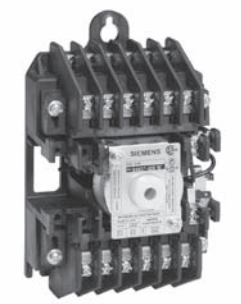
(Mechanically Latched)

The 300 & 400A lighting and heating contactors operate using a latching mechanism.

Closing – When the "close" pushbutton is operated, the closing coil is energized, closing the contactor. As the contactor closes, the latch lever hooks over the latch pin to mechanically latch the contactor closed. The coil-clearing auxiliary contact de-energizes the closing coil.

Opening – When the "Trip" pushbutton is operated, the trip solenoid coil is energized, unhooking the latch lever from the latch pin, which allows the contactor to open. As the contactor opens, the coil-clearing auxiliary contact de-energizes the trip solenoid coil.

① Operation through control modules.



Ordering Information

- Replace *** with a number from the coil table.
- Field modification kits see page 17-102.
- Factory modifications see page 17-114.
- Dimensions see page 17-139 open page 17-153 enclosed.
- Wiring Diagrams see page 17-173.
- Replacement parts see page 17-123.

Coil Table

60Hz Voltage	Number
24②	024
120	120
208	208
240	240
277	277
480④	480
600④	600

Open and Non-combination Enclosed Contactors

Max Amp Rating	Number of Poles	Open Type③		Enclosure					
				NEMA 1 General Purpose		NEMA 12 NEMA 3/3R Industrial Use Weatherproof		NEMA 4/4X Stainless Steel Watertight, Dust-tight, Corrosion Resistant, 304 Stainless Steel	
		Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
20	2 3 4 6 8 10 12	see table below		CLM1B02*** CLM1B03*** CLM1B04*** CLM1B06*** CLM1B08*** CLM1B10*** CLM1B12***		CLM2B02*** CLM2B03*** CLM2B04*** CLM2B06*** CLM2B08*** CLM2B10*** CLM2B12***		CLMSB02*** CLMSB03*** CLMSB04*** CLMSB06*** CLMSB08*** CLMSB10*** CLMSB12***	
30	2 3 4 5 6 8 9 10 12	CLM0C02*** CLM0C03*** CLM0C04*** CLM0C05*** CLM0C06*** CLM0C08*** CLM0C09*** CLM0C10*** CLM0C12***		CLM1C02*** CLM1C03*** CLM1C04*** CLM1C05*** CLM1C06*** CLM1C08*** CLM1C09*** CLM1C10*** CLM1C12***		CLM2C02*** CLM2C03*** CLM2C04*** CLM2C05*** CLM2C06*** CLM2C08*** CLM2C09*** CLM2C10*** CLM2C12***		CLMSC02*** CLMSC03*** CLMSC04*** CLMSC05*** — — — — —	 — — — — —
60	2 3 4 5 6 8 9 10 12	CLM0D02*** CLM0D03*** CLM0D04*** CLM0D05*** CLM0D06*** CLM0D08*** CLM0D09*** CLM0D10*** CLM0D12***		CLM1D02*** CLM1D03*** CLM1D04*** CLM1D05*** CLM1D06*** CLM1D08*** CLM1D09*** CLM1D10*** CLM1D12***		CLM2D02*** CLM2D03*** CLM2D04*** CLM2D05*** CLM2D06*** CLM2D08*** CLM2D09*** CLM2D10*** CLM2D12***		CLMSD02*** CLMSD03*** CLMSD04*** CLMSD05*** — — — — —	 — — — — —
100	2 3 4 5	CLM0E02*** CLM0E03*** CLM0E04*** CLM0E05***		CLM1E02*** CLM1E03*** CLM1E04*** CLM1E05***		CLM2E02*** CLM2E03*** CLM2E04*** CLM2E05***		CLMSE02*** CLMSE03*** CLMSE04*** CLMSE05***	
200	2 3 4 5	CLM0F02*** CLM0F03*** CLM0F04*** CLM0F05***		CLM1F02*** CLM1F03*** CLM1F04*** CLM1F05***		CLM2F02*** CLM2F03*** CLM2F04*** CLM2F05***		CLMSF02*** CLMSF03*** CLMSF04*** CLMSF05***	
300	2 3	CLM0G02*** CLM0G03***		CLM1G02*** CLM1G03***		CLM2G02*** CLM2G03***		— —	— —
400	2 3	CLM0H02*** CLM0H03***		CLM1H02*** CLM1H03***		CLM2H02*** CLM2H03***		— —	— —

Open 20 Amp Contactors

Max Amp Rating	Number of Poles①	110–120V Coil 50/60Hz		208–240V Coil 50/60Hz		265–277V Coil 50/60Hz	
		Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
20	2	CLM22031		CLM22061		CLM22071	
	3	CLM32031		CLM32061		CLM32071	
	4	CLM42031		CLM42061		CLM42071	
	6	CLM62031		CLM62061		CLM62071	
	8	CLM82031		CLM82061		CLM82071	
	10	CLM102031		CLM102061		CLM102071	
	12	CLM122031		CLM122061		CLM122071	

① Contactors with 2–6-poles will be assembled with all poles located in the top portion of the contactor. Contactors with 8–12-poles will be assembled with 6-poles in the top portion and the remaining poles in the bottom portion of the contactor.

② 24 volt coils are not available on 20, 300 and 400 amp contactor sizes. For 24 volt control of 20 amp contactor select solid state control module.

③ CLM 30 & 60A 6-12-pole can be field assembled. Order mounting kit **49MCMPMA** and the appropriate number of 2-5 pole contactors.

④ 480 or 600 volt coils are not available on 20 amp contactors.

Lighting Control

Combination Mechanically and Magnetically Held Lighting Contactors, Class CM

Selection

Ordering Information

- Replace *** with a number from the coil table.
- Field modification kits see page 17-102.
- Factory modifications see page 17-114.
- Dimensions see page 17-153.
- Wiring Diagrams see page 17-173.
- Replacement parts see page 17-123.

Coil Table

60Hz Voltage	Number
24①	024
120	120
208	208
240	240
277	277
480	480
600②	600

Combination Lighting Contactors

Disconnect Type	Contactor Amp Rating	Number of NO Poles	Disc Amp Rating	Disc Amp/ Fuse Clip Rating	Circuit Breaker Rating	Enclosure: NEMA 1 General Purpose — Catalog Number	NEMA 1 — List Price $	NEMA 12, NEMA 3/3R NEMA 4 Painted (thru 100 amps) Industrial Use Weatherproof, Watertight, Dust-tight — Catalog Number	NEMA 12, NEMA 3/3R — List Price $	NEMA 4/4X Stainless Steel Watertight, Dust-tight, Corrosion Resistant, 304 Stainless Steel — Catalog Number	NEMA 4/4X Stainless Steel — List Price $
Non-Fusible	20	3	30A	—	—	CMNB14***		CMNB24***		CMNBS4***	
	30	3	30A	—	—	CMNC14***		CMNC24***		CMNCS4***	
	60	3	60A	—	—	CMND15***		CMND25***		CMNDS5***	
	100	3	100A	—	—	CMNE16***		CMNE26***		CMNES6***	
	200	3	200A	—	—	CMNF17***		CMNF27***		CMNFS7***	
	300	3	400A	—	—	CMNG18***		CMNG28***		CMNGS8***	
Fusible	20	3	—	30A/250V	—	CMFB10***		CMFB20***		CMFBS0***	
		3	—	30A/600V	—	CMFB11***		CMFB21***		CMFBS1***	
	30	3	—	30A/250V	—	CMFC10***		CMFC20***		CMFCS0***	
		3	—	30A/600V	—	CMFC11***		CMFC21***		CMFCS1***	
	60	3	—	60A/250V	—	CMFD12***		CMFD22***		CMFDS2***	
		3	—	60A/600V	—	CMFD13***		CMFD23***		CMFDS3***	
	100	3	—	100A/250V	—	CMFE14***		CMFE24***		CMFES4***	
		3	—	100A/600V	—	CMFE15***		CMFE25***		CMFES5***	
	200	3	—	200A/250V	—	CMFF16***		CMFF26***		CMFFS6***	
		3	—	200A/600V	—	CMFF17***		CMFF27***		CMFFS7***	
	300	3	—	400A/250V	—	CMFG18***		CMFG28***		CMFGS8***	
		3	—	400A/600V	—	CMFG19***		CMFG29***		CMFGS9***	
Circuit Breaker	20	3	—	—	20A	CMBB14***		CMBB24***		CMBBS4***	
	30	3	—	—	30A	CMBC15***		CMBC25***		CMBCS5***	
	60	3	—	—	60A	CMBD18***		CMBD28***		CMBDS8***	
	100	3	—	—	100A	CMBE18***		CMBE28***		CMBES8***	
	200	3	—	—	200A	CMBF10***		CMBF20***		CMBFS0***	
	300	3	—	—	300A	CMBG11***		CMBG21***		CMBGS1***	

Lighting & Heating Contactor Ratings CLM

Maximum AC/DC Voltage and Amp Ratings

Load Type	Amperes Continuous	Poles to Load: 1 for 1-Phase	Poles to Load: 2 for 1-Phase 3 for 3-Phase
Tungsten	20	250V AC	250V AC
Ballast	20	347V AC	600V AC
General	30	347V AC	600V AC
General	20	125V DC	250V DC

Inrush Current Over Fuse Size (amps RMS) at AC Control Voltage 20A CLM					
Amps	120V	240V	277V	347V	480V
Inrush	5.0	2.5	2.2	1.8	1.3
Fuse	2.0	1.0	1.0	0.75	0.5

Contactor Ratings			
Load Type	Amperes Continuous	Max Volts Line to Line	Max Volts Line to Neutral
Tungsten	30-400	480	277
Ballast	30-400	600	346
Heating	30-400	600	346

AC Coil Data			
Contactor Amperes	No. Poles	Inrush VA	Dropout VA
20	2-12	625	6
30	2-5	410	40
60	2-3	410	40
60	4-5	600	40
100/200	2-3	900	200
100/200	4-5	1300	130
300/400	2-3	1600	550

① 24 volt coils are not available on 20 and 300 amp contactors. Use solid state control module on 20 amp size.

② 600 volt coils are not available on 20 amp contactors.

Industrial Control Power Transformers

Features

- Enclosed coils (50-5000VA); Completely encloses the transformer coils against moisture, dust, dirt and industrial contaminants for maximum protection in hostile and industrial environments.
- Fuse clips (most models). Factory mounted for integral fusing on the secondary side to save panel space, save wiring time and save the cost of buying an add-on fuse block or kit
- Integrally finger safe terminals. Between terminals and transformer, protect against electrical creepage. Up to 30% greater terminal contact area permits low-loss connections. Extra-deep barriers reduce the chance of shorts from frayed leads or careless wiring
- Terminals. Molded into the transformer, are difficult to break during wiring. A full quarter-inch of thread on the 8-32 terminal screws prevents stripping and pullout
- Jumpers supplied. Two jumper links are standard with all transformers which can be wired for dual primary voltages

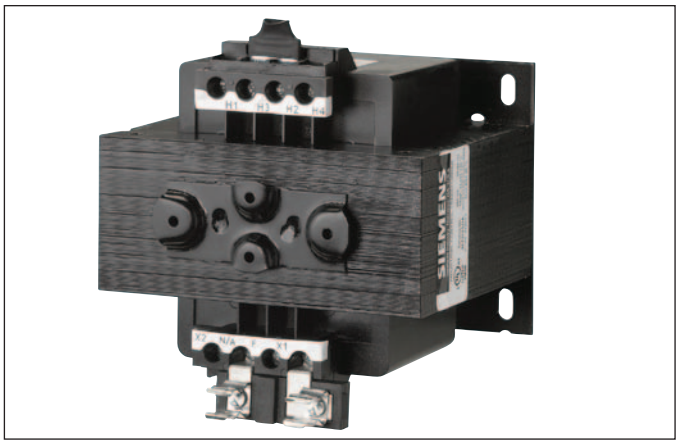
Operation

Industrial control circuits and motor control loads typically require more current when they are initially energized than under normal operating conditions. This period of high current demand, referred to as inrush, may be as great as ten times the current required under steady state (normal) operating conditions, and can last up to 40 milliseconds. A transformer in a circuit subject to inrush will typically attempt to provide the load with the required current during the inrush period. However, it will be at the expense of the secondary voltage stability by allowing the voltage to the load to decrease as the current increases. This period of secondary voltage instability, resulting from increased current, can be of such magnitude that the transformer is unable to supply sufficient voltage to energize the load. The transformer must therefore be designed and constructed to accommodate the high inrush current, while maintaining secondary voltage stability. According to NEMA standards, the secondary voltage would typically be at 85% of the rated voltage.

Industrial Control Power Transformers are specifically designed and built to provide adequate voltage to the load while accommodating the high current levels present at inrush. These transformers deliver excellent secondary voltage regulation and meet or exceed the standards established by NEMA, ANSI, UL and cUL. Their rugged construction and excellent electrical characteristics ensure reliable operation of electromagnetic devices and trouble-free performance.

Specifications

- Laminations are built with silicon steel to minimize core losses and to increase optimum performance and efficiency
- Copper magnet wire of the highest quality assures efficient operation
- Factory mounted type "K" fuse clips are standard on all secondary transformers where possible
- Two jumper links are standard with all transformers which can be wired for dual primary voltages
- cUL Listed and CSA certified
- 50/60 Hz rated
- Insulation materials are of the highest rating available for the temperature class
- Mounting plate is heavy gauge steel to add strength to core construction and provide stable mounting. Slotted mounting feet permit easy installation
- Attractive black finish; easy-to-read nameplate with complete rating data and wiring diagram
- Class 130°C (226°F) insulation system. 80°C (176°F) temperature rise. (50-750VA typical)
- Class 180°C (356°F) insulation system. 120°C (248°F) temperature rise. (1000–5000VA typical)
- Optional field mounted 2-pole primary Class CC fuse block is available



Features

- Class MTG Industrial Control Transformers are 100% certified for all domestic and International Applications
- The MTG line has full compliance with IEC Safety standards EN 61 558
- CE Mark in accordance with requirements for EN 61 558
- Meets IP-20 specifications per IEC 529 for finger-safe protection because all of our CPTs come standard with touchsafe terminals, both primary and secondary sides. There is no need to buy any terminal cover accessories.
- UL Listed
- Exceeds applicable requirements for control transformers as determined by NEMA and ANSI
- Insulation requirements is twice that of UL5085
- Class 130°C (226°F) insulation system. 80°C (176°F) temperature rise. (50-750VA typical)
- Class 180°C (356°F) insulation system. 120°C (248°F) temperature rise. (1000–5000VA typical)
- Primary and secondary fusing capability available as field installed kits for domestic or international fusing
- Integrally-molded terminals and barriers between terminals make breakage virtually impossible during wiring. The MTG transformer construction is the same as our high quality Class MT transformers

Optional Field Installed Fuse Clip Kits For Panel Mounting

- 2-Pole primary Class CC fuse block
- 1-Pole secondary midget fuse block for 13⁄32 × 1½ fuses
- 2-Pole primary international type fuse blocks
- 1-Pole secondary international type fuse blocks

Touch safe terminals are standard on all CPTs

The Touch-Safe terminals are designed to comply with IEC 742 and IP 20 requirements. The international fuse block kits have inherent touch safe terminals and fuse clips.

Siemens Meets International Standards

CSA (Canadian Standards Association) was utilized as a Competent Body in reviewing, interpreting and properly complying with the requirements of IEC-742 to place a CE mark on its MTG Series product. As a National Certification Body, CSA also has the proper documentation and reports on file for MTG Series to utilize the CB Scheme ensuring acceptance throughout the world.

The standard Siemens MTG product is available with terminal covers which meets the requirements of IEC-529, IP20 degree of protection and meets the applicable requirements for covers per IEC-742.

IEC-742

The requirements for industrial control circuit transformers to be used in the European Common Market are identified by the International Electrotechnical Commission (IEC) and specified under IEC-742, Non-Short Circuit Proof Isolating Transformers, under the Low Voltage Directive 73/23/EEC. Manufacturers of control transformers indicate compliance with these requirements by placing a CE mark on the product.

- Winding to winding insulation requirements may be twice that for IEC-742 compared to UL506
- The electrical clearances between current carrying parts are one-third greater to comply with IEC-742 requirements for units up to 250VA with voltages up to 440 volts ac
- Transformers manufactured to IEC-742 requirements will have a minimum of 10% higher overload capacity than those manufactured only to UL506 requirements

While no requirement exists in IEC-742 for the electrical connections to be either finger safe or touch proof, the specification does state that IF a transformer is supplied with a cover to prevent incidental contact with current carrying parts, that cover must utilize two separate methods or places of securing it to the component, with neither being dependent upon the other. Additionally, one of these methods MUST require a tool to remove it.

IEC-529

The requirements for finger-safe or touch-proof electrical connections are identified by the International Electrotechnical Commission (IEC) under specification 529, Classification of Degrees of Protection Provided by Enclosures. These various degrees of protection are identified and differentiated by IP ratings.

The IP specification which most closely approximates protection to a human finger is IP20. This IP rating would be the most common degree of touch-proof connection for electrical components such as transformers.

EN 61 558

The requirements for industrial control transformers to be used in the European Common Market are identified by the IEC and specified in EN 61 558, Safety of Power Control Transformers, under Low Voltage Directive 73/23/EEC. CE mark on the product indicates compliance.

Transformer Selection Process

Selecting a transformer for industrial control circuit applications requires knowledge of the following terms:

Inrush VA is the product of load voltage (V) multiplied by the current (A) that is required during circuit start-up. It is calculated by adding the inrush VA requirements of all devices (contactors, timers, relays, pilot lights, solenoids, etc.), which will be energized together. Inrush VA requirements are best obtained from the component manufacturer.

Sealed VA is the product of load voltage (V) multiplied by the current (A) that is required to operate the circuit after initial start-up or under normal operating conditions. It is calculated by adding the sealed VA requirements of all electrical components of the circuit that will be energized at any given time. Sealed VA requirements are best obtained from the component manufacturer. Sealed VA is also referred to as steady state VA.

Primary Voltage is the voltage available from the electrical distribution system and its operational frequency, which is connected to the transformer supply voltage terminals.

Secondary Voltage is the voltage required for load operation which is connected to the transformer load voltage terminals.

Fuse Clip Kit KCCFPX2R

Primary Fuse Kit

In addition to factory installed secondary fusing, Siemens offers a primary fuse kit for class MT transformers size 50–1500 VA for field installation. The primary fuse kit includes a 2-pole Class CC fuse block, instructions and all associated mounting and wiring hardware. Additionally, this fuse kit will fit most competitors' units. To order this kit, use catalog number **KCCFPX2R**. The primary fuse kit, when installed, will add a maximum of 0.69 in. (18 mm) to the transformer "A" dimension and 1.94 in. (49 mm) to the "C" dimension.

Once the circuit variables have been determined, transformer selection is a simple 5-step process as follows:

1. Determine the Application Inrush VA by using the following industry accepted formula:
   Application Inrush VA = $\sqrt{(\text{Inrush VA})^2 + (\text{Sealed VA})^2}$
2. Refer to the Regulation Data Chart. If the primary voltage is basically stable and does not vary by more than 5% from nominal, the 90% secondary voltage column should be used. If the primary voltage varies between 5% and 10% of nominal, the 95% secondary voltage column should be used.
3. After determining the proper secondary voltage column, read down until a value equal to or greater than the Application Inrush VA is found. In no case should a figure less than the Application Inrush VA be used.
4. Read left to the Transformer VA Rating column to determine the proper transformer for this application. As a final check, make sure that the Transformer VA Rating is equal to or greater than the total sealed requirements. If not, select a transformer with a VA rating equal to or greater than the total sealed VA.
5. Refer to the following pages to determine the proper catalog number based on the transformer VA, and primary and secondary voltage requirements.

Regulation Data Chart

Transformer VA Ratings	Inrush VA At 20% Power Factor		
	NEMA/IEC 95% Sec Voltage	NEMA/IEC 90% Sec Voltage	NEMA/IEC 85% Sec Voltage
25	100/——	130/——	150/——
50	170/190	200/220	240/270
75	310/350	410/460	540/600
100	370/410	540/600	730/810
150	780/860	930/1030	1150/1270
200	810/900	1150/1270	1450/1600
250	1400/1540	1900/2090	2300/2530
300	1900/2090	2700/2970	3850/4240
350	3100/3410	3650/4020	4800/5280
500	4000/4400	5300/5830	7000/7700
750	8300/9130	11000/12100	14000/15400
1000①	15000/——	21000/——	27000/——
1000②	9000/——	13000/——	18500/——
1500	10500/——	15000/——	205000/——
2000	17000/——	25500/——	34000/——
3000	24000/——	36000/——	47500/——
5000	55000/——	92500/——	115000/——

To comply with NEMA standards, which require all magnetic devices to operate successfully at 85% of rated voltage, the 90% secondary voltage column is most often used in selecting a transformer.

① For units with Class 105°C insulation systems.
② For units with Class 180°C insulation systems.

Primary Fuse Kit Installation—Class MT Transformer with Primary Fuse Kit, KCCFPX2R

Ordering Information

- Use the Voltage Table to determine the primary and secondary voltage required.
- Field Modifications see page 17-110.
- Dimension and wiring diagrams are available in CAD and PDF format on SIOS.
- All MT and MTG CPTs come standard with touch safe terminals.

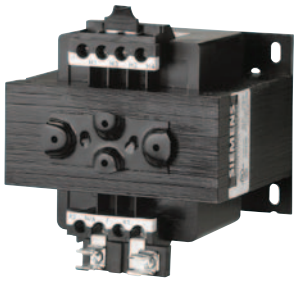
Voltage Table

Primary Volts 50/60 Hz	Secondary Volts	Letter
240 X 480, 230 X 460, 220 X 440	120/115/110	A
240 X 480	24	B
120 X 240	24	C
115 X 230	24	D
550/575/600	110/115/120	E
208/277	120	F
208/230/460	115	G
230/460/575	95/115	H
380/400/415	110 X 220	I
208/230/460, 200/220/440,240/480	24 X 115, 23 X 110, 25 X 120	J
240/416/480/600, 230/400/460/575, 220/380/440/550, 208/500	99/120/130, 95/115/125, 91/110/120, 85/100/110	L
240 X 480	120 X 240	M

VA Rating	Voltage Letter A		Voltage Letter B		Voltage Letter C		Voltage Letter D		Voltage Letter E		Voltage Letter F	
	Catalog No	List Price $	Catalog No	List Price $	Catalog No	List Price $	Catalog No	List Price $	Catalog No	List Price $	Catalog No	List Price $
50	MT0050A		MT0050B		MT0050C		MT0050D		MT0050E		MT0050F	
75	MT0075A		MT0075B		MT0075C		MT0075D		MT0075E		MT0075F	
100	MT0100A		MT0100B		MT0100C		MT0100D		MT0100E		MT0100F	
150	MT0150A		MT0150B		MT0150C		MT0150D		MT0150E		MT0150F	
200	MT0200A		MT0200B		MT0200C		MT0200D		MT0200E		MT0200F	
250	MT0250A		MT0250B		MT0250C		MT0250D		MT0250E		MT0250F	
300	MT0300A		MT0300B		MT0300C		MT0300D		MT0300E		MT0300F	
350	MT0350A		MT0350B		MT0350C		MT0350D		MT0350E		MT0350F	
500	MT0500A		MT0500B		MT0500C		MT0500D		MT0500E		MT0500F	
750	MT0750A		MT0750B		MT0750C		—	—	MT0750E		MT0750F	
1000	MT1000A		MT1000B		—	—	—	—	MT1000E		MT1000F	
1500	MT1500A		—	—	—	—	—	—	MT1500E		MT1500F	
2000	MT2000A		—	—	—	—	—	—	MT2000E		MT2000F	
3000	MT3000A		—	—	—	—	—	—	MT3000E		MT3000F	
5000	MT5000A		—	—	—	—	—	—	MT5000E		—	—

VA Rating	Voltage Letter G		Voltage Letter H		Voltage Letter I		Voltage Letter J		Voltage Letter L		Voltage Letter M	
	Catalog No	List Price $	Catalog No	List Price $	Catalog No	List Price $	Catalog No	List Price $	Catalog No	List Price $	Catalog No	List Price $
50	MT0050G		MT0050H		MT0050I		MT0050J		MT0050L		MT0050M	
75	MT0075G		MT0075H		MT0075I		MT0075J		—	—	MT0075M	
100	MT0100G		MT0100H		MT0100I		MT0100J		MT0100L		MT0100M	
150	MT0150G		MT0150H		MT0150I		MT0150J		MT0150L		MT0150M	
200	MT0200G		MT0200H		MT0200I		MT0200J		—	—	MT0200M	
250	MT0250G		MT0250H		MT0250I		MT0250J		MT0250L		MT0250M	
300	MT0300G		MT0300H		MT0300I		MT0300J		—	—	MT0300M	
350	MT0350G		MT0350H		MT0350I		MT0350J		MT0350L		MT0350M	
500	MT0500G		MT0500H		MT0500I		MT0500J		MT0500L		MT0500M	
750	MT0750G		MT0750H		MT0750I		—	—	MT0750L		MT0750M	
1000	MT1000G		MT1000H		MT1000I		—	—	—	—	MT1000M	
1500	MT1500G		MT1500H		MT1500I		—	—	—	—	MT1500M	
2000	MT2000G		MT2000H		MT2000I		—	—	—	—	MT2000M	
3000	MT3000G		MT3000H		MT3000I		—	—	—	—	MT3000M	
5000	MT5000G		MT5000H		MT5000I		—	—	—	—	MT5000M	

Industrial Control Power Transformers



Ordering Information

- Use the Voltage Table to determine the primary and secondary voltage required.
- Field Modifications see page 17-110.
- Dimension and wiring diagrams are available in CAD and PDF format on SIOS.
- All MT and MTG CPTs come standard with touch safe terminals.

Voltage Table

Primary Volts 50/60 Hz	Secondary Volts	Letter
240 X 480, 230 X 460, 220 X 440	120/115/110	A
240 X 480	24	B
120 X 240	24	C
550/575/600	110/115/120	E
380/400/415	110 X 220	I
208/230/460, 200/220/440, 240/480	24 X 115, 23 X 110, 25 X 120	J
380	24	P

VA Rating	Voltage Letter A		Voltage Letter B		Voltage Letter C		Voltage Letter E		Voltage Letter I		Voltage Letter J		Voltage Letter P	
	Catalog No	List Price $	Catalog No	List Price $	Catalog No	List Price $	Catalog No	List Price $	Catalog No	List Price $	Catalog No	List Price $	Catalog No	List Price $
50	MTG0050A		MTG0050B		MTG0050C		MTG0050E		MTG0050I		MTG0050J		MTG0050P	
75	MTG0075A		MTG0075B		MTG0075C		MTG0075E		MTG0075I		MTG0075J		MTG0075P	
100	MTG0100A		MTG0100B		MTG0100C		MTG0100E		MTG0100I		MTG0100J		MTG0100P	
150	MTG0150A		MTG0150B		MTG0150C		MTG0150E		MTG0150I		MTG0150J		MTG0150P	
200	MTG0200A		MTG0200B		MTG0200C		MTG0200E		MTG0200I		MTG0200J		MTG0200P	
250	MTG0250A		MTG0250B		MTG0250C		MTG0250E		MTG0250I		MTG0250J		MTG0250P	
300	MTG0300A		MTG0300B		MTG0300C		MTG0300E		MTG0300I		MTG0300J		MTG0300P	
350	MTG0350A		MTG0350B		MTG0350C		MTG0350E		MTG0350I		MTG0350J		MTG0350P	
500	MTG0500A		MTG0500B		MTG0500C		MTG0500E		MTG0500I		MTG0500J		MTG0500P	
750	MTG0750A		MTG0750B		MTG0750C		MTG0750E		MTG0750I		MTG0750J		MTG0750P	
1000	MTG1000A		MTG1000B		MTG1000C	—	MTG1000E	—	MTG1000I	—	MTG1000J		—	—
1500	MTG1500A		—	—	—	—	MTG1500E	—	MTG1500I	—	MTG1500J		—	—
2000	MTG2000A		—	—	—	—	MTG2000E	—	MTG2000I	—	—	—	—	—
3000	MTG3000A		—	—	—	—	MTG3000E	—	MTG3000I	—	—	—	—	—
5000	MTG5000A		—	—	—	—	MTG5000E	—	MTG5000I	—	—	—	—	—

Field Modification Kits

Accessories—Class SMF

Description	Catalog Number	List Price $
Handle Guard Kit with Padlock Provision	**SMFFL1**	
Emergency Off Actuator	**SMFPB1**	
Additional Key for Key Operated Devices	**SMFFK1**	

Accessories—Class MMS, MRS

Description	Catalog Number	List Price $
Handle Guard Kit with Padlock Provision	**SMFFL1**	
Emergency Off Actuator	**SMFPB1**	
Additional Key for Key Operated Devices	**SMFFK1**	

Pilot Light Kits—Class MMS, MRS①

Device	Voltage Rating	Green Pilot Light	
		Catalog Number	List Price $
Class SMF	115–277V AC	**SMFPL10G**	

Pilot Light Kits—Class MMS, MRS①

Device	Voltage Rating	Red Pilot Light		Green Pilot Light	
		Catalog Number	List Price $	Catalog Number	List Price $
Class MMS	110–120V AC	**SMFPL11**		**SMFPL11G**	
	208–277V AC	**SMFPL12**		**SMFPL12G**	
	440–600V AC	**SMFPL13**		**SMFPL13G**	

Enclosures—Class SMF

Enclosure Type	For Use With SMF	Catalog Number	List Price $
Oversized NEMA Type 1 General Purpose	FO1, FO1P, FO2, FO2P, FO3, FO3P, FO4, FO4P	**SMFFE1**	
NEMA 3R, 4, 12 Watertight Dust-tight	FO1, FO1P, FO2, FO2P, FO3, FO3P, FO4, FO4P	**SMF40BC2**	

Enclosures—Class MMS

Enclosure Type	For Use With SMF	Catalog Number	List Price $
Oversized NEMA Type 1 General Purpose	KO1, KO2B, KO2C, KO3, KO3A, KO3B, KO4, KO4B, KO4C, KO2	—	—
Jumbo NEMA Type 1 General Purpose	KO1, KO2B, KO2C, KO3, KO3A, KO3B, KO4, KO4B, KO4C, KO2	**SMFKE2**	
NEMA 3R, 4, 12 Watertight Dust-tight	KO1, KO2B, KO2C, KO3, KO3A, KO3B, KO4, KO4B, KO4C	**SMF40BC2**	

Nameplates—Class SMF

For Use On	Name-plate Marking	Without Pilot Light		With Pilot Light	
		Catalog Number	List Price $	Catalog Number	List Price $
Standard commercial switch box cover including stainless steel plates	None	—	—	—	—
Stainless Steel Plate	None	**SMFFSN3**		**SMFFSN4**	
NEMA 1 surface mounted enclosure or gray flush plate	None	**SMFFN30**		**SMFFN40**	
	High	**SMFFN31**		**SMFFN41**	
	Low	**SMFFN32**		**SMFFN42**	

Nameplates—Class MMS

For Use On	Name-plate Marking	Without Pilot Light		With Pilot Light	
		Catalog Number	List Price $	Catalog Number	List Price $
Standard commercial switch box cover including stainless steel plates	None	**SMFFN1**		—	—
NEMA 1 surface mounted enclosure or gray flush plate	None	**SMFFN10**		**SMFFN20**	
	High	**SMFFN11**		**SMFFN21**	
	Low	**SMFFN12**		**SMFFN22**	
	Forward	**SMFFN13**		—	—
	Reverse	**SMFFN14**		**SMFFN24**	

Replacement Parts—Class SMF, MMS

Description	Catalog Number	List Price $
Replacement Toggle Kits:Type FW and KW (NEMA 4 Metallic Enclosure)	**SMFHW1**	

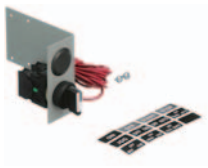
① Pilot lights can be field installed on standard NEMA 1 general purpose surface mount enclosures, and NEMA 3R, 4 and 12 enclosures only. For flush mounting units a complete switch unit with pilot light must be ordered.

	Description	Type		Catalog Number	List Price $
3RV2901-1D	**Auxiliary Contact Blocks**				
	Plug in contact block 1 block per 3RV mountable at the front	1 SPDT contact, NO/NC 1 NO + 1 NC 1 SPDT contact NO/NC electronic contact④		**3RV2901-1D** **3RV2901-1E** **3RV2901-1G**	
3RV2901-1A	**Side mount auxiliary contact with screw connection** 1 side mount auxiliary contact per 3RV mountable on the left-hand side	1 NO + 1 NC 2 NO 2 NC 2 NO + 2 NC		**3RV2901-1A** **3RV2901-1B** **3RV2901-1C** **3RV2901-1J**	
	Signaling Contact Block				
	Signaling contact 1 signaling contact per 3RV mountable on the left-hand side. Can also be fitted together with side mount auxiliary contact.	1NO + 1NC for any trip + 1NO + 1NC for short circuit trip only.		**3RV2921-1M**	
	Auxiliary Releases				
3RV2922-1CP0	**Undervoltage release** 1 undervoltage release per 3RV mountable on the right-hand side. Cannot be fitted together with shunt trip.	AC 50Hz — 230V 415V	AC 60Hz 120V 208V 240V 480V	**3RV2902-1AF0** **3RV2902-1AM1** **3RV2902-1AP0** **3RV2902-1AV1**	
	Undervoltage release with early make contacts (2NO) 1 undervoltage release per 3RV mountable at the right-hand side. Cannot be fitted together with shunt trip.	AC 50Hz 230V 415V	AC 60Hz 240V 480V	**3RV2922-1CP0** **3RV2922-1CV1**	
3RV2902-1DP0	**Shunt trip** 1 shunt trip per 3RV mountable at the right-hand side. Cannot be fitted together with undervoltage release.	AC 50Hz/60Hz① 20–24V 90–110V 200–240V 350–415V	DC② 20–70V 70–190V 190–330V 330–500V	**3RV2902-1DB0** **3RV2902-1DF0** **3RV2902-1DP0** **3RV2902-1DV0**	
	Pilot Lights (LED)	AC 50Hz/60Hz			
	For NEMA 1 enclosure only. Kit includes Red, Green, and Amber lenses	24 to 240 V AC/DC 277 V AC		**49SDLBU**③ **49SDLBL**③	
	Lug Kit				
3RV2928-1H	Required for Type E Manual Combination Starter	For 3RV with amp range: 0.11-22A up to 480V Max. 0.11-12.5A up to 575V Max		**3RV2928-1H**	
	Mounting				
	Push-in Mounting Hole Kit For screw panel mounting of the 3RV	Four mounting holes required for each 3RV.		**3RV2928-0B**	
	Sealing device				
	Adjustment Dial covers	For sealing the FLA adjustment dial (Kit includes 10 covers)		**3RV2908-0P**	
	Front mount auxiliary cover	For sealing the front mount auxiliary opening. (Kit includes 10 covers)		**3RV2901-0H**	
	Door Operators				
3RV2901-0H	**Thru-the-door operators** Rotary operating mechanism, rated NEMA 12, lockable with up to 3 padlocks in the OFF position. Includes extension shift and connecting element for the 3RV.	With Black Handle	130 mm depth	**3RV2926-0B**	
			330 mm depth with supporting bracket	**3RV2926-0K**	

① 100% on time.
② 5 sec. max. on time.
③ Product Category: PILO.

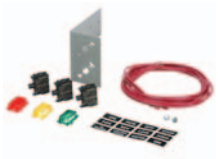
④ Compatible for use in dusty atmospheres. Contacts rated for 1-300mA @ 3-60V.

Field Modification Kits

Push Buttons and Selector Switches	Class	Enclosure Type	Controller Size or (Lighting Rating)	Type	Catalog Number	List Price $
49SDPB5	14, 40, LC, LEN, CLM①	Open	00-4	Start, Stop Push Buttons	**49SAPB5**	
				Hand-Off-Auto Selector Switch	**49SASB1**	
				Off-On Selector Switch	**49SASB4**	
		1	00-4 or (20–100A)	Start, Stop Push Buttons	**49SDPB5**	
				Hand-Off-Auto Selector Switch	**49SDSBJ**	
				Off-On Selector Switch	**49SDSB4**	
			5-8 or (200–400A)	Start, Stop Push Buttons	**49SAP05**	
				Hand-Off-Auto Selector Switch	**49SAS01**	
				Keyed Hand-Off-Auto (key removable in all positions)	**49SAS09**	
				Off-On Selector Switch	**49SAS04**	
 **49SDSB1**		12, 4/4X	00-8 or (20–400A)	Start, Stop Push Buttons	**49SAP05**	
				Hand-Off-Auto Selector Switch	**49SAS01**	
				Keyed Hand-Off-Auto (key removable in all positions)	**49SAS09**	
				Off-On Selector Switch	**49SAS04**	
	22, 43	Open	00-4	Forward-Off-Reverse Selector Switch	**49SASB2**	
		1	00-4	Forward-Off-Reverse Selector Switch	**49SDSBJ**	
			5-8	Forward, Reverse, Stop Push Buttons	**49SAP02**	
				Forward-Off-Reverse Selector Switch	**49SAS02**	
		12, 4/4X	0-8	Forward, Reverse, Stop Push Buttons	**49SAP02**	
				Forward-Off-Reverse Selector Switch	**49SAS02**	
49SAP05	30 (2S1W)	Open	0-4	High-Off-Low Selector Switch	**49SASB3**	
		1	0-1 ¾	High-Off-Low Selector Switch	**49SDSBJ**	
			2-4	High, Low, Stop Push Buttons	**49SAP03**	
				High-Off-Low Selector Switch	**49SAS03**	
		12, 4/4X	0-4	High, Low, Stop Push Buttons	**49SAP03**	
				High-Off-Low Selector Switch	**49SAS03**	
	30 (2S2W)	Open	0-4	High-Off-Low Selector Switch	**49SASB3**	
		1	0-4	High-Off-Low Selector Switch	**49SDSBJ**	
		12, 4/4X	0-4	High, Low, Stop Push Buttons	**49SAP03**	
				High-Off-Low Selector Switch	**49SAS03**	
49SAS01	17, 18, 36, 37, 83, 84, LED,LEF, LEB, CMN①, CMF①, CMB①	1, 12, 4/4X	0-8 (20-400A)	Start, Stop Push Buttons	**49SAP05**	
				Hand-Off-Auto Selector Switch	**49SAS01**	
				Keyed Hand-Off-Auto (key removable in all positions)	**49SAS09**	
				Off-On Selector Switch	**49SAS04**	
	25, 26	1, 12, 4/4X	0-8	Forward, Reverse, Stop Push Buttons	**49SAP02**	
				Forward-Off-Reverse Selector Switch	**49SAS02**	
	32	1, 12, 4/4X	0-4	High, Low, Stop Push Buttons	**49SAP03**	
				High-Off-Low Selector Switch	**49SAS03**	

① To be used for replacement of switch only. Does not include relay or extra contact block on 30-400A CLM and CM Lighting Contactors. Class 49SB not available for these devices.

Field Modification Kits

	Description			Lens Color (Lamp Type)	Legend(s)	Voltage	Catalog Number
	Class	Enclosure Type	Controller Size or (Lighting Rating)				
 49SDLBU	14, 40, LC, LEN, CLM	1 (with lift-off cover)	00–4 or (20–100A)	Red, Green, Amber (LED lamp)	ON, RUN, OFF①, OLR TRIPPED	24 to 240 V AC/DC	49SDLBU
						277 V AC	49SDLBL
	14, 17, 18, 36, 37, 40, 83④, 84④, 88, CLM, CM, LE, LEN, LC	1 (with hinged cover), 3/3R, 4, 4X, 12	00–8 or (20–400A)	Red (Transformer Type incandecent lamp)③	ON	(Refer to voltage table)	49SPL0BR*
					OFF①②	(Refer to voltage table)	49SPL0AR*
				Green (Transformer Type incandecent lamp)③	ON	(Refer to voltage table)	49SPL0BG*
					OFF①②	(Refer to voltage table)	49SPL0AG*
49SPL0BRF	82, 87	3/3R	1-6	Red (LED lamp)	ON	24 to 240 V AC/DC	49SFL0BRU
						277 V AC	49SFL0BRL
					OFF①	24 to 240 V AC/DC	49SFL0ARU
						277 V AC	49SFL0ARL
				Green (LED lamp)	ON	24 to 240 V AC/DC	49SFL0BGU
						277 V AC	49SFL0BGL
					OFF①	24 to 240 V AC/DC	49SFL0AGU
						277 V AC	49SFL0AGL
49SPL0JRF	22, 43	1 (with lift-off cover)	00–4	Red, Red (LED lamp)	FORWARD, REVERSE	24 to 240 V AC/DC	49SDLB7RU
						277 V AC	49SDLB7RL
				Green, Green (LED lamp)	FORWARD, REVERSE	24 to 240 V AC/DC	49SDLB7GU
						277 V AC	49SDLB7GL
	22, 25, 26, 43	1 (with hinged cover), 3/3R, 4, 4X, 12	00-8	Red, Red (Transformer Type incandecent lamp)③	FORWARD, REVERSE	(Refer to voltage table)	49SPL0JR*
				Green, Green (Transformer Type incandecent lamp)③	FORWARD, REVERSE	(Refer to voltage table)	49SPL0JG*
49SFL0BGU	30	1 (with lift-off cover)	0-1 3/4 (1-winding) 0-4 (2-winding)	Red, Red (LED lamp)	HIGH, LOW	24 to 240 V AC/DC	49SDLB7RU
						277 V AC	49SDLB7RL
				Green, Green (LED lamp)	HIGH, LOW	24 to 240 V AC/DC	49SDLB7GU
						277 V AC	49SDLB7GL
	30, 32	1 (with hinged cover), 3/3R, 4, 4X, 12	0-4 (1- or 2-winding)	Red, Red (Transformer Type incandecent lamp)③	HIGH, LOW	(Refer to voltage table)	49SPL0KR*
				Green, Green (Transformer Type incandecent lamp)③	HIGH, LOW	(Refer to voltage table)	49SPL0KG*
49SBLBL	Lens Kit for pilot light kits 49SDLB*			Red, Green, Amber	—	—	49SBLBL
52AED2	LED lamp BA9s type used to replace incandecsent or LED lamps. Applies only to 49SP* pilot light kits.			Red	—	24 V AC/DC	52AED2
				Green			52AED3
				Amber			52AED4
				White			52AEDB
				Red	—	120 - 600 V AC/DC	52AEB2
				Green			52AEB3
				Amber			52AEB4
				White			52AEBB

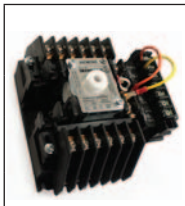
Voltage Table

Voltage	Code (*)
24 V AC (Full voltage)	J
120 V AC	F
240 V AC	G
480 V AC	H
600 V AC	E

① To use as an OFF indicator, the contactor must have a normally closed (NC) auxiliary contact available for the circuit. Order separately as needed.
② Includes a nomally closed (NC) auxiliary contact for NEMA controller sizes 0–4.
③ Incandecsent lamps may be replaced with 52AE* LED lamps listed on this page.
④ Class 83 and 84 requires a quantity of two pilot light kits.

Field Modification Kits

Solid State Control Module Kits For Lighting and Heating Contactors①

	CLM 20 Amp Contactor Kit Description	Accessory	Catalog Number	List Price $	Accessory	Catalog Number	List Price $	Accessory	Catalog Number	List Price $
	120V AC, 50/60 Hz	47 (2-Wire Control) (2W)	CLM4379771		48 (3-Wire Control) (3W)	CLM4379781		49 (Start/Stop Control) (3WS)	CLM4379791	
	24V AC/DC, 50/60 Hz		CLM4379772			CLM4379782			CLM4379792	
	240/277V AC, 50/60 Hz		CLM4379773			CLM4379783			CLM4379793	

Protective Shielding for NEMA Products

Class 14

Class 40

Disconnect with protective shield

Class 14, 22, 30, 40, 43

Contactor or Starter Size	00–1¾	List Price $	2–2½	List Price $	3–3½	List Price $	4	List Price $
Contactor Shield Catalog Number	49PSC1		49PSC2		49PSC3		49PSC4	
Starter Shield Catalog Number	49PSS1		49PSS2		49PSS3		49PSS4	

Class 17, 25, 32, 87

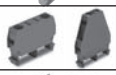
Disconnect Size	Catalog Number	List Price $
30A	49PSD5	
60 & 100A	49PSD6	
200A	49PSD7	

Power Pole Kits	Class	Enclosure type	Contactor Size (Amp)	Description	Field Kit Catalog No.
	LC	Open, 1, 12, 4/4X	30	Single power pole Double power pole	49LCPP1A 49LCPP2A

Electrically Held to Mechanically Held Conversion Modules	Class	Enclosure type	Contactor Size (Amp)	Description	Field Kit Catalog No.
	LC	Open, 1, 12, 4/4X	30	2-wire, 24VAC 2-wire, 110-120VAC 2-wire, 200-277VAC 3-wire, 24VAC 3-wire, 110-120VAC 3-wire, 200-277VAC	49LCCM1A 49LCCM2A 49LCCM3A 49LCCM4A 49LCCM5A 49LCCM6A

① These kits are only for use with 20A mechanically held lighting contactors.

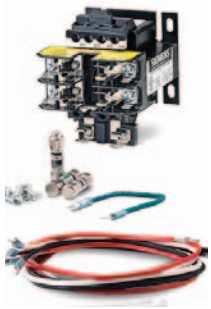
Starter/Contactor Auxiliary Contact Kits

Description	Class	Size	Type	Catalog Number	List Price $
	14, 17, 18, 22, 25, 26, 30, 32, 36, 37, 40, 43, 83, 84, 87, 88	00-4	1 NO	**49AB10**	
			1 NC	**49AB01**	
			1 NC Early Break	**49AB01EB**	
			1 NC Late Break	**49AB01LB**	
			1 NC Extra Late Break	**49AB01XLB**	
			1 NO Extra Late Make	**49AB10XLM**	
			1 NO & 1 NC	**49AB11**	
			2 NO	**49AB20**	
			4 NO	**49AB40**	
			3 NO & 1 NC	**49AB31**	
			2 NO & 2 NC	**49AB22**	
	14, 17, 18, 22, 25, 26, 36, 37, 40, 43, 87, 88	5, 6	2 NO	**3RH1921-1EA20**	
			1 NO & 1 NC	**3RH1921-1DA11**	
			2 NC	**3RH1921-1EA02**	
	14, 17, 18, 22, 25, 26 40, 43	7, 8	1 NO & 1 NC (Inside L or R)	**49CAL18-11**	
			1 NO & 1 NC (Outside L or R)	**49CAL18-11B**	
	LC	30	1 NO/NC	**49LCAC1PA**	
			2 NO/NC	**49LCAC2PA**	
	LE	20	Front Mounted 1 NO/NC	**3RH2911-1HA11**	
		30-100	Side Mounted 1 NO/NC	**3RH2911-1DA11**	
		200-400	Side Mounted 1 NO/NC	**3RH1921-1EA11**	
	CLM, CMN, CMF, CMB	20 Amps	1 NO/NC SPDT	**CLM4097291**	
			2 NO/NC SPDT	**CLM4097292**	
		30-200 Amps	1 NO & 1 NC	**CLMFCAK11**	
			2 NC	**CLMFCAK02**	
			2 NO	**CLMFCAK20**	
			1 Coil Clearing NO & NC	**CLMFCCK11**	
		300-400 Amps	1 NO & 1 NC	**CLMHCAK11**	
			2 NC	**CLMHCAK02**	
			2 NO	**CLMHCAK20**	
			1 Coil Clearing NO & NC	**CLMHCCK11**	

Disconnect Auxiliary Switch Kits

Description	Class	Disconnect Amp or CB Rating	Type	Catalog Number	List Price $
Non-fusible or Fusible Type	17, 25, 32, 37, 83, 84, 87, 88, LED, LEF, CMN, CMF	30 - 200A	2 NO/2 NC DPDT (NEMA A600)	**HA261234**	
MCP	18, 26, 32, 37, 83, 84, 87, 88, LEB, CMB	3A–125A	1 NO/1 NC 15A @240VAC	**A02ED62**	
		250A	1 NO/1 NC 480V	**A02FD64**	
		400A-600A	(2) 1 NO/1 NC SPDT-480V	**A02JLD64**	

Control Power Transformer Kits①③

Description	Recommended Transformer Size		VA Rating	Catalog Number	List Price $	Transformer Table		
	Control Size	Transformer VA				Primary Volts	Secondary Volts	Code
 Transformer 50/60HZ	00–2½	45 or 50③	45 VA	**KT*050**②③		120	24	**1**
	3–3½	75	50 VA	**KT*050P**③		208	24	**G**
	4	150	100 VA	**KT*100**		208	120	**H**
	5-6	150	150 VA	**KT*150**		240/480	24	**4**
	7-8	300	200 VA	**KT*200**		240/480	120	**8**
	Lighting Control		300 VA	**KT*300**		277	24	**5**
	CLM		500 VA	**KT*500**		277	120	**7**
	20A, 2 - 12P	150				600	24	**6**
	30A, 3P	100				600	120	**9**
	30A, 6 - 12P	200						
	60A, 3P	100						
	60A, 4 - 6P	150						
	60A, 8 - 12P	250						
	100/200A, 3P	200						
	100/200A, 5P	250						
	300/400A, 3P	250						
	LC & LE							
	LC 30A, 2-12P	100						
	LE 20, 30, 60A, 3 & 4P	45						
	LE 30A, 6P	45						
	LE 30A, 9-12P	100						
	LE 60A, 6-12P	150						
	LE 100, 200A, 3P	100						
	LE 300, 400A, 3P	150						

Replace * with code from Transformer table. Kits used with NEMA 1 general purpose lift-off cover type require extra wide enclosure.
Class 14 Sizes 0-2½
Class 30 (2S2W) Sizes 0-2½
Class 30 (2S1W) Sizes 0-1¾

① Installation of CPTs may require a larger enclosure.
② 45VA transformer kits will include secondary but not primary fusing. Sizes 50VA and higher include 2-pole primary fusing and 1-pole secondary fusing.
③ For 24VAC control a minimum of 100VA CPT is required.

Accessories

Description				Catalog Number	List Price $
	ESP200 Tamper Resistance Cover			**49ASTC1** **3UB89848**	
	ESP100/200 Mounting Plate	**Frame Size**	**Controller Size**		
		A or A1	00 - 1 3/4	**49ASMP1**	
		B	2 -2 1/2	**49ASMP2**	
		B	3-4	**49ASMP3**	
	Mounting Kit			**49ASMS1**	
	Universal Reset Operator 8" for class 36, 37 and 87 in NEMA 1, 12 and 3/3R			**49MARB**	
	Overload Relay Reset Operator for Class 14, 22, 30 and 83 non-combination starters in NEMA type 1, 12 and 4/4X enclosures			**49MBRS**	
	Overload Relay Reset Operator for Class 17, 18, 25, 26, 32 and 84 combination starters in NEMA type 1 enclosures			**49MBRS1**	
	Overload Relay Reset Operator for Class 17, 18, 25, 26, 32 and 84 combination starters in NEMA type 12 and 4/4X enclosures			**49MBRS2**	
	Overload Relay Reset Operator with red button for any Class in NEMA type 1, 3R, 4/4X and 12 enclosures with a 30mm hole			**49MARSR**	
	ESP200 Reset Extender			**49ASRE**	
	Protective Boot Offers protection from ice and foreign substances from interfering with button operation. For use with 49MARSR reset.			**52AABA**	
	Current Transformer 300:5 use with **3UB81234JW2**			**97CT005**	
	Current Transformer 400:5 use with **3UB81234KW2**			**97CT006**	
	Current Transformer 600:5 use with **3UB81234LW2**			**97CT008**	
	Current Transformer 750:5 use with **3UB81234MW2**			**97CT009**	
	Current Transformer 1200:5 use with **3UB81234NW2**			**97CT012**	

Miscellaneous Kits

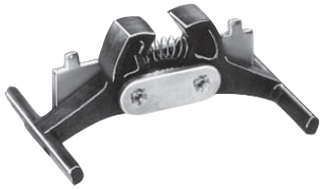
Description		Class	Encl. Type	Controller Size	Catalog Number	List Price $
 Mechanical Interlock for Horizontally Mounted Contactors	Includes wire	14, 40	Open	00–1 1¾ 2, 2½ 3, 3½ 4	**49CCF22H** **49EEF22H** **49GGF22H** **49HHP22H** **49JJG22H**	
	Interlock Only	14, 40	Open	5, 6	**3RA1954-2A**	
	Wire Kit Only			5 6	**3RA1963-2A** **3RA1973-2A**	
	Base Plate Only			5 6	**3RA1962-2A** **3RA1972-2A**	
	Mechanical Interlock	14, 40	Open	7 8	**49VM750H** **49VM1650H**	
	Includes wire & mounting plate	14, 40	Open	00–1 1¾ 2, 2½ 3, 3½ 4	**49CCF22HP** **49EEF22HP** **49GGF22HP** **49HHP22HP** **49JJG22HP**	
	Includes mounting plate (Different Frame Sizes)	14, 40	Open	Left / Right 2, 2½ / 3, 3½ 3, 3½ / 2, 2½	**49L107944** **49L107945**	
Surge Suppressor	Surge Suppressor for 120V AC coil. Limits transient voltage produced by the coil to 220% maximum peak line volts.	All but Class LC, LE, CLM	All	00–4①	**49D26344**	
Auxiliary Power Pole	NO 36A at 600V AC Max NC 25A at 600V AC Max	All but Class LC, LE, CLM	All	00–1¼	**49SAF0** **49SAFC**	
Main Contacts Lighting Contactors	Top or Bottom, 2-Pole Top, 3-Pole Top or Bottom, 4-Pole Top or Bottom, 6-Pole	CLM	All	20 Amps	**CLM4097331** **CLM4097332** **CLM4097333** **CLM4097334**	
Load Side Power Take Off Kit	Includes 3 power lugs for making extra connections to the load side of the contactor	All but Class LC, LE, CLM	All	00–1¾	**49SAE**	
Lug Kit for Contactors Item / Wire Range 49SAAF / 2-14 49SAAH / 2/0-14 75D35994001 / 250MCM-6	For AL/CU Wire	14, 40	All	2-2½ 3-3½ 4 Line 4 Load	**49SAAF**③ **49SAAH**③ **75D35994002**③	
	For AL/CU Wire	14, 40	All	5, 6	**3RT1966-4G**②	
	Use CU Only	14, 40	All	7 8	**49ZATK750-3**② **49ZATK1650-6**②	
Three Conductor Ground Lug Kit Meets UL 508 and CSA Standard 22.2 No 14-1973	2-14 AWG AL/CU Wire	All	All	All	**75D28182001**	
Lightning Arrestor		All	All	All	**49D45584002**	
Backspin Timer	On delay timer that reduces risk of starting into a backspin	87, 88	All	All	**3RP2025-1AQ30** **3RP2025-1AP30**	
Hole Plug	Covers the hole that is typically used for the conduit hub	87	All	1-4	**49D41149006**	
Hole Plug	Covers the hole in the enclosure door/cover normally filled by overload reset 49MBRS. Hole plug is used for enclosed contactors.	40, 43, LC, LE, CLM & CM	1	All	**49MZPB2**	

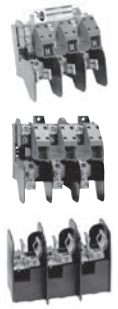
Illustration	Description	Contactor	Wire Size	Catalog Number	List Price $
3RT1966-4G	**Lug Kit** 1 Kit = 1 Terminal block. 1 kit necessary for each line and load.	NEMA size 4 (Vacuum) NEMA size 5 NEMA size 6	2/0 to 600 MCM, max. one 500MCM & one 600MCM	3RT1966-4G	

① Surge Suppression for NEMA sizes 5 – 8 are supplied internal with the coil. For size 4 panel mount.

② Only 3 lugs are suplied for line or load. If lugs for line and load are required order 2 kits.

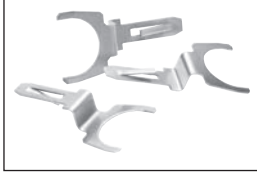
③ Lug Kit for contactors include 3 lugs for line or load.
75D35994001 for line side.
75D35994002 for load side.

Fused and Non-Fused Disconnect Switch Kits②



Basic Switch Ampere Rating	Switch Catalog Number Non-Fused	List Price $	Switch Catalog Number Fused	List Price $	Kit Description	Load Base Catalog Number Class J	List Price $	Load Base Catalog Number Class H③	List Price $	Lug Wire Size
30	HNB612		HFB21		30A, 250V	—	—	HBB21		#14-2 AWG (Cu/Al)
			HFB612		30A, 600V	HBB612		HBB612		
60	HNB623		HFB22		60A, 250V	—	—	HBB22		#14-2 AWG (Cu/Al)
			HFB62		60A, 600V	HBB62		HBB62		
100	HNB623		HFB63		100A, 250V	—	—	HBB63		#14-1/0 AWG (Cu/Al)
					100A, 600V	HBB63				
200	HNB64		HFB64		200A, 250V	—	—	HBB64		#6-300 AWG (Cu/Al)
					200A, 600V	HBB64				

Class R Fuse Conversion Kits



Catalog Number	Description	List Price $
HR21	30A, 240V	
HR612	30A, 600V	
HR612	60A, 240V	
HR62	60A, 600V	
HR63	100A, 240/600V	
HR64	200A, 240/600V	

Metal Conduit Hubs

Description	Conduit Size	Class	Controller Size	Enclosure Type	Milbank Catalog No.④
	1"	87	All	3R	A7514
	1 1/2"				A7516
	2"				A7517
	2 1/2"				A7518

① Product Category: PILO.
② Product Category: HDSS.

③ For Class R fuses order Class H kit from this table and the Class R conversion kit.

④ Milbank catalog numbers are for reference only. Milbank conduit hubs are not sold by Siemens but can be purchased at a typical electrical hardware and supply distributor.

Sirius 3RB20

Illustration	Description		For Overload Type	Catalog Number	List Price $
	Reset mechanisms				
Reset plunger with reset button	**Reset plunger** Mounts directly to overload relay. Requires separate reset operator in enclosure door. Kit includes reset plunger, holder and funnel.		3RB206	**3RU1900-1A**	
Flexible reset	**Flexible cable reset mechanism** Requires a 6.5 mm hole in the enclosure with a maximum enclosure thickness of 8 mm.	Cable length 15.75 in (400mm)	3RB206	**3RU1900-1B**	
		Cable length 23.62 in (600mm)		**3RU1900-1C**	
	Covers Tamper resistant cover for current setting and manual/automatic reset button.		3RB206	**3RB2984-0**	

Competitive Retrofit Overload Plates

Manufacturer	NEMA Size	Plate Part Number	List Price $
A-B	0, 1	**49D57090**	
A-B	2	**49D57161**	
Sq. D	0, 1	**49D57091**	

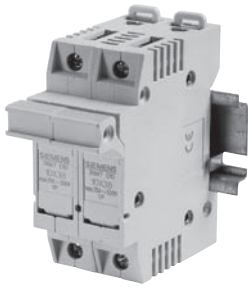
Electronic Coil System with Remaining Lifetime Indication and 24VDC PLC Output

Class	Size	Model Type	21 - 27V		96 - 127V		200 - 277V	
			Catalog Number	List Price $	Catalog Number	List Price $	Catalog Number	List Price $
All	5	P	–	–	**3RT1965-5PF31**		**3RT1965-5PP31**	
		V	–	–	**3RT1966-5PF31**		**3RT1966-5PP31**	
	6	P	–	–	**3RT1975-5PF31**		**3RT1975-5PP31**	
		V	–	–	**3RT1976-5PF31**		**3RT1976-5PP31**	

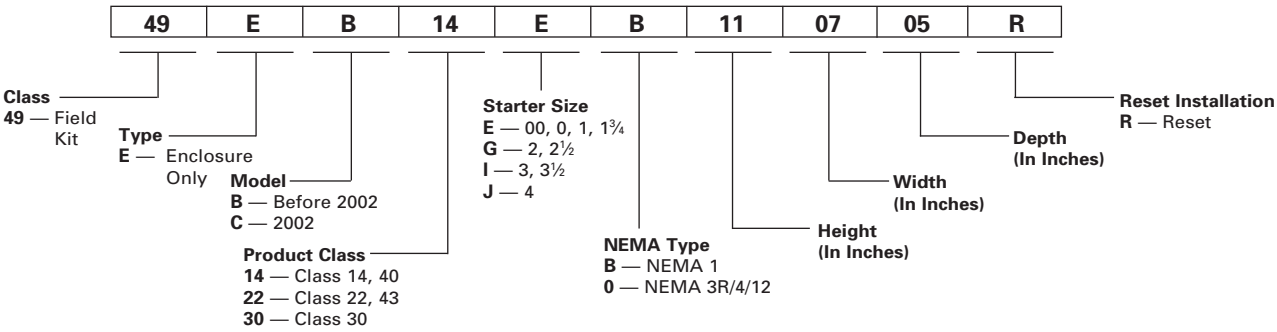
Fuse Blocks, Touch-Safe Terminal Covers

Catalog Number	Description	List Price $
KCCF1G	SECONDARY FUSE BLOCK,1P,250V MAX	
KCCFBCK	SINGLE POLE FUSE BLOCK COVER KIT	
KCCFP2RG	2 Pole PRIMARY FUSE BLOCK,2P,600V MAX (block only)	
KCCFPX2R	2 Pole PRIMARY FUSE BLOCK KIT with wire Leads	
US2:SECFUBLK	Secondary Fuse Block Assy 50va to 750va	
US2:SECFUBLK2	2nd fuse blk assy. genII 1kva to 5kva	
US2:49JUCPT2	Terminal Jumper 750VA and below	
US2:49JUCPT3	Terminal Jumper 1kVA and above	
US2:KCCSECFCVR	Touch safe cover for secondary fuse clips	
US2:KCCFP3POLE	3 pole fuse blk (2 pole primary and 1 pole secondary)	

International Fusing①

Catalog Number	Description	List Price $
8WA1011-1SF12	1-Pole Fuse Block, Touch-Safe. Up to 6.3A for 5 mm × 20 mm or 5 mm × 25 mm (Requires DIN Rail Mounting)	
3NW7013	1-Pole Fuse Block, Touch-Safe 32A, for 10 × 38 mm Cylindrical Fuses. (Requires DIN Rail Mounting.)	
 3NW7023	2-Pole Fuse Block, Touch-Safe 32A, for 10 × 38 mm Cylindrical Fuses. (Requires DIN Rail Mounting.)	
3NW7111	1-Pole Fuse Block, Touch-Safe 4-50A, for 14 × 51 mm Cylindrical Fuses. (Requires DIN Rail Mounting.)	
8WA1815	Fuse Block DIN Rail Mounting for separate screw mounting to panel. (Max 2-pole 2-25A size per rail.) (Max 1-pole 4-50A size per rail.)	

① Product Category: IEC.



Non-Reversing Starters & Contactors Class 14, 40

Size	NEMA 1 General Purpose (Clamshell)①③			NEMA 3R/4/12 Watertight, Dust-tight, Weatherproof②④	
	Without CPT	With CPT (Extra Wide)	Max. CPT VA	Without CPT	With CPT (Extra Wide)
	Catalog Number	Catalog Number		Catalog Number	Catalog Number
00–1¾	**49EC14EB110705R**	**49EC14IB201208R**	200	**49EB14E0130806R**	**49EB22E0131306R**
2, 2½	**49EC14GB140807R**	**49EC14IB201208R**	200	**49EB14G0160907R**	**49EB22G0161406R**
3, 3½	**49EC14IB201208R**	**49EC14IB201208R**	100	**49EB14J0261408R**	**49EB14J0261408R**
3, 3½	—	**49EC14JB251409R**	250	—	—
4	**49EC14JB251409R**	**49EC14JB251409R**	300	**49EB14J0261408R**	—

Reversing Starters & Reversing Contactors Class 22, 43

Size	NEMA 1 General Purpose (Clamshell)①③			NEMA 3R/4/12 Watertight, Dust-tight, Weatherproof②④	
	Without CPT	With CPT (Extra Wide)	Max. CPT VA	Without CPT	With CPT (Extra Wide)
	Catalog Number	Catalog Number		Catalog Number	Catalog Number
00–1¾	**49EC14IB201208R**	**49EC14IB201208R**	200	**49EB22E0131306R**	**49EB22E0131306R**
2, 2½	**49EC14IB201208R**	**49EC14IB201208R**	200	**49EB22G0161406R**	**49EB22G0161406R**
3, 3½	**49EC14JB251409R**	**49EC14JB251409R**	250	—	—
4	**49EC14JB251409R**	**49EC14JB251409R**	300	—	—

Lighting Contactors Class LC and LE

Class	Size	Pole	NEMA 1 General Purpose (Clamshell)①③			NEMA 3R/4/12 Watertight, Dust-tight, Weatherproof ②④	
			Without CPT	With CPT (Extra Wide)	Max. CPT VA	Without CPT	With CPT (Extra Wide)
			Catalog Number	Catalog Number		Catalog Number	Catalog Number
LC	30A	2-12	**49EC14GB140807R**	**49EC14IB201208R**	200	**49EB22G0161406R**	**49EB30G0161808R**
LE	20A, 30A	3-4	**49EC14EB110705R**	**49EC14IB201208R**	200	**49EB22G0161406R**	**49EB22G0161406R**
LE	30A	6-9	**49EC14IB201208R**	**49EC14IB201208R**	200	**49EB22G0161406R**	**49EB14J0261408R**
LE	30A	12	**49EC14IB201208R**	**49EC14JB251409R**	250	**49EB22G0161406R**	**49EB14J0261408R**
LE	60A	3-6	**49EC14GB140807R**	**49EC14IB201208R**	200	**49EB22G0161406R**	**49EB22G0161406R**
LE	60A	9-12	**49EC14IB201208R**	**49EC14IB201209R**	250	**49EB22G0161406R**	**49EB14J0261408R**
LE	100A	3	**49EC14IB201208R**	**49EC14IB201208R**	200	**49EB14J0261408R**	**49EB14J0261408R**

Lighting Contactors Class CLM

Size	Pole	NEMA 1 General Purpose (Clamshell)①③			NEMA 3R/4/12 Watertight, Dust-tight, Weatherproof ②④	
		Without CPT	With CPT (Extra Wide)	Max. CPT VA	Without CPT	With CPT (Extra Wide)
		Catalog Number	Catalog Number		Catalog Number	Catalog Number
20A	2-12	**49EC14GB140807R**	**49EC14IB201208R**	200	**49EB22G0161406R**	**49EB22G0161406R**
30A	2-5	**49EC14EB110705R**	**49EC14IB201208R**	200	**49EB22G0161406R**	**49EB22G0161406R**
30A	6-12	**49EB30G0161808R**	**49EB30G0161808R**	200	**49EB22G0161406R**	**49EB30G0161808R**
60A	2-5	**49EC14GB140807R**	**49EC14IB201208R**	250	—	—
100A	2-5	**49EC14IB201208R**	**49EC14IB201208R**	200	—	—

① Clamshell enclosure suitable for two operating devices and two pilot lights. See Field Mods page 17-102.
② Hinged cover enclosures, except for **49EB14E0130806R**, are suitable for one or more class 52 operating devices and one or more class 52 pilot lights. See Field Mods page 17-94.
③ Install NEMA 1 hole plug cat. no. **3SB1902-0AR** (included) when the cover OL reset is not needed.
④ Install NEMA 12 hole plug cat. no. 52ABH6 (not included) when the cover OL reset is not needed.

Combination Starter Enclosure Kits

Features and Benefits

Features

- 100kA short circuit rating when protected with class R fuses to 600V or MCP to 480V and when installing listed components from the instruction guide
- Enclosure types available, NEMA 1, 12, 3R and painted NEMA 4.
- Pre-Drilled mounting panels
- Heavy duty quarter turns
- Industrial type disconnect handle

Disconnect Type Enclosure Kit

- Used to assemble both non-fusible and fusible combination starters
- Accommodates Class 14 full voltage non-reversing (FVNR) NEMA starters 00 – 4 including Siemens exclusive half sizes
- Handle mechanism, power wire, mounting panel, reset assembly, and instruction guide included. Hardware for panel mounted devices and disconnect switch are not included

MCP Type Enclosure Kit

- Used to assemble combination starters with circuit breakers
- Accommodates Class 14 full voltage non-reversing (FVNR) NEMA starters 00 – 4 including Siemens exclusive half sizes
- Handle mechanism, power wire, mounting panel, reset assembly and instruction guide included. Circuit breaker not included however, mounting hardware for the circuit breaker is.

How to Select the Required Kits to Assemble a Combination Starter

1. From the catalog, select a class 14 open type starter.
2. Based on the starter size, select the enclosure kit from table 1a for fusible or non-fusible combination starters or select from table 1b for combination starters with an MCP.
3. For a non-fusible combination starter, select the disconnect switch kit from table 2a. For a fusible combination starter, select the appropriate disconnect switch, fuse clip kit, and class R rejection kit from table 2b (for H fusing, class R rejection kit not required). For combination starters with MCP, select the appropriate circuit breaker kit from table 3.

Nomenclature for Combination Enclosure Kits

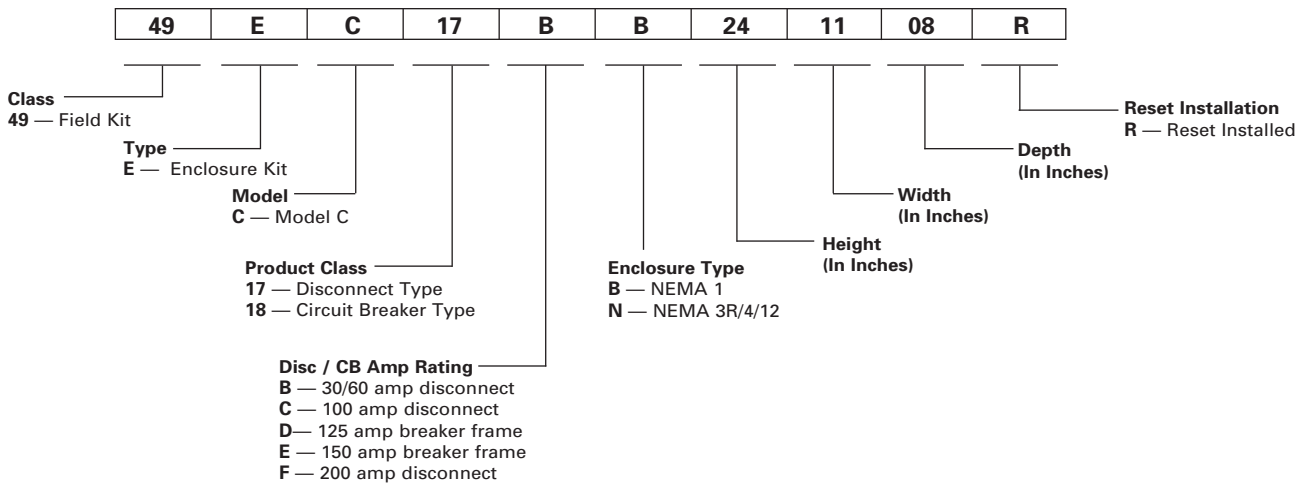


Table 1a - FVNR Combination Starter Kits for use with Disconnect Devices

Starter Size	Disc. Amp Rating	NEMA 1 General Purpose	NEMA 3R/4/12 Watertight, Dust-tight, Weatherproof
		Catalog Number	Catalog Number
0 - 2	60	**49EC17BB241108R**	**49EC17BN241108R**
2 ½ - 3	100	**49EC17CB242008R**	**49EC17CN242008R**

Table 1b. – FVNR Combination Starter Kits for use with MCP Devices

Starter Size	Max MCP Amps	NEMA 1 General Purpose	NEMA 3R/4/12 Watertight, Dust-tight, Weatherproof
		Catalog Number	Catalog Number
0 - 2	50	**49EC18DB241108R**	**49EC18DN241108R**
2 ½ - 3	125	**49EC18DB242008R**	**49EC18DN242008R**

Table 2a – Non-Fusible Disconnect Kits

Disconnect Switch	
Switch Rating	Catalog Number
30A	**HNB612**
60A	**HNB623**
100A	**HNB623**
200A	**HNB64**

Table 2b – Fusible Disconnect Kits

Fuse Clip Ratings	Class	Disconnect Switch	Load Base for Fuse	Rejection Clips for Class R Fusing
		Catalog Number	Catalog Number	Catalog Number
30A-250V	H	**HFB21**	**HBB21**	**HR21**
30A-600V	H	**HFB612**	**HBB612**	**HR612**
60A-250V	H	**HFB22**	**HBB22**	**HR612**
60A-600V	H	**HFB62**	**HBB62**	**HR62**
100A-250V	H	**HFB63**	**HBB63**	**HR63**
100A-600V	H	**HFB63**	**HBB63**	**HR63**
200A-250V	H	**HFB64**	**HBB64**	**HR64**
200A-600V	H	**HFB64**	**HBB64**	**HR64**

Table 3 – Circuit Breaker Kits

	MCP Type Used with Solid State Overload Relay		
Starter Size	Overload Amp Range	Motor Circuit Interrupter Amps	Circuit Breaker Kit
	0.75-3.4	3	**ED63A003**
0	3-12	10	**ED63A010**
	5.5-22	25	**ED63A025**
	0.75-3.4	3	**ED63A003**
1	3-12	10	**ED63A010**
	5.5-22	25	**ED63A025**
	10-40	30	**ED63A030**
1 ¾	10-40	40	**ED63A040**
2	13-52	50	**ED63A050**
2 ½	25-100	100	**ED63A100**
3	25-100	100	**ED63A100**
3 ½	50-200	125	**ED63A125**
4	50-200	150	**FXD63A150L**

Ordering Information

► All modifications will consist of Siemens standard components as available. Standard equipment dimensions and enclosure construction may not apply when certain modifications and special features are added.

Pilot Devices

Description	Modification	Class	Enclosure Type	Modification Code	List Price $
Push Buttons	Start, Stop	14, 17, 18, 36, 37, 40, 83③, 84③, CLM, CM, LC, LE	All	**A1**	
	Forward, Reverse, Stop	22, 25, 26, 43	All	**A2**	
	High, Low , Stop	30, 32	All		
	E-Stop	14, 17, 18, 22, 25, 26, 30, 32, 36, 37, 40, 43	All	**ES**	
Selector Switches	Hand-Off-Auto	14, 17, 18, 36, 37, 40, 83③, 84③, LC, LE	All	**A3**	
		CM, CLM	All	**A3**	
	For 24 volt HOA control, 20 Amp contactor only	CM, CLM	1	**EM**	
	Off-On	14, 17,18, 22, 25, 26, 30, 32, 36, 37, 40, 43, 83③, 84③, CLM, CM, LC, LE	All	**A4**	
	Auto-Off	14, 17, 18, 40, 83③, 84③, CM, CLM, LC, LE	All	**A6**	
	Forward-Off-Reverse	22, 25, 26, 43	All	**A5**	
	High-Off-Low	30, 32	All		
	Hand-Off-Auto (Keyed)	14, 17, 18, 36, 37, 40, 83③, 84③, LC, LE, CLM, CM	All	**A9**	
	Auto-Off-Low-High	30, 32	All	**A0**	

Pilot Lights

Class	Enclosure Type	Lens Color →	Red	Green	Red	Green	Red	Green	Amber	White	Red Push-To-Test	Green Push-To-Test	Green Push-To-Test	LED Bulb Upgrade
		Legend→	On For/Rev Low/High	On For/Rev Low/High	Run	Run	Off	Off	Overload Relay Tripped	Control Power On	On For/Rev Low/High	On For/Rev Low/High	Off	
		Mod Code→	FA	FB	FC	FD	FJ	FK	FL	FW	FS	FT	FU	FE①
14, 40, 17, 18, 36, 37, 87, 88, LC, LE, CLM, CM	All													
22, 25, 26, 30, 32, 43, 83③, 84③	All													

Coil Options

Class 14, 17, 18, 22, 25, 26, 30, 32, 40, 43, 83④, 84④, 87, 88					
Volts 60 HZ	Volts 50 HZ	Coil Letter Change	Controller Size — List Price $		
			00–2½	3, 3½	4
24 120 110–120/220–240 200–208 220–240 277 220–240/440–480 440–480 575–600	24 110 110/190–220 — 190–220 240 190–220/380–440 380–440 550	**J** **F** **A** **D** **G** **L** **C** **H** **E**			
DC Coil②	24V 48V 125V 250V	**S**⑤ **U** **V** **W**	.		

AC (50–60 HZ) or DC	Coil Letter Change	Controller Size 4 (Vacuum Only) Size 5 & 6 (ALL)
23–26V	**J**	
42–48V	**U**	
110–127V	**F**	
200–220V	**D**	
220–240V	**G**	
240–277V	**L**	
380–420V	**K**	
440–480V	**H**	
575–600V	**E**	

① Pilot lights are transformer type as standard. For LED type bulbs, order suffix FE in addition to the standard device suffix(es). For example, to order red "ON" and green "OFF" pilot lights with LED bulbs, order FA, FK and FE.

② DC coils include 1 NC, late break aux. contact. This aux. contact takes up one side of the starter (00–4 only).

③ For Class 83 and 84, two devices are included.

④ For Class 83, 84 standard enclosure (92) alternating relay available in 24V or 120V control only.

⑤ S coil is not available for size 4 contactors or starters.

Ordering Information	Transformer Table		
► Replace (*) with letter from Transformer Table.	Primary Volts	Secondary Volts	Letter
	120	24	B
	208	24	S
	208	120	T
	240	24	J
	240	120	F
	277	24	N
	277	120	P
	380	110	U
	415	100	W
	480	240	R
	480/240	24	D
	480/240	120	A
	600	24	E
	600	120	C

Control Power Transformers

Description	Modification Code	Product Class③
Standard Capacity① with 1-Secondary Fuse	B*	All
Standard Capacity with 2-Primary and 1-Secondary Fuse	D*	
100VA Extra Capacity with 2-Primary and 1-Secondary Fuse	C*	
150VA Extra Capacity with 2-Primary and 1-Secondary Fuse	C*1	

Factory Assembled Fuse Clips—Class 25, 32, 84④

Fuse Clip Amps	Volts	Modification Code
30	250	10
30	600	11
60	250	12
60	600	13
100	250	14
100	600	15
200	250	16
200	600	17
400	250	18
400	600	19
600	250	20
600	600	21
800	600	23
1200	600	24
1600	600	25

Note: Factory will furnish the same voltage coils as transformer secondary voltage (except with class 36,37).

① The standard control transformer supplied for starter sizes 0 through 2½ will be rated 45VA and have the appropriate secondary fuse. Primary fuses will not be supplied as standard. For primary fuse option select appropriate suffix from table.

③ Class 83 and 84 duplex controllers requires two CPTs.
④ Class 84 Duplex Controllers require two fusible disconnects.

Additional Auxiliary Contacts

Class	NO Contacts	NC Contacts	Modication Code	Controller Size — List Price $			
				00–1¾	2–4	5–6	7–8
14, 17, 18, 40, 83③, 84③	—	1	G01			—	—
	—	2	G02				—
	1	—	G10			—	—
	1	1	G11				
	1	2	G12			—	—
	2	—	G20				—
	2	1	G21			—	—
	2	2	G22				—
	2	3	G23			—	—
	3	1	G31				—
	3	2	G32			—	—
	3	3	G33		—	—	—
	4	—	G40				—
	4	1	G41			—	—
	4	2	G42		—	—	—
	4	4	G44		—	—	—
	5	—	G50			—	—
	5	1	G51		—	—	—
	5	3	G53		—	—	—
	6	—	G60		—	—	—
	6	2	G62		—	—	—
	7	1	G71		—	—	—
	8	—	G80		—	—	—
22, 25, 26, 43 & 30, 32 (2-winding)	—	2	G02①			—	—
	2	—	G20①			—	—
	2	2	G22①				—
	4	0	G40①				—
	4	4	G44①			—	—
	6	2	G62①			—	—
	8	0	G80①			—	—
30, 32 (1-winding)	0	2	G02①	—		—	—
	2	—	G20①	—		—	—
	2	2	G22①			—	—
	4	—	G40①			—	—
	4	4	G44①	—		—	—
	6	2	G62①	—		—	—
	8	—	G80①	—		—	—
LE, CLM, CM	1	1	G11		—	—	—
LC	0	1	G01				
	1	0	G10				
	1	1	G11				
	0	2	G02				
	2	0	G20				
LE, CLM, CM	0	2	G02①		—	—	—
	2	0	G20①		—	—	—
	2	2	G22①		—	—	—

Description	Class	Modification Code	Controller Size - Price Deduction $					
			0, 1	1¼ - 2½	3	3½, 4	5, 6	7, 8
Omit Overload Relay and Reset Button	17, 18, 25, 26	EX1						

① Auxiliary contacts will be added evenly across contactors. (i.e. Class 22, G02 suffix will add 2 NC contacts (one per contactor).

② Double the price addition for Class 30 and 32.
③ For class 83 and 84 contacts will be added to both starters. Price x 2.

Control Options

Description	Class	Modification Code
Lighting Control Modules (does not include pilot devices)	CLM 20 Amp only	**2W (2-wire control module) 3W (3-wire control module) 3WS (Start/Stop control module)**
Surge Suppression for 120V AC Coil②	14, 17, 18, 22, 25, 26, 30, 32, 36, 37, 83, 84, 87, 88	**SS**
Disconnect Switch Interlock 2 NO/2 NC DPDT	17, 25, 32, 37, 84, CM, LE	**GY**
Motor Circuit Protector Interlock NO/NC SPDT	18, 26, 32, 37, 84, CM, LE	**GY**
Lightning Arrestor	All	**L**
Circuit Breaker Shunt Trip	18, 26, 32, 37, 84, 87, 88, CM, LE	**L6**
Circuit Breaker Undervoltage Trip	18, 26, 32, 37, 84, 87, 88, CM, LE	**L7**
Circuit Breaker Alarm Switch Trip	18, 26, 32, 37, 84, 87, 88, CM, LE	**L8**
Ground Lug – 3 Conductor	All	**L10**
Control Circuit Fuse and Holder (Transformer Primary Fusing)	All	**F1 (1 fuse) F2 (2 fuses)**
Control Circuit Circuit Breaker Internally Operated	All	**F4**
Space Heater (120V separate control)	All	**SH**
Space Heater with Thermostat (120V separate control)	All	**ST**
Alarm Package (includes horn, light, relay & push-button)	83, 84, 87, 88	**M7**
Backspin Protection	87, 88	**T5**
Blown Control Fuse Indicator Light	17, 25, 32, 37, 84, 87, 88, CM, LC, LE	**L11**
Minimum Run Timer 0.2 sec. - 3 mins.	87, 88	**T6**
Single Phase 120VAC Combination Starter	17, 18, 25, 26	**SP1**
Single Phase 240VAC Combination Starter	17, 18, 25, 26	**SP2**

SIMOCODE Motor Management with Communications③

	Basic Unit	Class	Mod. Code
	pro S General Performance PROFIBUS DP interface 1.5 Mbit/s	14, 17, 18, 22, 25, 26, 87	**Z1**
	pro V General Performance Ethernet / PROFINET IO with One Bus Connection		
	pro V General Performance Ethernet / PROFINET IO with Two Bus Connections		
	pro V High Performance PROFIBUS DP interface 12 Mbit/s		
	pro V High Performance Modbus RTU interface		
	pro V High Performance Ethernet / PROFINET IO with Two Bus Connections		
	pro V High Performance Ethernet / IP interface		
	Factory Parameterization of SIMOCODE		

Current Measuring Module

	Current Range (Amps)
	0.3 - 3
	2.4 - 25
	10 - 100
	20 - 200
	63 - 630

Current/Voltage Measuring Module

	Current Range (Amps)
	0.3 - 4
	3 - 40
	10 - 115
	20 - 200
	63 - 630

Electrically Held to Mechanically Held Conversion Modules

	Class	Contactor Size (Amp)	Description	Modification Code
	LC	**30**	**2-wire, 24VAC 2-wire, 110-120VAC 2-wire, 200-277VAC 3-wire, 24VAC 3-wire, 110-120VAC 3-wire, 200-277VAC**	**2W1 2W2 2W3 3W1 3W2 3W3**

① Supplied as NEMA 12, field convertible to NEMA 3R.
② Surge Suppression for NEMA sizes 5 – 8 are supplied internal with the coil.
③ To order, select modification code Z1. Specify within the order notes the basic unit and measuring module. Also indicate if factory parameterization is needed.

A CPT must also be ordered to power the motor management device.

Control Relays

Description		Class	Modification Code
Control Relay 4-Poles Max	4 NO	All	**R40**
	2 NO/2 NC		**R22**
	4 NC		**R04**
Under/Over Voltage, Phase Failure, Phase Sequence, Phase Unbalance		All	**R1**
Ground Fault Relay			**R5**
Electronic On Delay Relay (.15s–100h) 24 V AC/DC, 100-127 VAC			**T1**
Electronic On Delay Relay (.15s–100h) 24 V AC/DC, 200-240 VAC①			**T2**
Electronic Off Delay Relay (.15s–100s) 100-127 V AC/DC			**T3**
Electronic Off Delay Relay (.15s–100s) 200-240 V AC/DC①			**T4**
24 hour time clock 24 hour time clock with day omission 7 day time clock		LC, LE, CLM, CM	**T7** **T8** **T9**
Compelling Relay		30, 32	**A6**
Acceleration Control			**A7**
Deceleration Control			**A8**

Meters—Mounted on Enclosure

Description	Class	Enclosure Type	Modification Code
Ammeter (includes a C.T. if necessary)	14, 17, 18, 22, 25, 26, 30④, 32④, 36, 37, 40, 43, 83, 84, 87, 88	1, 3, 4, 4X, 12	**M1**
Ammeter and Switch (3-Phase with 3 C.T.'s)		1, 12	**M2**
Voltmeter		1, 3, 4, 4X, 12	**M3**
Voltmeter and Switch (3-Phase)		1, 12	**M4**
Elapsed Time Meter②		1, 3, 4, 4X, 12	**M5**

Function Identification Plates

Description	Class	Modification Code
Function identification plate, with marking as specified	All	**N1**

Terminal Blocks

Description	Class	Modification Code
3 Point Terminal 6 Point Terminal 9 Point Terminal	All	**TC3**③ **TC6**③ **TC9**③

Special Ratings

Description	Class	Modification Code
Service Entrance Rating *Please note* Class 87, 88, CM and LE (combination type) are UL Listed for Service Entrance as standard and thus does not need to be modified for such.	17, 18, 25, 26, 32, 37, 84	**N3**

Drawings

Description	Class	Catalog Number
Approval/submittal and as-built drawings for factory modified product may be ordered. The drawing set includes an enclosure outline, a panel layout and a schematic. When entering the order, use the line item notes to reference a product and modifications or an existing order that the drawings are to be engineered for. Specify the contact information and an email address in the ship to address field. Attach any reference drawings to the order or forward to National Customer Support. Once completed, the drawing set will emailed.	All	**CONTROLDRAWING**

① Not available on Class 36, 37.
② ETM available with 120V coil only.
③ For terminal point more than 9 terminals use additional suffixes. Max 3 suffixes can be selected.
④ Class 30 and 32 can be modified with only an elapsed time meter. No other meters apply to class 30 or 32.

Heater Elements Class SMF

Ordering Information

1. Determine number of heater elements required from Table A.
2. Determine motor full load current and service factor.
3. If the motor and controller are in the same ambient temperature:
   a. For 1.15 to 1.25 service factor motors use 100% of motor full load current for heater element selection.
   b. For 1.0 service factor motors use 90% of motor full load current for heater element selection.
   c. Heater elements are class 20.
4. If the motor and controller are in different ambient temperatures multiply motor full load current by the multiplier in Table B. Use the resultant full load current for heater element selection.
5. Select proper heater element from table below.
6. All tables are based on the operation of the motor and controller in the same ambient temperature, 40°C (104°F) or less. Always be certain the correct heater element is installed in the starter before operating the motor.

Heater Catalog Number	Motor Full-Load Current (Amps)	List Price $
SMFH01	0.157–0.173	
SMFH02	0.174–0.192	
SMFH03	0.193–0.212	
SMFH04	0.213–0.235	
SMFH06	0.262–0.289	
SMFH08	0.322–0.355	
SMFH09	0.356–0.399	
SMFH10	0.41–0.44	
SMFH11	0.45–0.49	
SMFH12	0.50–0.53	
SMFH13	0.54–0.58	
SMFH14	0.59–0.65	
SMFH16	0.72–0.78	
SMFH17	0.79–0.85	
SMFH18	0.86–0.96	
SMFH19	0.97–1.04	
SMFH20	1.05–1.16	
SMFH21	1.17–1.25	
SMFH22	1.30–1.39	
SMFH23	1.38–1.54	
SMFH24	1.48–1.63	
SMFH26	1.66–1.86	
SMFH27	1.80–1.99	
SMFH28	1.96–2.15	

Heater Catalog Number	Motor Full-Load Current (Amps)	List Price $
SMFH29	2.16–2.38	
SMFH30	2.39–2.75	
SMFH31	2.76–2.84	
SMFH32	2.85–3.06	
SMFH33	3.07–3.45	
SMFH34	3.46–3.70	
SMFH35	3.71–4.07	
SMFH36	4.08–4.32	
SMFH37	4.33–4.90	
SMFH38	4.91–5.35	
SMFH39	5.36–5.85	
SMFH40	5.86–6.41	
SMFH41	6.42–6.79	
SMFH42	6.80–7.57	
SMFH43	7.58–8.15	
SMFH44	8.16–8.98	
SMFH45	8.99–9.67	
SMFH46	9.68–9.95	
SMFH47	9.96–10.8	
SMFH48	10.9–12.1	
SMFH49	12.2–13.1	
SMFH50	13.2–13.9	
SMFH51	14.0–15.0	
SMFH52	15.1–16.0	

Table A
Number of Heater Elements

Device	Number of Heater Elements	Notes
SMFF*1 SMFF*2 SMFF*3 SMFF*4 SMFF*5 SMFF*6	1	All single pole and two pole SMF starters require only 1 Heater Element.
SMFF*22 SMFF*44	2	Duplex Unit. One Heater Element per starter.
SMFF*11 SMFF*22	2	Two Speed Starter. One Heater Element per speed.

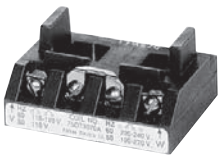
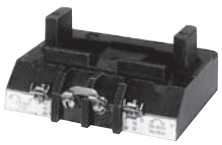
Table B—Special Applications
Heater Element Selection

Continuous Duty Motor Service Factor	Ambient Temperature of Motor		
	Same as Controller Ambient	Constant 10°C (18°F) Higher Than Controller Ambient	Constant 10°C (18°F) Lower Than Controller Ambient
	Full Load Current Multiplier		
1.15 to 1.25	1.0	0.9	1.05
1.0	0.9	0.8	0.95

Ordering Information

► 4th character of starter or contactor catalog number indicates model.

AC Coils — For Class 14, 17, 18, 22, 25, 26, 30, 32, 36, 37, 40, 43, 83, 84, 87, 88

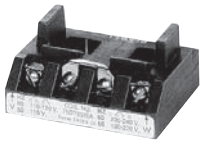
	Size	Model	Volts 60Hz	Volts 50Hz	Catalog Number	List Price $
	00–2½	P U (ESP200)	24 120 110–120/220–240 208 220–240 277 220–240/440–480 440–480 575–600	24 110 110/190–220 — 190–220 240 190–220/380–440 380–440 550	**75D73070J** **75D73070F** **75D73070A** **75D73070D** **75D73070G** **75D73070L** **75D73070C** **75D73070H** **75D73070E**	
	3 , 3½	P U (ESP200)	24 120 110–120/220–240 208 220–240 277 220–240/440–480 440–480 575–600	24 110 110/190–220 — 190–220 240 190–220/380–440 380–440 550	**75D73251J** **75D73251F** **75D73251A** **75D73251D** **75D73251G** **75D73251L** **75D73251C** **75D73251H** **75D73251E**	
	4	G U (ESP200)	24 120 120/220–240 208 220–240 277 220–240/440–480 440–480 575–600	24 110 110/190–220 — 190–220 240 190–220/380–440 380–440 550	**75D70131J** **75D70131F** **75D70131A** **75D70131D** **75D70131G** **75D70131L** **75D70131C** **75D70131H** **75D70131E**	
	4, 5	V (Vacuum)	23-26 110-127 200-220 220-240 240-277 380-420 440-480 575-600	23-26 110-127 200-220 220-240 240-277 380-420 440-480 575-600	**3RT1966-5AB31** **3RT1966-5AF31** **3RT1966-5AM31** **3RT1966-5AP31** **3RT1966-5AU31** **3RT1966-5AV31** **3RT1966-5AR31** **3RT1966-5AT31**	
	5	P	23-26 110-127 200-220 220-240 240-277 380-420 440-480 575-600	23-26 110-127 200-220 220-240 240-277 380-420 440-480 575-600	**3RT1965-5AB31** **3RT1965-5AF31** **3RT1965-5AM31** **3RT1965-5AP31** **3RT1965-5AU31** **3RT1965-5AV31** **3RT1965-5AR31** **3RT1965-5AT31**	
	6	P V (Vacuum)	23-26 110-127 200-220 220-240 240-277 380-420 440-480 575-600	23-26 110-127 200-220 220-240 240-277 380-420 440-480 575-600	**3RT1975-5AB31** **3RT1975-5AF31** **3RT1975-5AM31** **3RT1975-5AP31** **3RT1975-5AU31** **3RT1975-5AV31** **3RT1975-5AR31** **3RT1975-5AT31**	
	7	H	100-250 150-500	100-250 150-500	**75ZAF750-70** **75ZAF750-71**	
	8	H	100-250	100-250	**75ZAF1650-70**①	

① Set of 2 coils. Recommend to change printed circuit board when changing coils. **49ZP1650** see page 17-121.

Ordering Information

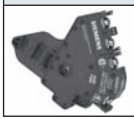
- ► 4th character of starter or contactor catalog number indicates model.
- ► DC Coils for Size 00-4 require Late Break Interlock.

DC Coils — For Class 14, 17, 18, 22, 25, 26, 30, 32, 40, 43

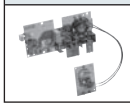
	Size	Model	Volts DC	Catalog Number	List Price $
	00–2½	P U (ESP200)	12 24 32 48 125 250	**75D73070R** **75D73070S** **75D73070T** **75D73070U** **75D73070V** **75D73070W**	
	3, 3½	P U (ESP200)	12 24 32 48 125 250	**75D73251R** **75D73251S** **75D73251T** **75D73251U** **75D73251V** **75D73251W**	
	4	G U (ESP200)	48 125 250	**75D70131U** **75D70131V** **75D70131W**	
	4, 5	V (Vacuum)	23-26 42-48 110-127 240-277	**3RT1966-5AB31** **3RT1966-5AD31** **3RT1966-5AF31** **3RT1966-5AU31**	

Note: For sizes 7 & 8 contactors the AC coils are used for DC see page 17-116.

Late Break Auxiliary Contacts

	Control Size	Model	Catalog Number	List Price $
	00–4	P, G, S, T	**49AB01LB**	

Board for Size 8 Contactor

	Control Size	Model	Catalog Number	List Price
	8	H	**49ZP1650**	

Contact Kits – Single Pole Stationary and Movable Contacts, Contact Spring①

Description	Size	Number of Poles in Kit	Model (4th position in part number)	Catalog Number	List Price $
Class 14, 17, 18, 22, 25, 26, 30, 32, 36, 37, 40, 43, 83, 84, 87, 88	Internal Aux Contact (00-1-¾) 00 0		P, U P, U P, U	**75AF14** **75BF14** **75CF14**	
	1 1¾–1P	1	P, U P, U	**75DF14** **75EF14**	
	2	1	P, U	**75FP14**	
	2½	1	P, U	**75GP14**	
	3 3½	1	P, U P, U	**75HF14** **75IF14**	
	4 4 (Vacuum)	1 3 (Bottles)	G, T V, C	**75JG14** **3RT1964-6V**	
	5 5 (Vacuum)	3 3 (Bottles)	P V, C	**3RT1966-6A** **3RT1966-6V**	
	6 6 (Vacuum)	3 3 (Bottles)	P V, C	**3RT1976-6A** **3RT1976-6V**	
14, 40	7	3	H	**49ZL750**	
	8	3	H	**49ZL1650**	

Armature and Magnet Kits

Size	Catalog Number	List Price $
00–2½	**49AMSA2**	
3–3½	**49AMSA3**	
4	**49AMSA4**	

① On 3-phase controls, all 3-poles should be replaced - 3 kits required.

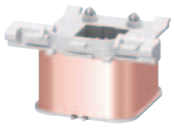
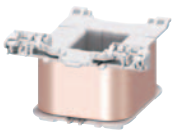
Power Pole Kits

Class	Enclosure type	Contactor Size (Amp)	Description	Catalog No.
LC	Open, 1, 12, 4/4X	30	Single power pole Double power pole	**49LCPP1A** **49LCPP2A**

Replacement Contact Kits

Class	Contactor Size (Amp)	Description	Catalog No.
LC	30	NA	**NA**
LE	20, 30	NA	**NA**
	60 100 200 300 400	1 contact kit includes 3 moving and 6 fixed contacts.	**3RT2937-6A** **3RT1945-6A** **3RT1956-6A** **3RT1965-6A** **3RT1975-6A**

Replacement Coil Kits

	Class	Contactor Size (Amp)	Description	Catalog No.
	LC	30	24V 60Hz / 20V 50Hz 115-120V 60Hz / 110V 50Hz 200-208V 60Hz 230-240V 60Hz / 220V 50Hz 277V 60Hz / 240V 50Hz 347V 60Hz 460-480V 60Hz / 440V 50Hz 575-600V 60Hz / 550V 50Hz	**75LCC024A** **75LCC120A** **75LCC208A** **75LCC240A** **75LCC277A** **75LCC347A** **75LCC480A** **75LCC600A**
	LE	20, 30	NA	**NA**
		60	24VAC 50/60Hz 110VAC 50Hz / 120VAC 60Hz 208VAC 50/60Hz 220VAC 50Hz / 240VAC 60Hz 277VAC 60Hz 480VAC 60Hz 600VAC 60Hz	**3RT29345AC21** **3RT29345AK61** **3RT29345AM21** **3RT29345AP61** **3RT29345AU61** **3RT29345AV61** **3RT29345AT61**
		100	24VAC 50/60Hz 110VAC 50Hz / 120VAC 60Hz 208VAC 50/60Hz 220VAC 50Hz / 240VAC 60Hz 277VAC 60Hz 480VAC 60Hz 600VAC 60Hz	**3RT29445AC21** **3RT29445AK61** **3RT29445AM21** **3RT29445AP61** **3RT29445AU61** **3RT29445AV61** **3RT29445AT61**
		200	23 - 26 V AC 50-60Hz / DC 110 - 127 V AC 50-60Hz / DC 200 - 220 V AC 50-60Hz / DC 220 - 240 V AC 50-60Hz / DC 240 - 277 V AC 50-60Hz / DC 440 - 480 V AC 50-60Hz / DC 575 - 600 V AC 50-60Hz / DC	**3RT19555AB31** **3RT19555AF31** **3RT19555AM31** **3RT19555AP31** **3RT19555AU31** **3RT19555AR31** **3RT19555AT31**
		300	23 - 26 V AC 50-60Hz / DC 110 - 127 V AC 50-60Hz / DC 200 - 220 V AC 50-60Hz / DC 220 - 240 V AC 50-60Hz / DC 240 - 277 V AC 50-60Hz / DC 440 - 480 V AC 50-60Hz / DC 575 - 600 V AC 50-60Hz / DC	**3RT19655AB31** **3RT19655AF31** **3RT19655AM31** **3RT19655AP31** **3RT19655AU31** **3RT19655AR31** **3RT19655AT31**
		400	23 - 26 V AC 50-60Hz / DC 110 - 127 V AC 50-60Hz / DC 200 - 220 V AC 50-60Hz / DC 220 - 240 V AC 50-60Hz / DC 240 - 277 V AC 50-60Hz / DC 440 - 480 V AC 50-60Hz / DC 575 - 600 V AC 50-60Hz / DC	**3RT19755AB31** **3RT19755AF31** **3RT19755AM31** **3RT19755AP31** **3RT19755AU31** **3RT19755AR31** **3RT19755AT31**

AC Coils 20 Amps②

	Type	Contactor Size	Number of Poles	120V, 60Hz 110V, 50Hz	240V, 60Hz 208V, 50Hz	277V 50/60Hz
 CLM4097341	CLM	20 Amp	2–12	**CLM4097341**	**CLM4097342**	**CLM4097343**

AC Coils 30–400 Amps③

	Type	Contactor Size	Number of Poles	Catalog Number						
				24V AC	120V AC	208V AC	220/240V AC	277V AC	480V AC	600V AC
 CLMC4C120	CLM†C	30 Amp	2–3-Pole	**CLMC4C024**	**CLMC4C120**	**CLMC4C208**	**CLMC4C240**	**CLMC4C277**	**CLMC4C480**	**CLMC4C600**
			4-Pole	**CLMC4C024**	**CLMC4C120**	**CLMC4C208**	**CLMC4C240**	**CLMC4C277**	**CLMC4C480**	**CLMC4C600**
			5-Pole	**CLMC5C024**	**CLMC5C120**	**CLMC5C208**	**CLMC5C240**	**CLMC5C277**	**CLMC5C480**	**CLMC5C600**
	CLM†D	60 Amp	2–3-Pole	**CLMD3C024**	**CLMD3C120**	**CLMD3C208**	**CLMD3C240**	**CLMD3C277**	**CLMD3C480**	**CLMD3C600**
			4-Pole	**CLMD5C024**	**CLMD5C120**	**CLMD5C208**	**CLMD5C240**	**CLMD5C277**	**CLMD5C480**	**CLMD5C600**
			5-Pole	**CLMD5C024**	**CLMD5C120**	**CLMD5C208**	**CLMD5C240**	**CLMD5C277**	**CLMD5C480**	**CLMD5C600**
 CLMGU3C120	CLM†E	100, 200 Amp	2–3-Pole	**CLME3C024**	**CLME3C120**	**CLME3C208**	**CLME3C240**	**CLME3C277**	**CLME3C480**	**CLME3C600**
			4-Pole	**CLME5C024**	**CLME5C120**	**CLME5C208**	**CLME5C240**	**CLME5C277**	**CLME5C480**	**CLME5C600**
			5-Pole	**CLME5C024**	**CLME5C120**	**CLME5C208**	**CLME5C240**	**CLME5C277**	**CLME5C480**	**CLME5C600**
	CLM†G Latching Coil	300/400 Amp	2–3-Pole	—	**CLMGL3C120**	**CLMGL3C208**	**CLMGL3C240**	**CLMGL3C277**	**CLMGL3C480**	**CLMGL3C600**
	Unlatch Coil		2–3-Pole	—	**CLMGU3C120**	**CLMGU3C208**	**CLMGU3C240**	**CLMGU3C277**	**CLMGU3C480**	**CLMGU3C600**

① Product Category: IEC.
② Coil kits for 20 amp CLM contactors include the coil clearing auxiliary contact.
③ For 30–200 amp CLM contactors, in the event that either the coil or the control module fails, it is recommended that both be replaced.

Ordering Information

- **For CLM:** 5th character of contactor catalog number indicates Frame Size.
- **For CMB, CMF, CMN:** 4th character of contactor catalog number indicates Frame Size.

Main Contacts 20 Amp Lighting Contactors

CLM4097334

Type	Contactor Size	Number of Poles	Location	Catalog Number	List Price $
CLM	20 Amp	2 3 4 6	Top or Bottom Top Top or Bottom Top or Bottom	**CLM4097331** **CLM4097332** **CLM4097333** **CLM4097334**	

Main Contacts 30–400 Amp Lighting Contactors

Type	Frame Size	Contactor Size	Number of Poles	Catalog Number	List Price $
CLM	C	30 Amp	2 3 4 5	**CLMCCK02** **CLMCCK03** **CLMCCK04** **CLMCCK05**	
	D	60 Amp	2 3 4 5	**CLMDCK02** **CLMDCK03** **CLMDCK04** **CLMDCK05**	
	E	100 Amp	2 3 4 5	**CLMECK02** **CLMECK03** **CLMECK04** **CLMECK05**	
	F	200 Amp	2 3 4 5	**CLMFCK02** **CLMFCK03** **CLMFCK04** **CLMFCK05**	
	G	300 Amp	2 3	**CLMGCK02** **CLMGCK03**	
	H	400 Amp	2 3	**CLMHCK02** **CLMHCK03**	

Auxiliary Contact Blocks 20 Amp Lighting Contactors②

Type	Contactor Size	Contacts	Catalog Number	List Price $
CLM	20 Amp	1 Form C NO, NC Contact 2 Form C NO, NC Contacts	**CLM4097291** **CLM4097292**	

Auxiliary Contact Blocks 30–400 Amp Lighting Contactors

CLMFCAK11

Type	Frame Size	Contactor Size	Contact Configuration	Catalog Number	List Price $
CLM	C to F②	30–200 Amps	1 NO and 1 NC 2 NC 2 NO 1 Coil Clearing NO and NC	**CLMFCAK11** **CLMFCAK02** **CLMFCAK20** **CLMFCCK11**	
	G to H①	300–400 Amps	1 NO and 1 NC 2 NC 2 NO 1 Coil Clearing NO and NC	**CLMHCAK11** **CLMHCAK02** **CLMHCAK20** **CLMHCCK11**	

Control Module Rectifier③

Type	Device	Contactor Size	Number of Poles	Catalog Number	List Price $
CLM	CLM†C to CLM†F	30–200 Amps	All	**CLMKCMR**	

① Maximum 1 block per contactor.
② Maximum 2 blocks per contactor.
③ For 30–200 amp CLM contactors, in the event that either the coil or the control module fails, it is recommended that both be replaced.

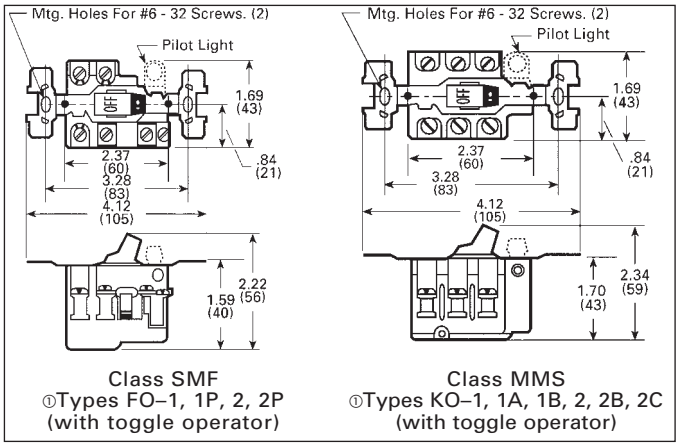
Replacement Handle Assemblies and Disconnect Mechanisms
Enclosure Types 1, 3R, 4, 4X Stainless Steel & 12

Class	Disconnect (Amps)	Enclosure Size	Handle Assembly Only		Handle Assembly and Disconnect Mechanism	
			Catalog Number	List Price $	Catalog Number	List Price $
17, 25, 32, 84, 87, CM, LE	30, 60 & 100	All Standard and Extra-wide Sizes	**75D73944015**		**75D68257103**	
37, 88	30 & 60		**75D73944018**		**75D68257048**	
17, 25, 32, 84	200		**75D73944015**		**75D68257105**	
37, 88, CM, LE	200		**75D73944015**		**75D68257063**	
87	200		**75D73944023**		**75D68257068**	
17, 25, 37, 87, 88, CM, LE	400 & 600		**75D73944027**		**75D68257078**	
Class	**Motor Circuit Interrupter (Amps)**	**Enclosure Size**	**Handle Assembly Only**		**Handle Assembly and Disconnect Mechanism**	
			Catalog Number	**List Price $**	**Catalog Number**	**List Price $**
18, 26, 32, CM, LE	3 - 125	(24"H x 11"W x 8"D), (24"H x 20"W x 8"D)	**75D73944025**		**75D68257080**	
18, 26, 32	100 - 125	(36"H x 24"W x 8"D)	**75D73944025**		**75D68257073**	
18, 26, 32	150 & 250	All Standard Sizes	**75D73944028**		**75D68257089**	
18, 26, 37, 87, 88, CM	300 - 600		**75D73944027**		**75D68257078**	
87	3 - 125		**75D73944025**		**75D68257080**	
87	150		**75D73944028**		**75D68257089**	
87	250		**75D73944011**		**75D68257077**	
37, 88	30 - 125		**75D73944025**		**75D68257073**	
37, 84, 88, CM	150 - 250		**75D73944011**		**75D68257077**	
84	3 - 125		**75D73944025**		**75D68257074**	

Quarter Turn Assemblies

Description		Class	Enclosure Type	Catalog Number	List Price $
	Quarter-Turn Latch	17, 18, 25, 26, 32, 87 & 88	1, 3/3R & 12	75D46260004	
			4 & 4X	75D46260005	

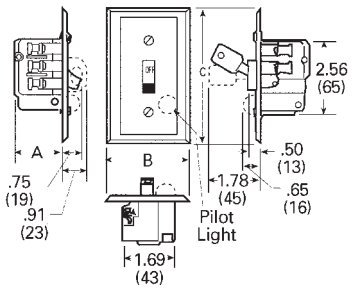
Class SMF and MMS Open Type



Class SMF
①Types FO–1, 1P, 2, 2P
(with toggle operator)

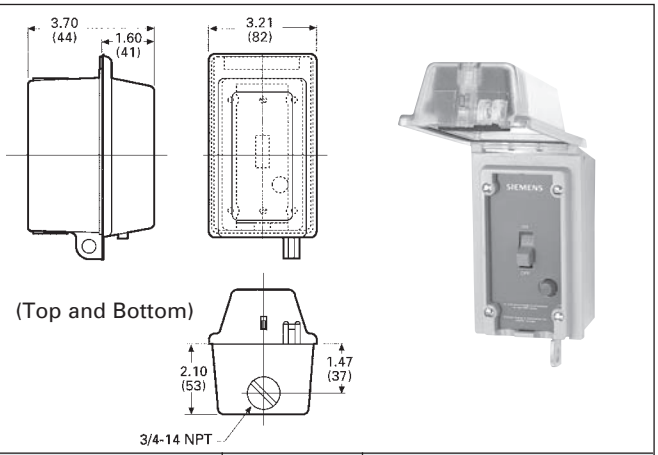
Class MMS
①Types KO–1, 1A, 1B, 2, 2B, 2C
(with toggle operator)

NEMA Type 1B General Purpose Flush Mounting



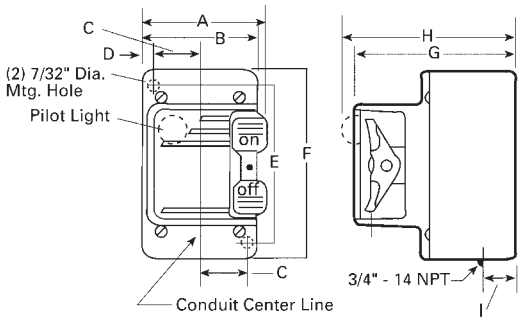
Device	Type of Operator	Type	Dimensions in Inches (mm) A	B	C
Class SMF Fractional HP Starter	Toggle	**FF1, 1P, 2, 2P** **FS1, 1P, 2, 2P**	1.44 (37)	2.75 (70)	4.50 (114)
		FSJ1P, 2P	1.44 (37)	3.50 (89)	5.25 (133)
	Key	**FF3, 3P, 4, 4P** **FS3, 3P, 4, 4P**	1.44 (37)	2.75 (70)	4.50 (114)
		FSJ3P, 4P	1.44 (37)	3.50 (89)	5.25 (133)
Class MMS Motor Starting Switch	Toggle	**KF1, 1A, 1B, 2, 2B, 2C** **KS1, 1A, 1B, 2, 2B, 2C**	1.75 (44)	2.75 (70)	4.50 (114)
		KSJ1A, 1B, 2B, 2C	1.75 (44)	3.50 (89)	5.25 (133)
	Key	**KF3, 3A, 3B, 4, 4B, 4C** **KS3, 3A, 3B, 4, 4B, 4C**	1.75 (44)	2.75 (70)	4.50 (114)
		KSJ3A, 3B, 4B, 4C	1.75 (44)	3.50 (89)	5.25 (133)

NEMA Type 3R, 4 and 12



Device	Class	Type
Fractional HP Starter	SMF	**FWN1, 1P, FWN2, 2P** **FWN3, 3P, FW4, 4P**
Motor Starting Switch	MMS	**KWN1, 1A, 1B, KWN2, 2B, 2C** **KWN3, 3A, 3B, KWN4, 4B, 4C**

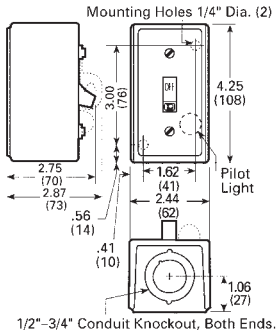
NEMA Type 4 Watertight Die Cast Zinc Enclosure



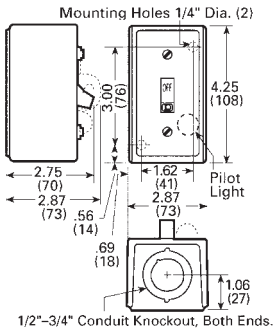
Dimensions in Inches (mm) A	B	C	D	E	F	G	H	I
3.00 (76)	2.75 (70)	1.13 (28)	0.25 (6)	3.75 (95)	4.69 (119)	4.25 (108)	4.56 (116)	0.78 (20)

Device	Class	Type
Fractional HP Starter	SMF	**FW1, 1P, 2, 2P**
Motor Starting Switch	MMS	**KW1, 1A, 1B, 2, 2B, 2C**

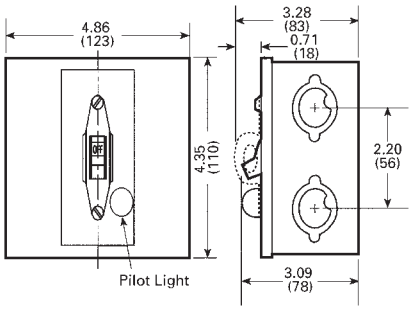
NEMA Type 1 General Purpose Surface Mounting Enclosures



Standard Size—Class SMF and MMS
Types FG & KG (Single-Unit)



Oversized—Class SMF and MMS
Types FGJ & KGJ (Single-Unit)



Jumbo MMSKE2
½"–¾" Knock-Out On Back and Sides

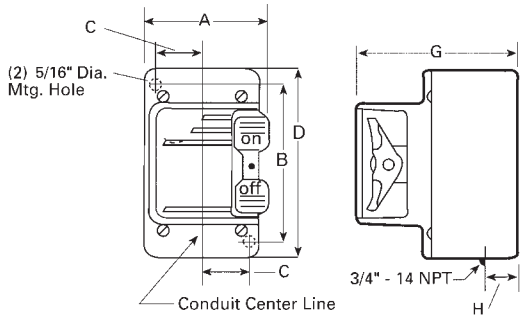
Note: Dimensions for reference, not for construction. Dimensions are in inches (mm).

① Dimensions typical for key operator devices.

NEMA Type 7 and 9 Cast Aluminum Enclosure

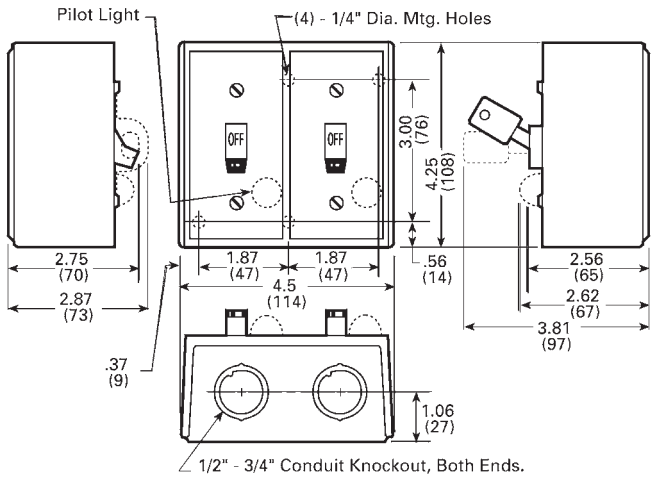
Dimensions in Inches (mm)					
A	**B**	**C**	**D**	**G**	**H**
4.00 (101)	5.75 (146)	1.38 (35)	6.36 (161)	4.38 (111)	1.20 (30)

Device	Class	Type
Fractional HP Starter	SMF	**FR1, FR2**
Motor Starting Switch	MMS	**KR1, KR2**



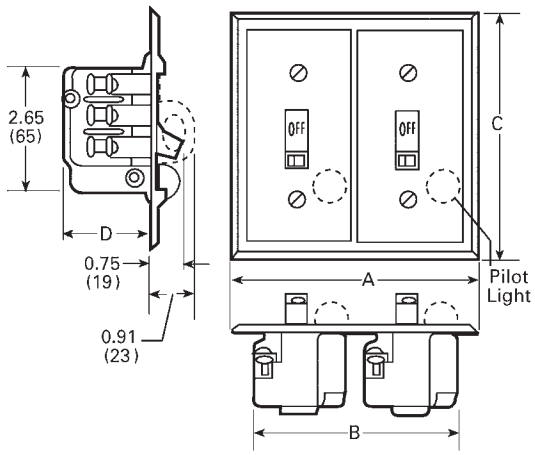
NEMA Type 1 General Purpose Enclosure For Two Unit Devices

Device	Type of Operator	Class	Type
One Starter	Toggle	SMF	**FG02, 02P**
	Key	SMF	**FG04P**
Two Starters	Toggle	SMF	**FG222, 222P**
	Key	SMF	**FG44P**
One Starter and One Sel. Switch①	Toggle	SMF	**FG71, 71P, 72, 72P**
	Key	SMF	**FG74P**
Reversing Switch②	Toggle	MRS	**KG11, 11A, 11B, 22, 22A, 22B, 22C**
Two Speed Starter	Toggle	SMF	**FG11, 11P, 22, 22P**
Two Speed Switch	Toggle	MMS	**KG11, 11A, 11B, 22, 22B, 22C**



NEMA Type 1B General Purpose Flush Mounting For Two Unit Devices

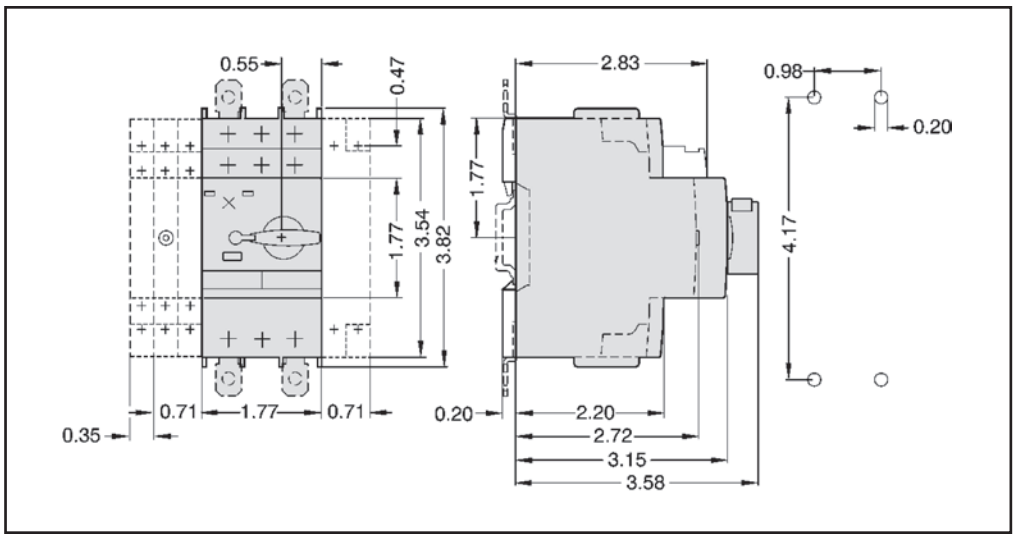
Device③	Type of Operator	Class	Type	A	B	C	D
Two Starters	Toggle	SMF	**FF22, 22P**	5.25 (133)	3.75 (95)	5.25 (133)	1.44 (37)
			FS22P	4.56 (116)	3.50 (89)	4.50 (114)	1.44 (37)
	Key	SMF	**FF44P**	5.25 (133)	3.75 (95)	5.25 (133)	1.44 (37)
			FS44P	4.56 (116)	3.50 (89)	4.50 (114)	1.44 (37)
One Starter and One Selector Switch④	Toggle	SMF	**FF71, 71P, 72, 72P**	5.25 (133)	0.75 (19)	5.25 (133)	2.00 (51)
			FS71P, 72P	4.56 (116)	3.50 (89)	4.50 (114)	2.00 (51)
	Key	SMF	**FF74P**	5.25 (133)	3.75 (95)	5.25 (133)	2.00 (51)
			FS74P	4.56 (116)	3.50 (89)	4.50 (114)	2.00 (51)
Reversing Switch	Toggle	MRS	**KF11, 11A, 11B KF22, 22A 22B, 22C**	5.25 (133)	3.75 (95)	5.25 (133)	1.75 (44)
Two Speed Switch	Toggle	SMF	**FF11, 11P, 22, 22P**	5.25 (133)	3.75 (95)	5.25 (133)	1.44 (37)
Two Speed Switch	Toggle	MMS	**KF11, 11A, 11B 22, 22B, 22C**	5.25 (133)	3.75 (95)	5.25 (133)	1.44 (37)



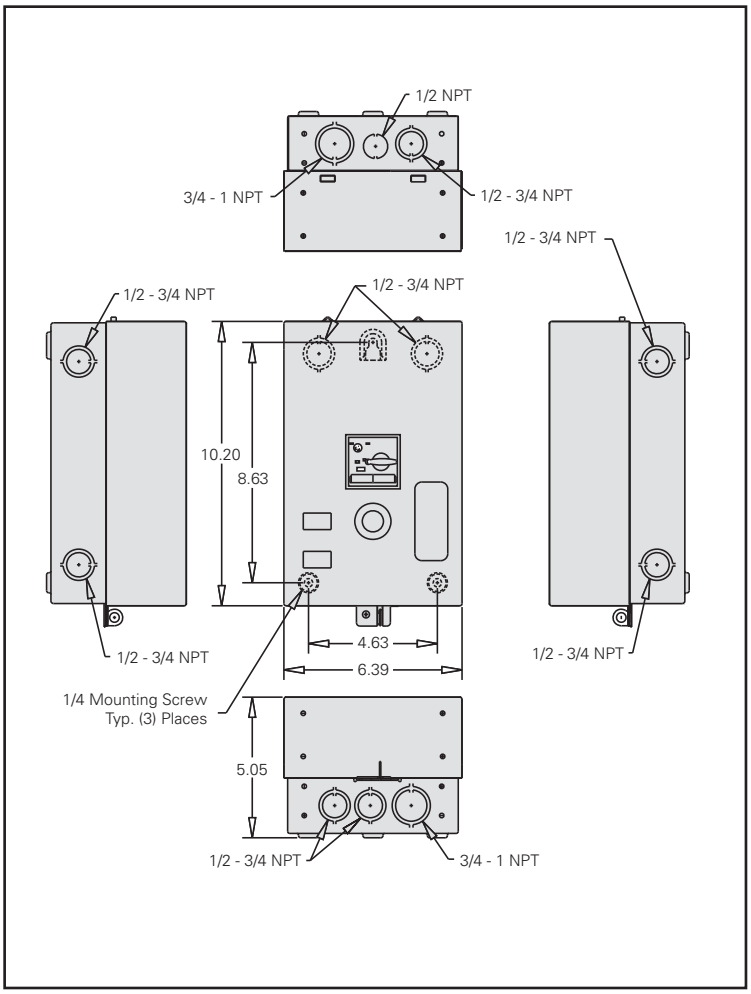
Note: Dimensions for reference, not for construction. Dimensions are in inches (mm).

① Selector switch is on the left, increases overall depth to 3.50 in. (89 mm).
② Only one pilot light (located on right) is used on MRS switches.
③ Dimensions include factory wired power connections.
④ Selector switch is on the left, extends 1.62 in. (41 mm) from mounting surface.

3RV102



Class 11 - NEMA 1 Enclosure



Note: Dimensions in inches (millimeters). Dimensions for reference, not for construction. Contact Sales Office for dimensions not listed.

Figure 1

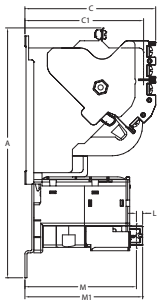


Figure 2

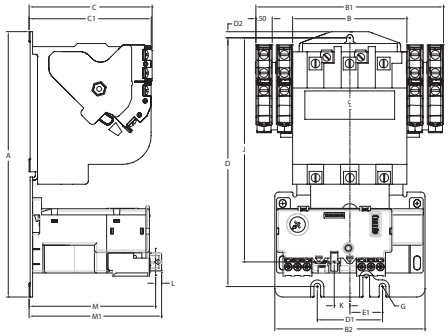


Figure 3

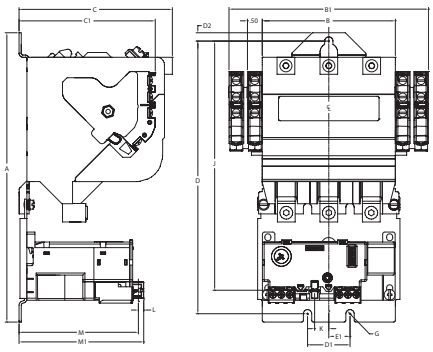


Figure 4

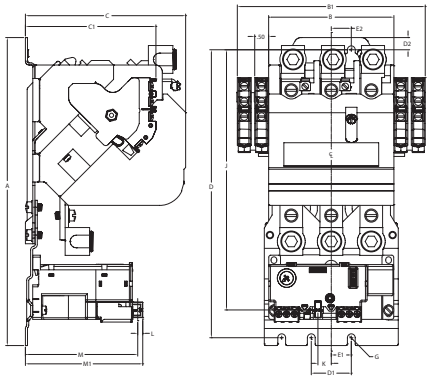
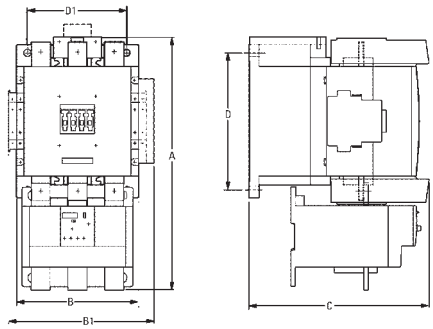


Figure 5



Open Type Solid State Overload

Size	Figure	Outline Dimensions						Mounting Dimensions						Mounting Screw	Reset Dimensions				
		A	B	B1	B2	C	C1	D	D1	D2	E	E1	E2	G	J	K	L	M	M1
00–1¾	1	7.44 (189)	3.50 (89)	5.75 (146)	—	3.75 (95)	3.50 (89)	6.50 (165)	2.00 (51)	0.19 (5)	6.27 (159)	1.00 (25)	—	#10	5.60 (142)	—	0.18 (5)	3.23 (82)	3.41 (87)
2–2½	2	8.13 (207)	3.50 (89)	5.75 (146)	4.60 (117)	4.00 (102)	3.77 (96)	7.62 (194)	2.00 (51)	0.19 (5)	—	1.00 (25)	—	#10	6.87 (174)	0.48 (12)	0.18 (5)	3.88 (99)	4.06 (103)
3–3½	3	9.78 (248)	4.50 (114)	6.75 (171)	—	5.19 (132)	4.66 (118)	9.22 (234)	1.44 (37)	0.28 (7)	—	0.72 (18)	—	0.25 (6)	8.43 (214)	0.48 (12)	0.18 (5)	4.04 (103)	4.22 (107)
4	4	11.06 (281)	4.50 (114)	6.75 (171)	—	5.75 (146)	4.66 (118)	10.34 (263)	1.44 (37)	0.44 (11)	—	0.72 (18)	0.72 (18)	0.25 (6)	9.35 (237)	0.48 (12)	0.18 (5)	4.04 (103)	4.22 (107)
5	5	12.76 (324)	5.71 (145)	6.89 (175)	—	8.54 (217)	—	7.09 (180)	4.72 (120)	—	—	—	—	0.35 (9)	—	—	—	—	—
6	6	13.03 (331)	6.30 (160)	7.48 (190)	—	9.29 (236)	—	7.09 (180)	5.12 (130)	—	—	—	—	0.35 (9)	—	—	—	—	—

Note: Dimensions in inches (millimeters). Dimensions for reference, not for construction. Contact Sales Office for dimensions not listed.

Figure 1

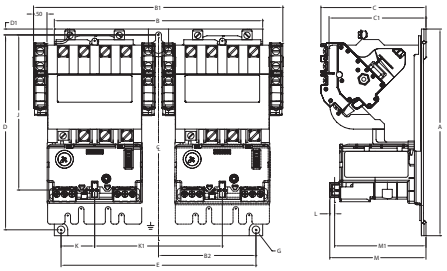


Figure 2

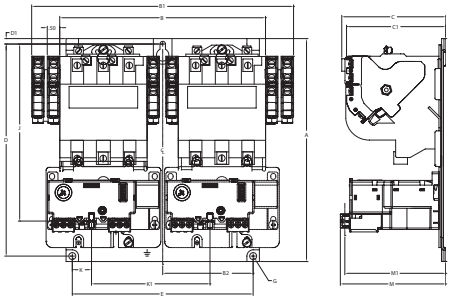


Figure 3

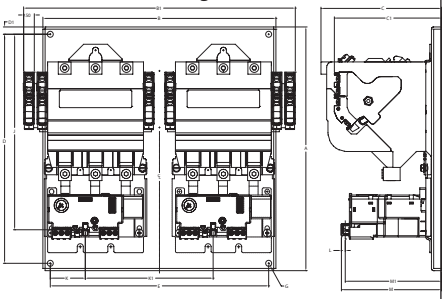


Figure 4

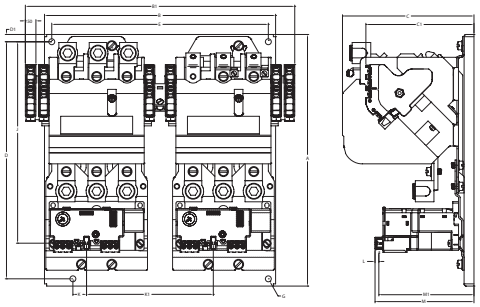
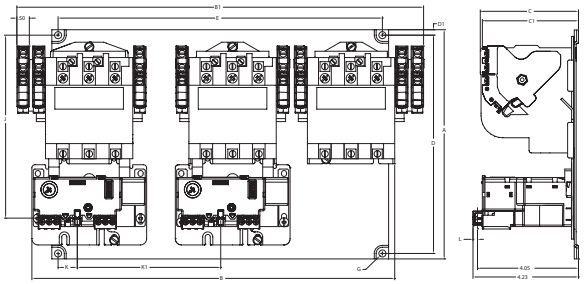


Figure 5



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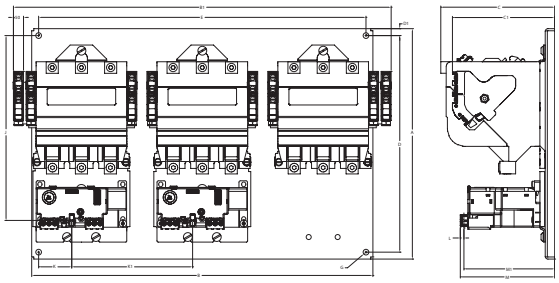
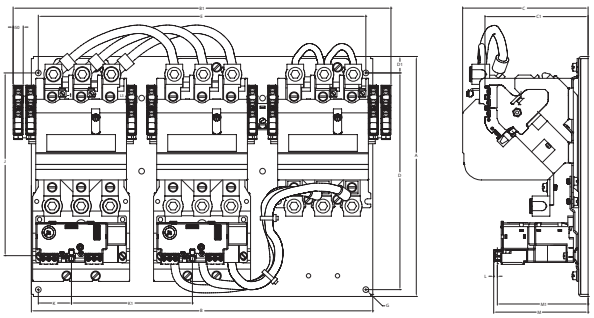


Figure 7



Class 22 Reversing & Class 30 2 Speed/2 Winding

Size	Figure	Outline Dimensions						Mounting Dimensions			Mounting Screw	Reset Dimensions					
		A	B	B1	B2	C	C1	D	D1	E	G	J	K	K1	L	M	M1
00–1¾	1	7.69	7.75	10.50	3.62	3.92	3.61	7.25	0.22	7.25	#10	5.77	1.25	4.75	0.18	3.58	3.40
2–2½	2	8.94	8.25	10.50	3.62	4.17	3.98	8.50	0.22	7.25	#10	7.10	0.77	4.75	0.18	4.23	4.05
3– 3½	3	11.44	10.94	12.75	—	5.65	5.03	10.75	0.34	10.25	#10	9.18	1.64	6.00	0.18	4.69	4.51
4	4	11.91	10.94	12.75	—	6.22	5.12	11.22	0.34	10.25	0.25	9.53	0.65	6.00	0.18	4.68	4.50

Class 30 2 Speed/1 Winding

Size	Figure	Outline Dimensions						Mounting Dimensions			Mounting Screw	Reset Dimensions					
		A	B	B1	B2	C	C1	D	D1	E	G	J	K	K1	L	M	M1
00–1¾	1	7.69	7.75	10.50	3.62	3.92	3.61	7.25	0.22	7.25	#10	5.77	1.25	4.75	0.18	3.58	3.40
2–2½	5	9.19	14.55	16.30	—	3.94	3.85	8.75	0.22	13.00	#10	7.33	0.77	5.75	0.18	4.23	4.05
3–3½	6	11.44	16.94	18.75	—	5.65	5.07	10.75	0.34	16.25	#10	9.18	1.64	6.00	0.18	4.68	4.50
4	7	11.91	16.94	17.75	—	6.22	5.12	10.75	0.82	16.25	#10	9.06	1.64	6.00	0.18	4.68	4.50

Note: Dimensions for reference, not for construction.
Contact sales office for dimensions not listed.
Dimensions are in inches (mm).

Full Voltage Open Type NEMA Contactor Size 00-8

Figure 1

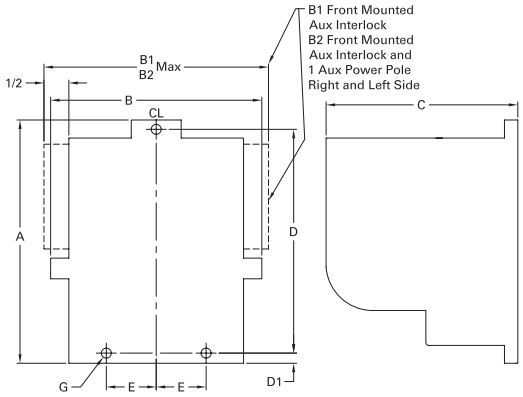


Figure 2

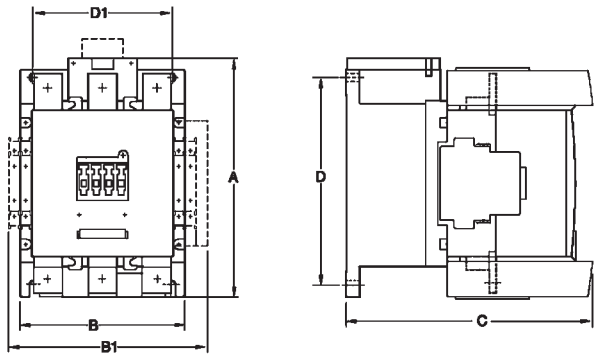


Figure 3

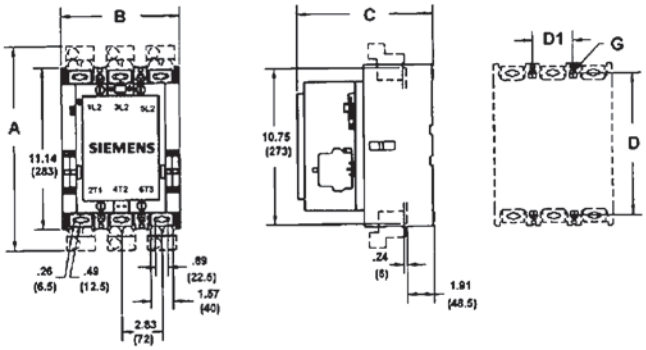
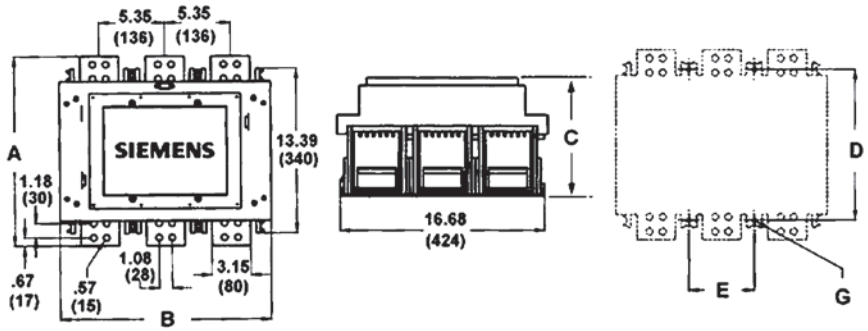


Figure 4



Open Type

Size	3rd Character of Catalog No.①	Outline Dimensions						Mounting Dimensions			Mounting Screw
		Fig	A	B	B1	B2	C	D	D1	E	G
00–1¾	C, D, E	1	4.31 (110)	3.94 (100)	4.25 (108)	4.75 (121)	3.75 (70)	3.94 (100)	0.19 (5)	1.00 (25)	#10
2–2½	F,G	1	4.88 (124)	3.94 (100)	4.25 (108)	—	4.00 (102)	4.50 (114)	0.19 (5)	1.00 (25)	#10
3–3½	H, I	1	6.13 (156)	5.13 (130)	5.50 (140)	—	5.06 (129)	5.63 (143)	0.25 (6)	0.75 (19)	0.25 (6)
4	J	1	7.81 (198)	5.19 (132)	5.50 (140)	—	5.75 (146)	6.56 (167)	0.81 (21)	0.75 (19)	0.5 (13)
5	L	2	8.27 (210)	5.71 (145)	6.89 (175)	—	8.54 (217)	7.09 (180)	4.72 (120)	—	0.35 (9)
6	M	2	8.43 (214)	6.3 (160)	7.48 (190)	—	9.29 (236)	7.09 (180)	5.12 (130)	—	0.35 (9)
7	N	3	14.05 (357)	8.27 (210)	—	—	9.53 (242)	9.80 (249)	2.83 (72)	—	0.25 (6)
8	P	4	15.41 (392)	17.23 (438)	—	—	10.56 (268)	12.28 (312)	—	5.35 (136)	0.35 (9)

Note: Dimensions for reference, not for construction. Contact sales office for dimensions not listed. Dimensions are in inches (mm).

① 3rd character of catalog number identifies contactor rating.

Figure 1

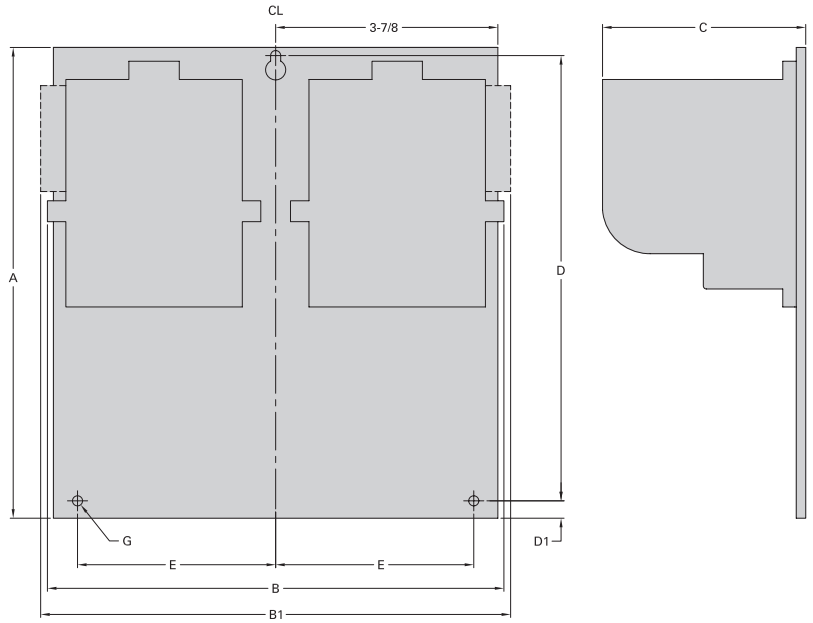
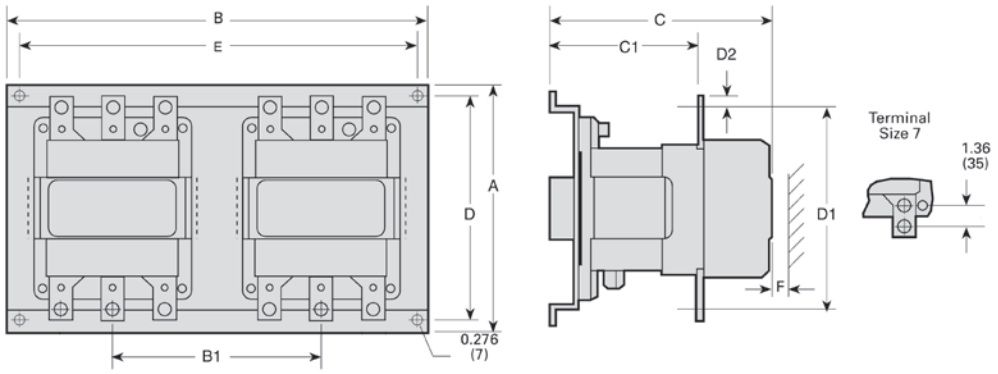


Figure 2

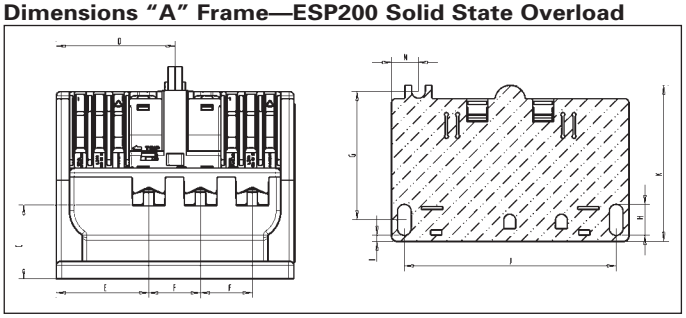


Open Type Horizontal Mounted

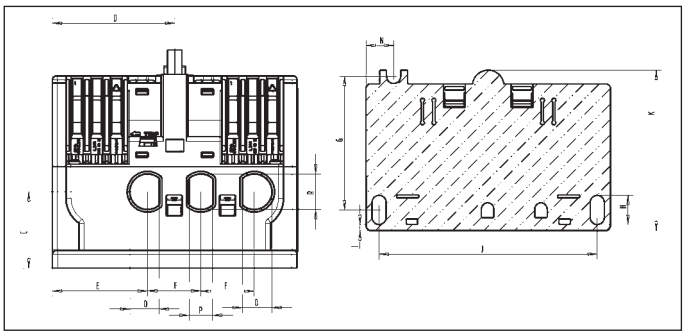
Size	Fig.	Outline Dimensions A	B	B1	C	C1	Mounting Dimensions D	D1	E	F	Mouning Screw G
00–1¾	1	7.69 (195)	7.75 (197)	9.25 (235)	3.88 (98)	—	7.25 (184)	0.25 (6)	3.63 (92)	—	#10
2, 2½	1	8.94 (227)	7.75 (197)	9.25 (235)	4.56 (116)	—	8.5 (216)	0.25 (6)	3.63 (92)	—	#10
3–3½	1	11.44 (291)	10.94 (278)	11.50 (292)	5.19 (132)	—	10.75 (273)	0.38 (6)	5.13 (130)	—	0.25
4	1	8.50 (216)	10.94 (278)	11.50 (292)	6.25 (159)	—	7.81 (198)	0.38 (6)	5.13 (130)	—	0.25
5	2	18.07 (459)	14.20 (361)	—	9.44 (240)	—	17.20 (437)	—	9.61 (244)		—
6	2	11.61 (295)	18.88 (480)	9.45 (240)	10.85 (276)	7.44 (189)	10.44 (265)	10.71 (272)	17.72 (450)	1.18 (30)	—

Note: Dimensions for reference, not for construction.
Contact sales office for dimensions not listed.
Dimensions are in inches (mm).

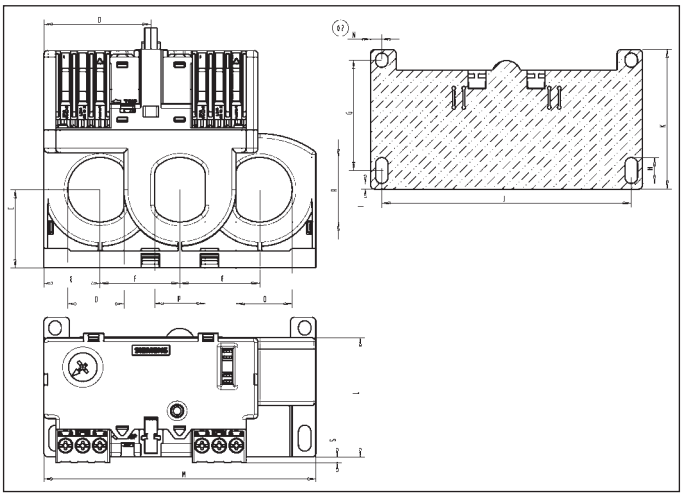
Dimensions "A" Frame—ESP200 Solid State Overload



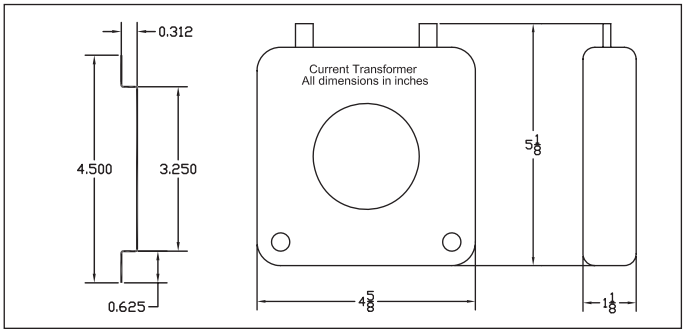
Dimensions "A1" Frame—ESP200 Solid State Overload



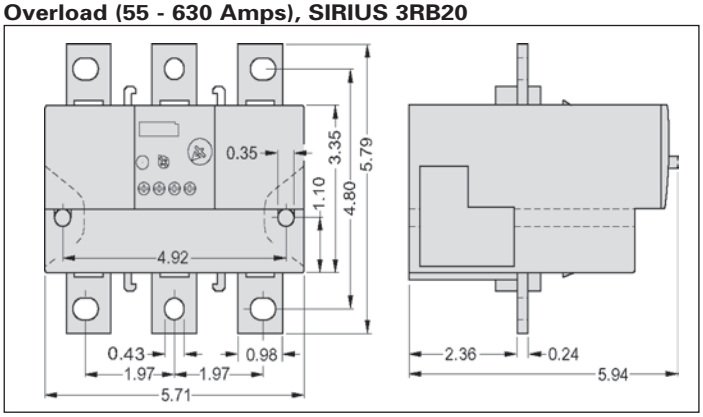
Dimensions "B" Frame—ESP200 Solid State Overload



Current Transformers (all CT's have the same dimensions)

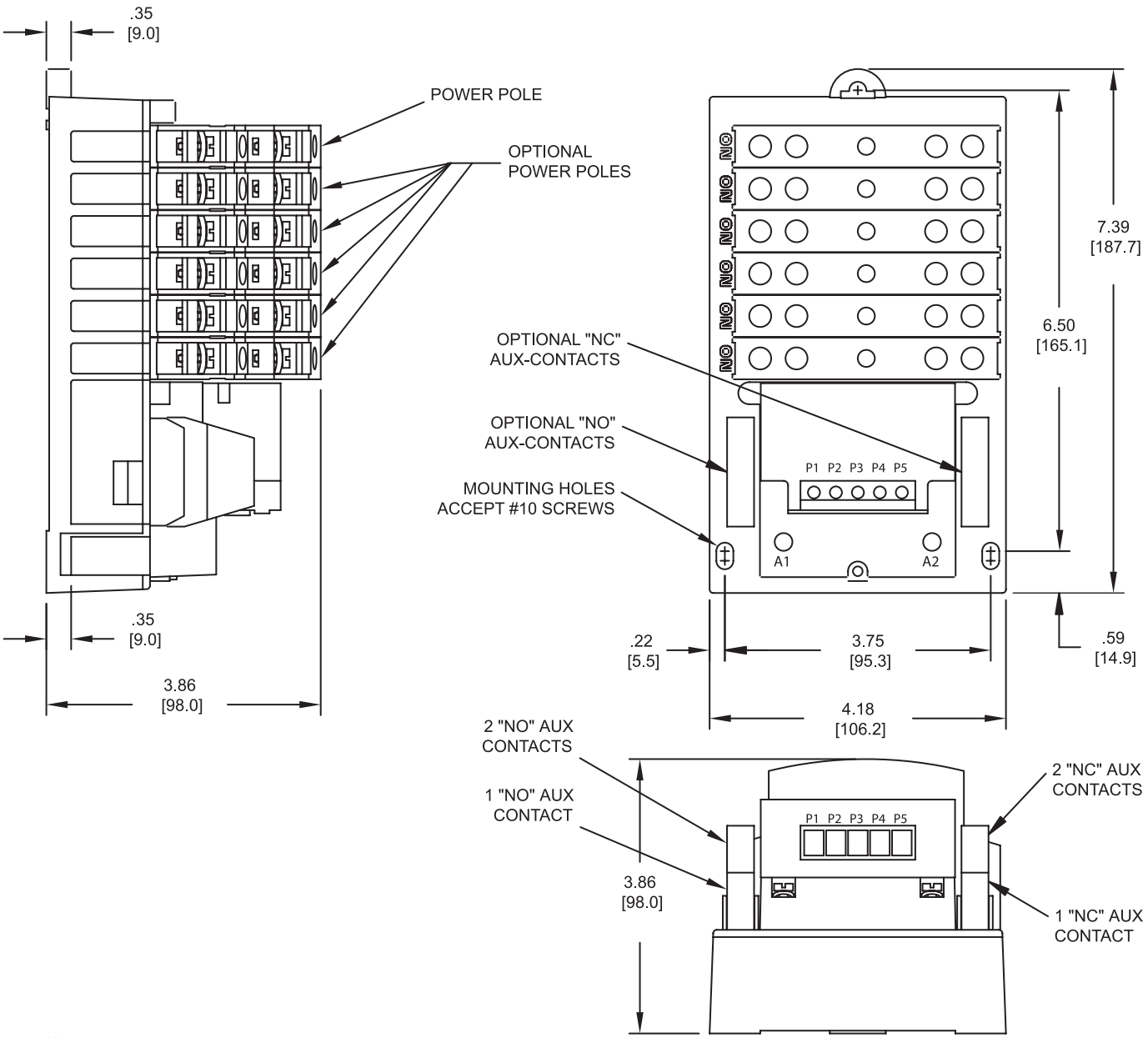


Overload (55 - 630 Amps), SIRIUS 3RB20



Dimensions	Frame Size A		Frame Size A1		Frame Size B	
	mm	in.	mm	in.	mm	in.
A	80	3.15	80	3.15	100.4	3.95
B	12.6	0.5	12.6	0.5	8.6	0.34
C	27.7	1.1	28	1.10	32.6	1.28
D	44.85	1.77	44.85	1.77	44.85	1.77
E	34.9	1.37	34.9	1.37	23.5	0.93
F	19.6	0.77	19.6	.077	33.5	1.32
G	48.95	1.93	48.95	1.93	46.23	1.82
H	10.7	0.42	10.7	0.42	10.9	0.43
I	2.3	0.09	2.3	0.09	2.4	0.09
J	80	3.15	80	3.15	104.6	4.12
K	53.9	2.12	53.9	2.12	58.6	2.31
L	66.0	2.6	55.9	2.20	50	1.97
M	89.7	3.53	89.7	3.53	114	4.49
N	10.18	0.40	10.18	0.40	4.7	0.19
O	—	—	10.77	0.42	23.6	0.93
P	—	—	8.62	0.34	21.1	0.83
R	—	—	12.9	0.51	27.1	1.07
S	9.5	0.37	—	—	2.45	0.1
T	5.2	0.21	5.2	0.21	5.2	0.21

Note: When mounted on a plate, torque screws to 11 lb.in. (1.2 Nm).



Note:

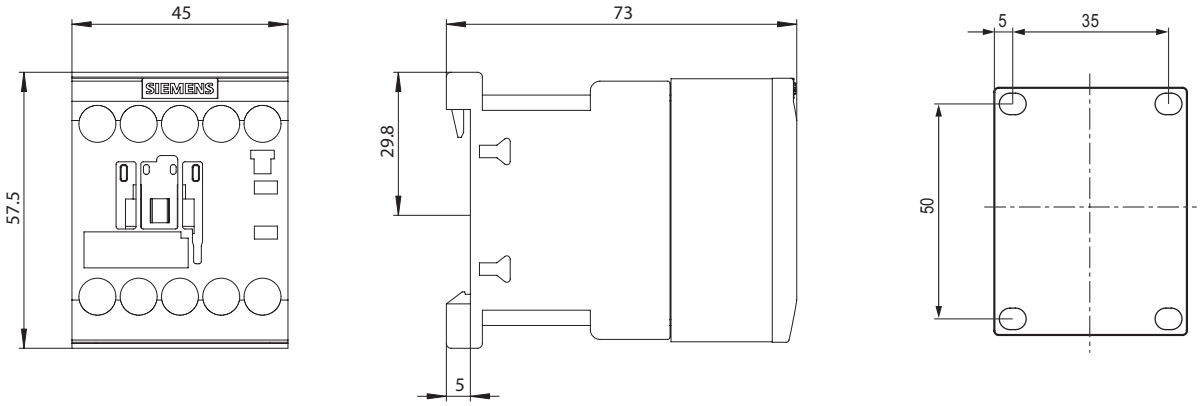
1) Mounting Dimensions remain the same for 1 to 12 Poles

2) Line and Load terminals are inter-changeable

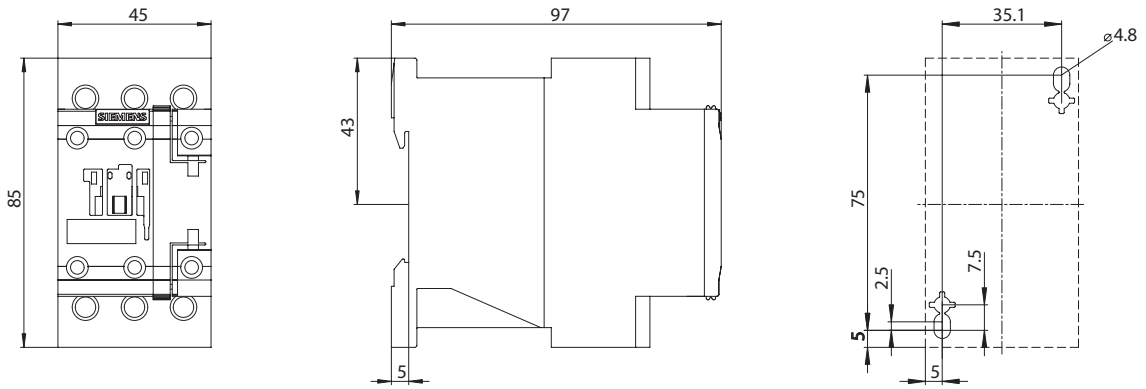
3) Up to 2NO and 2NC auxiliary contacts can be added onto the base product

4) Same Power Pole can be configured as NO type or NC type

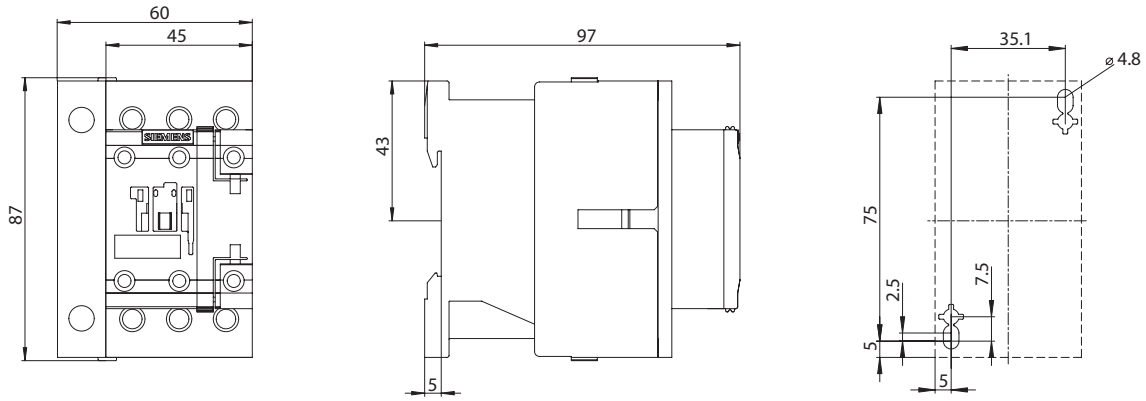
LEN00B (20A 3 Pole and 4 Pole)



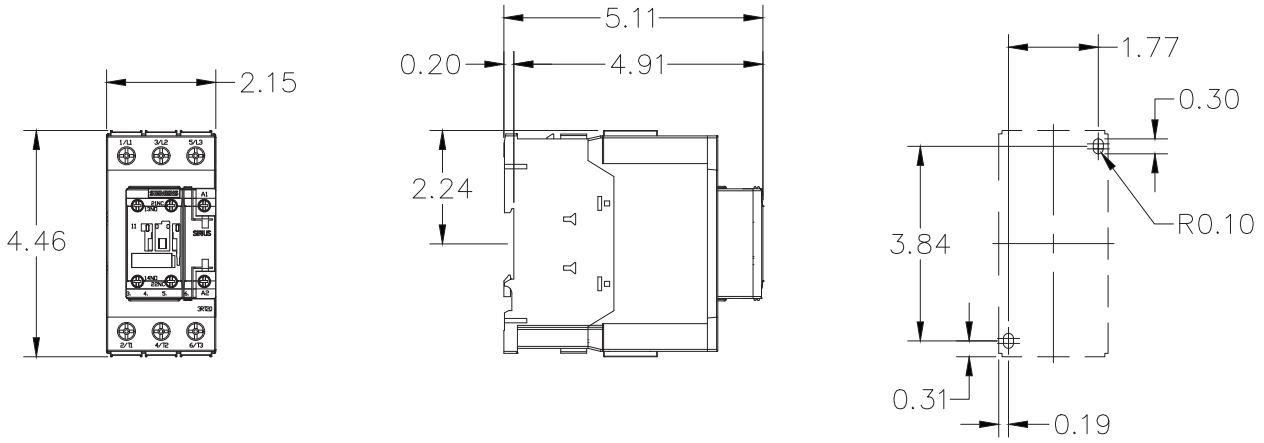
LEN00C003 (30A 3 Pole)



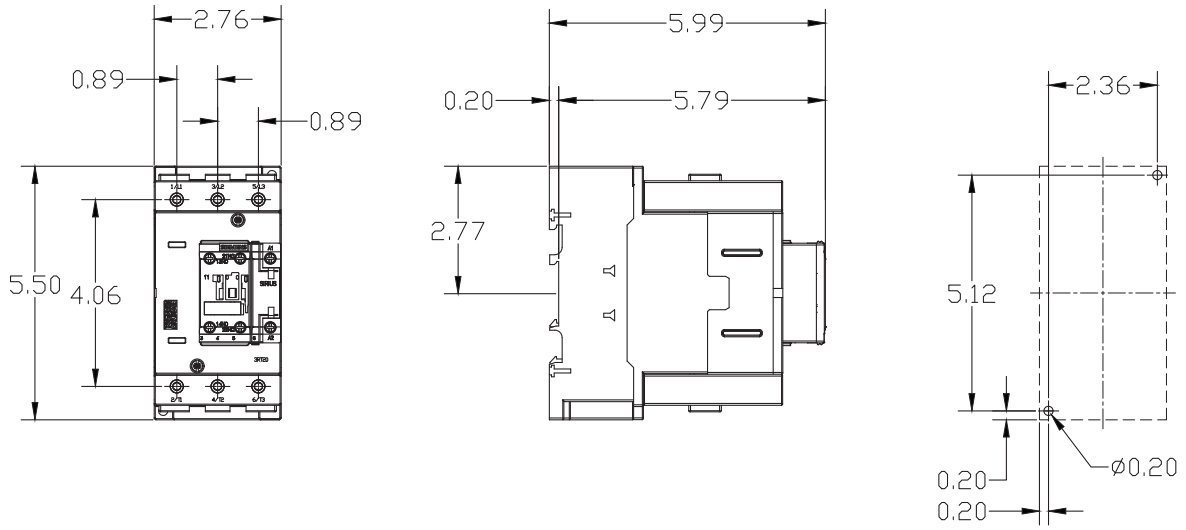
LEN00C004 (30A 4 Pole)



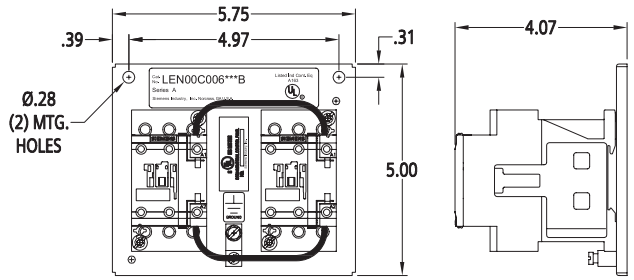
LEN00D003 (60A 3 Pole)



LEN00E003 (100A 3 Pole)



LEN00C006 (30A 6 Pole)



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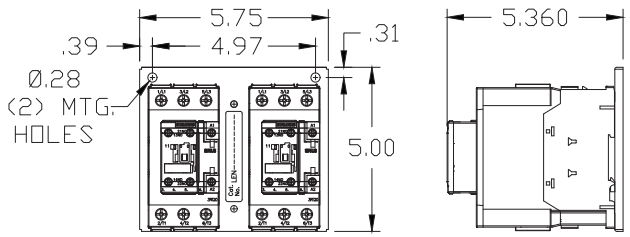
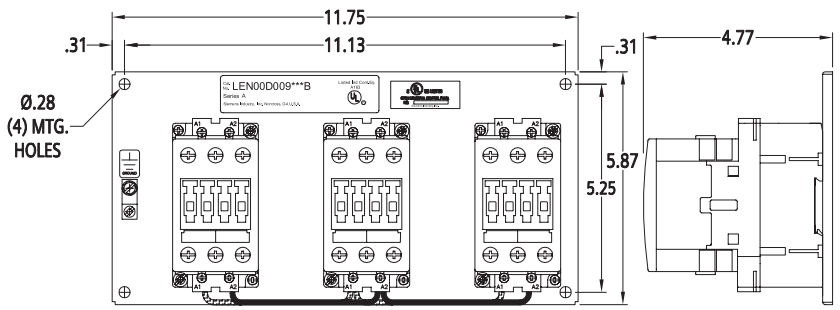


Dimensions in inches.

LEN00C009 (30A 9 Pole)



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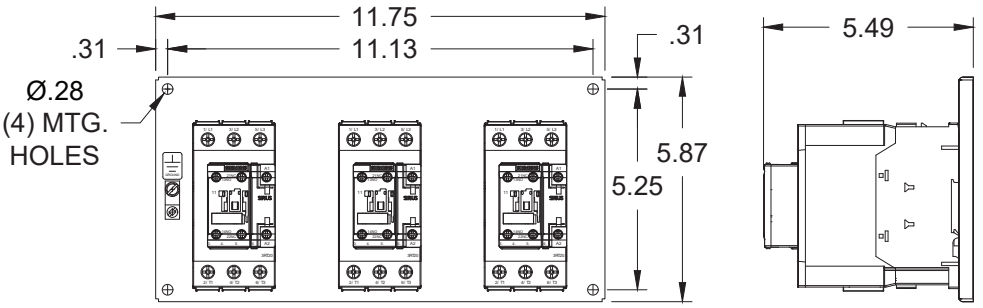
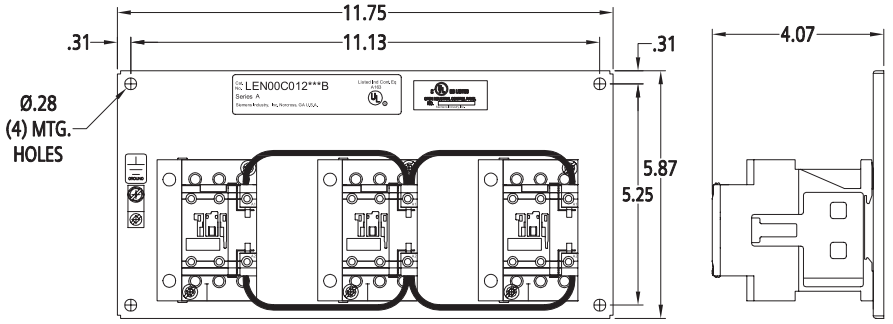
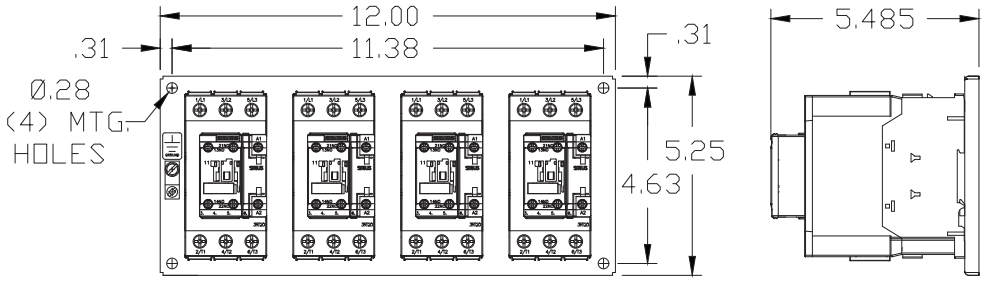


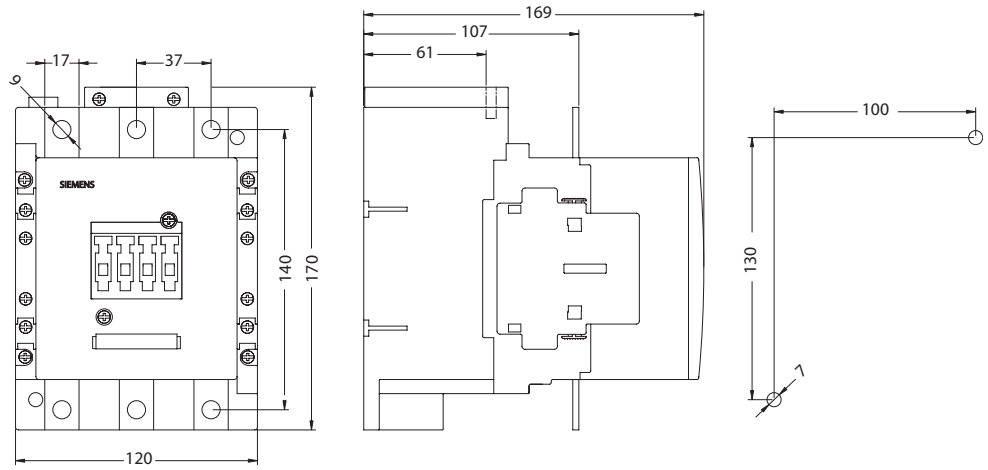
LEN00C012 (30A 12 Pole)



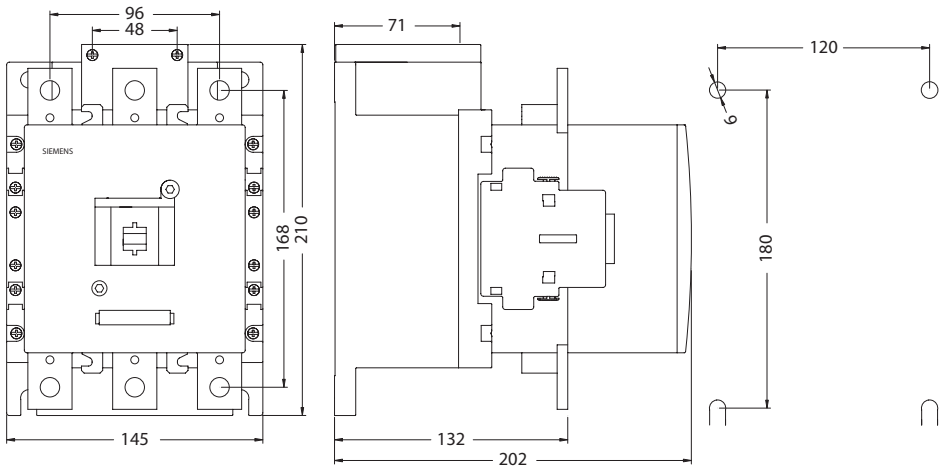
LEN00D012 (60A 12 Pole)



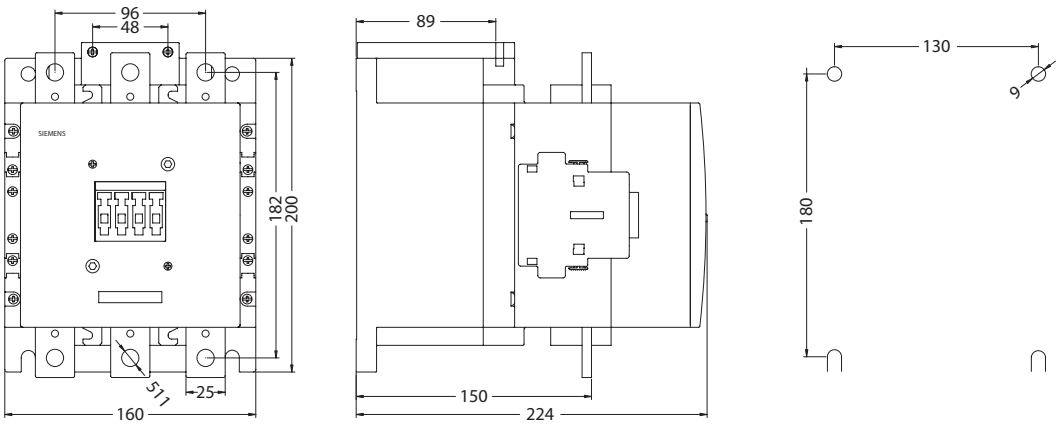
LEN00F003 (200A 3 Pole)



LEN00G003 (300A 3 Pole)



LEN00H003 (400A 3 Pole)



CLM Contactor, 20 Amp

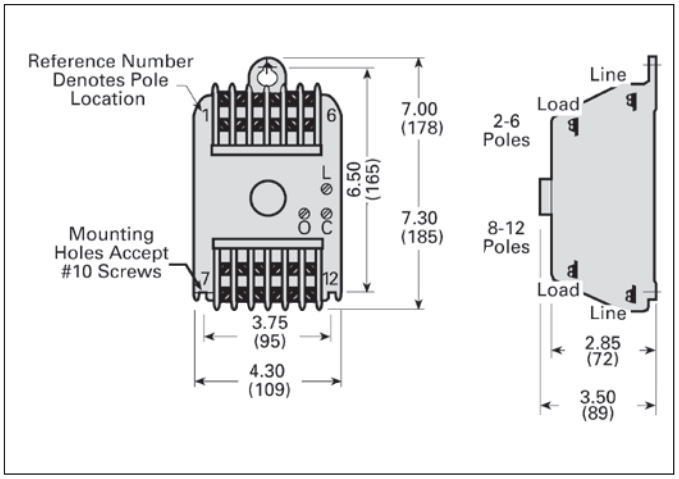


Figure 1

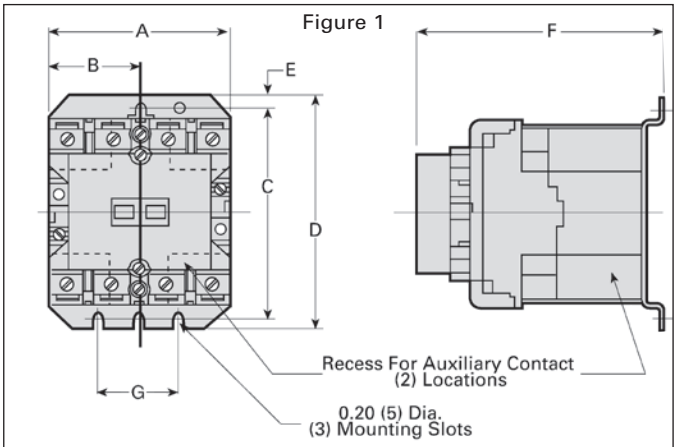


Figure 2

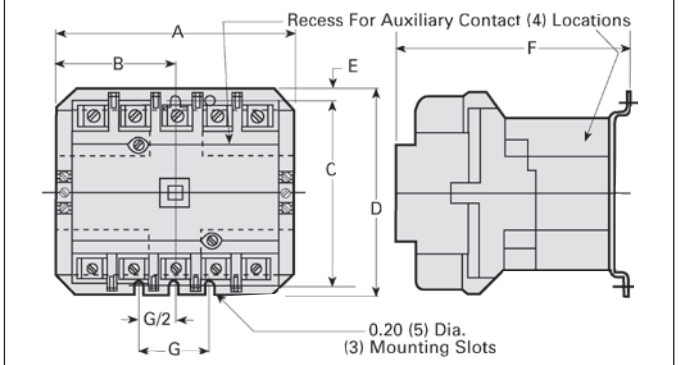


Figure 3

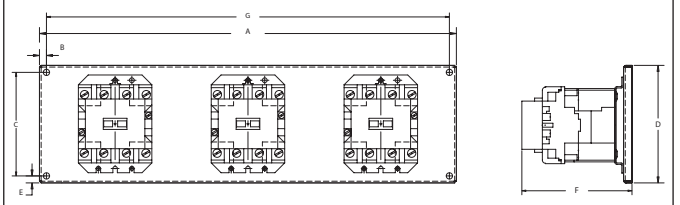


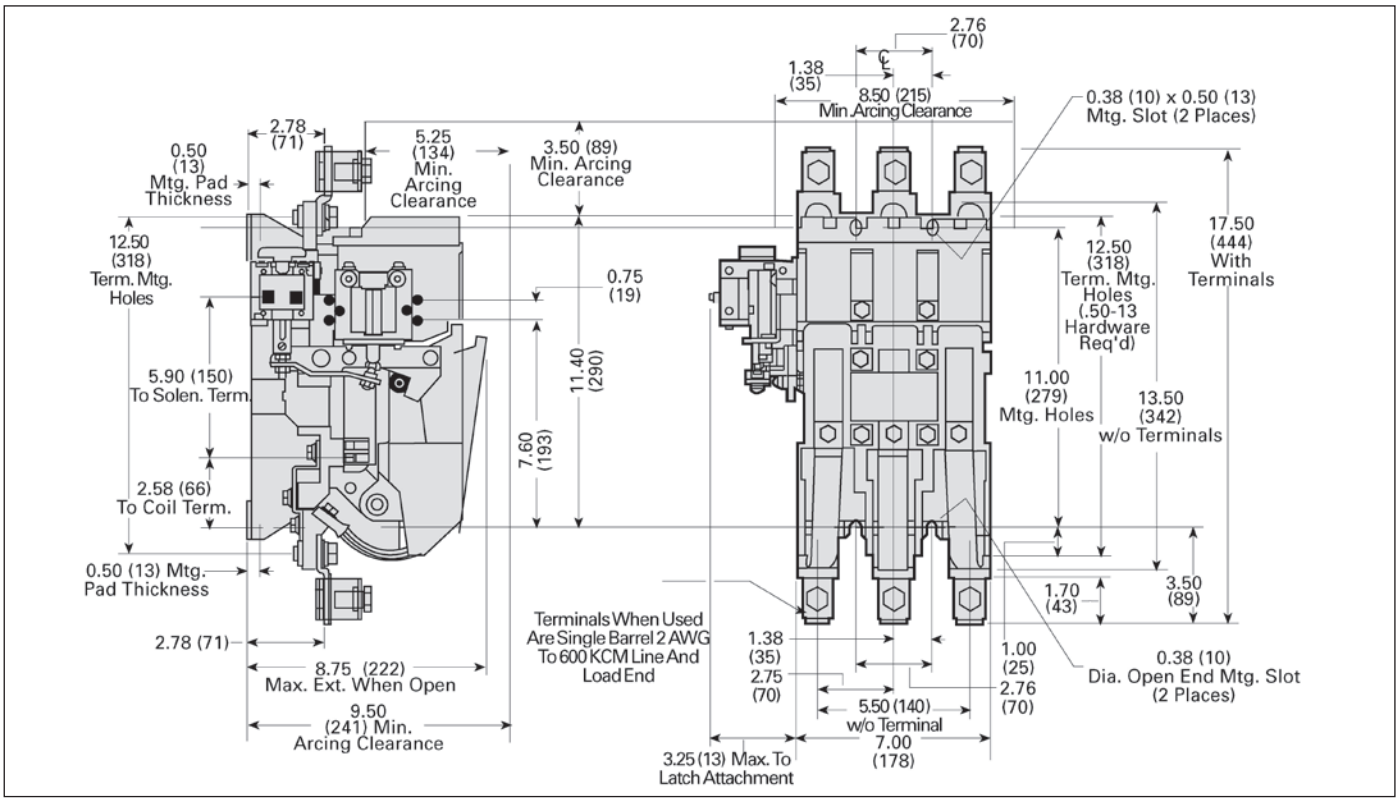
Figure is representative and may not depict the actual number of contactors mounted on the plate. There will be either 2 or 3 contactors. Furthermore, each contactor may have 3, 4 or 5 poles.

Open Type Lighting and Heating Contactors

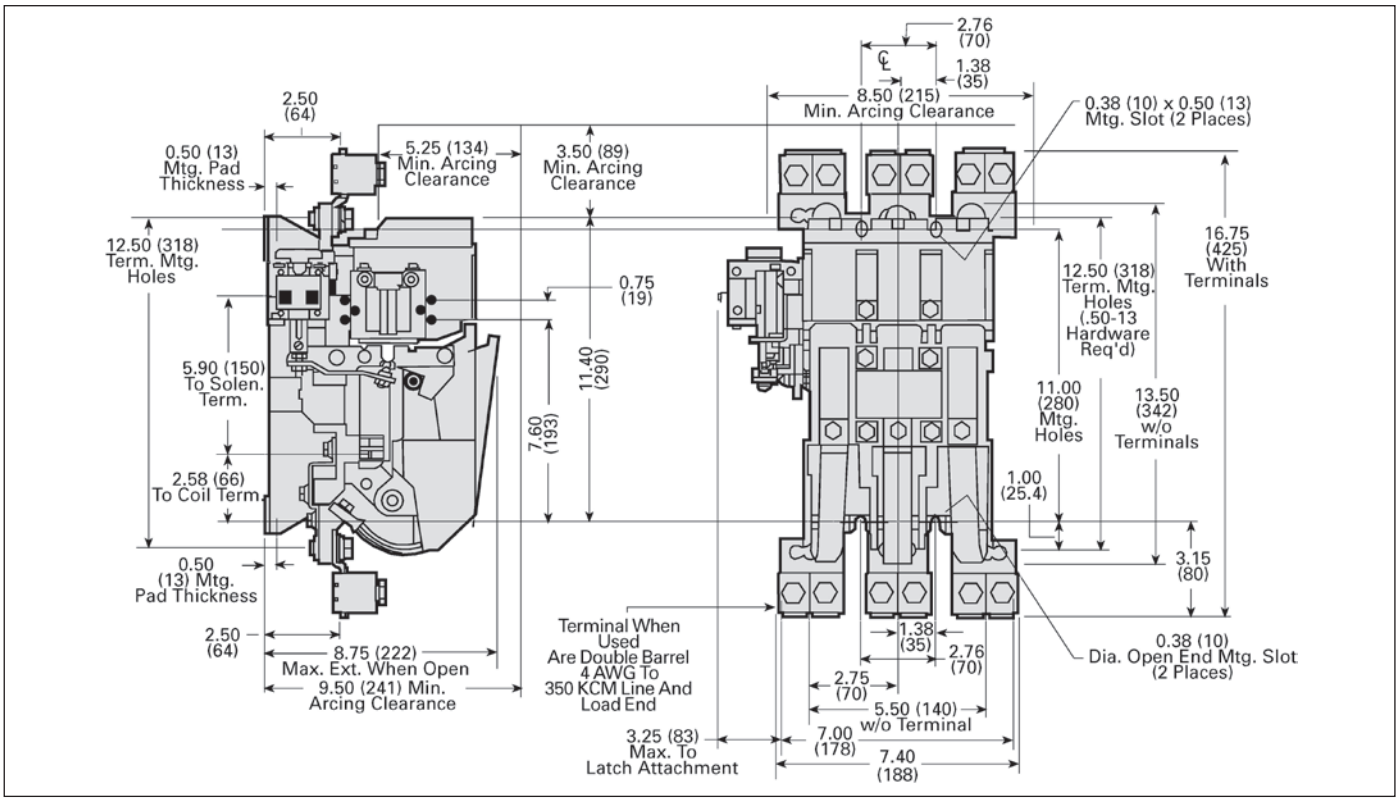
Class	Figure Number	Amp Rating	Number of Poles	A	B	C	D	E	F	G
CLM	1	30	2–4	3.31 (84)	1.65 (42)	3.95 (100)	4.38 (111)	0.23 (6)	4.61 (117)	1.50 (38)
		30	5	4.19 (106)	2.09 (53)	3.95 (100)	4.38 (111)	0.23 (6)	4.61 (117)	1.50 (38)
	2	60	2, 3	3.31 (84)	1.65 (42)	3.95 (100)	4.38 (111)	0.23 (6)	4.94 (125)	1.50 (38)
		60	4, 5	5.06 (129)	2.53 (64)	3.95 (100)	4.38 (111)	0.23 (6)	4.94 (125)	1.50 (38)
		100	2, 3	4.62 (117)	2.31 (59)	6.00 (152)	6.62 (168)	0.38 (10)	6.75 (171)	1.88 (48)
		100	4, 5	7.25 (184)	3.62 (92)	6.00 (152)	6.62 (168)	0.38 (10)	6.75 (171)	1.88 (48)
		200	2, 3	4.62 (117)	2.31 (59)	6.00 (152)	6.62 (168)	0.38 (10)	6.75 (171)	1.88 (48)
		200	4, 5	7.25 (184)	3.62 (92)	6.00 (152)	6.62 (168)	0.38 (10)	6.75 (171)	1.88 (48)
	3	30	6, 8	8.00 (196)	0.31 (8)	5.25 (129)	5.87 (144)	0.31 (8)	4.86 (119)	7.38 (181)
		30	9, 10, 12	11.75 (289)	0.31 (8)	5.25 (129)	5.87 (144)	0.31 (8)	4.86 (119)	11.13 (273)
		60	6	8.00 (196)	0.31 (8)	5.25 (129)	5.87 (144)	0.31 (8)	5.19 (127)	7.38 (181)
		60	8, 9, 10	11.75 (289)	0.31 (8)	5.25 (129)	5.87 (144)	0.31 (8)	5.19 (127)	11.13 (273)
		60	12	16.75 (410)	0.31 (8)	5.25 (129)	5.87 (144)	0.31 (8)	5.19 (127)	16.13 (395)

Note: Dimensions for reference, not for construction.
Dimensions in inches (mm).

CLM Contactors 300 Amp



CLM Contactors 400 Amp



Note: Dimensions for reference, not for construction.
Dimensions in inches (mm).

Figure 1

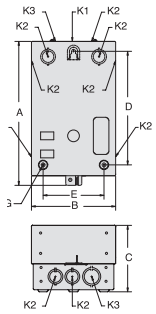
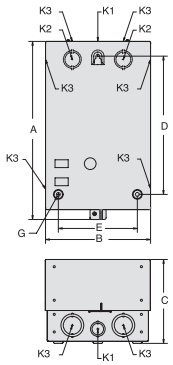


Figure 2



View is typical for bottom and top

Figure 3

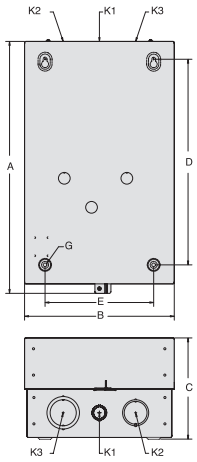


Figure 4

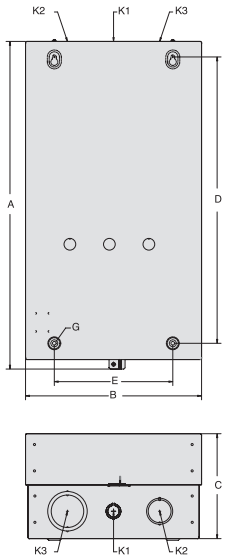
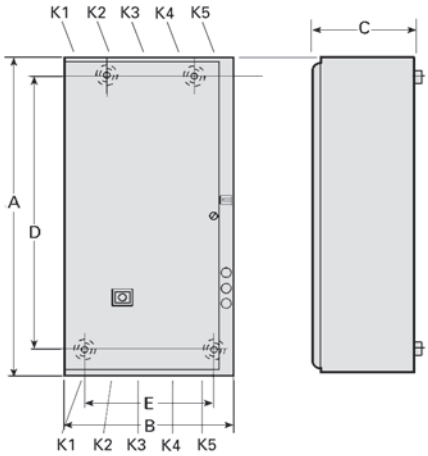


Figure 5



Enclosure Type	Size	Fig.②	Outline Dimensions			Mounting		G①	Conduit Size					Approx. Ship Wt Lbs	Reference Drawing
			A	B	C	D	E		K1	K2	K3	K4	K5		
1 (Standard width for use with or without CPT)	00–1 3/4 (w/o CPT)	1	11.00	6.41	5.00	8.22	4.63	0.25	0.5	0.5-0.75	0.75–1	—	—	10	D68870
	2–2 1/2 (w/o CPT)	2	13.53	8.00	6.38	10.25	6.00	0.25	0.5-0.75	0.75-1	1–1.25	—	—	15	D68870
	3–3 1/2	3	19.13	11.38	7.69	15.63	8.25	0.25	0.5-0.75	1–1.25	1.5–2	—	—	26	D68870
	4	4	24.88	13.38	8.13	21.75	9.00	0.25	0.5-0.75	1.25–1.5	2–2.5	—	—	37	D68870
	5	5	48.00	24.00	12.00	49.56	22.50	0.38	2–3					135	
	6, 7	5	48.00	24.00	12.00	49.56	22.50	0.38	2–2.5					150	
	8	5	60.00	38.00	16.00	61.56	36.50	0.38						275	
1 (Extra wide for use with CPT)	00–2 1/2	3	19.13	11.38	7.69	15.63	8.25	0.25	0.5-0.75	1–1.25	1.5–2	—	—	26	D68870
	3–3 1/2	4	24.88	13.38	8.13	21.75	9.00	0.25	0.5-0.75	1.25–1.5	2–2.5	—	—	37	D68870

Note: Dimensions are in inches.

① G designates mounting screw size.
② Enclosures shown in figures 1 - 4 have lift-off covers.
Enclosures shown in figure 5 have hinged covers.

Figure 1

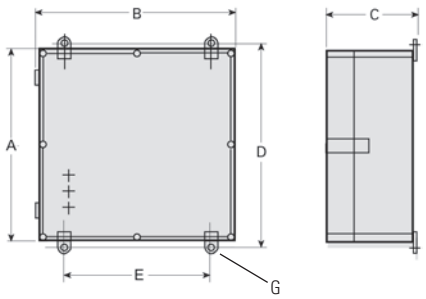
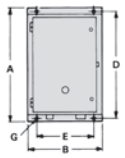
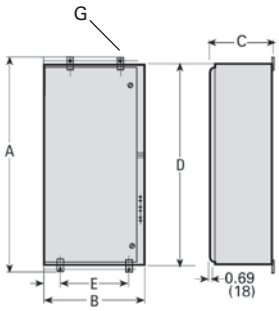


Figure 2



Typical view top and bottom

Figure 3



Enclosure Type	Size	Fig.	Outline Dimensions A	B	C	Mounting D	E	G①	Conduit Size K1	K2	K3	Approx. Ship Wt Lbs	Reference Drawing
4/4X Fiberglass (Standard width for use with or without CPT)	0-1 3/4	1	13.00	7.75	5.44	12.25	5.00	0.375	—	—	—	12	D41547
	2-2 1/2	1	16.00	8.13	6.06	15.25	5.00	0.375	—	—	—	18	D41547
	3-4	1	26.00	13.13	7.56	25.25	10.00	0.375	—	—	—	49	D41552
3/3R/4/12 (Standard width for use without CPT)	0-1 3/4	2	13.00	7.75	5.44	12.25	5.00	0.25	—	—	—	12	D41547
	2-2 1/2	2	16.00	8.13	6.06	15.25	5.00	0.25	—	—	—	18	D41547
	3-4	2	26.00	13.13	7.56	25.25	10.00	0.25	—	—	—	49	D41552
3/3R/4/12 (Extra wide for use with CPT)	0–1 3/4	2	13.00	12.63	5.38	12.25	10.00	0.25	—	—	—	30	D17150
	2–2 1/2	2	16.00	13.25	6.13	15.25	11.00	0.25	—	—	—	33	D17150
	3–3 1/2	2	24.00	20.00	8.00	25.56	18.50	0.375	—	—	—	49	D41552
	4	2	30.00	24.00	10.00	31.56	22.50	0.375	—	—	—	64	D17150
	5	3	48.00	24.00	12.00	49.56	22.50	0.375	—	—	—		D65608007
	6, 7	3	48.00	24.00	12.00	49.56	22.50	0.375	—	—	—		D65608009
	8	3	60.00	38.00	16.00	61.56	36.50	0.375	—	—	—	275	D65632006
4/4X Stainless Steel (Standard width for use without CPT)	0-1 3/4	2	13.00	7.75	5.44	12.25	5.00	0.25	—	—	—	18	D41546
	2-2 1/2	2	16.00	8.13	6.06	15.25	5.00	0.25	—	—	—	36	D41546
	3-4	2	26.00	13.13	7.56	25.25	10.00	0.25	—	—	—	67	D41551
4/4X Stainless Steel (Extra wide for use with CPT)	0–1 3/4	2	13.00	12.63	5.38	12.25	10.00	0.25	—	—	—	30	D41917
	2–2 1/2	2	16.00	13.25	6.13	15.25	11.00	0.25	—	—	—	33	D42935
	3–3 1/2	2	24.00	20.00	8.00	25.56	18.50	0.375	—	—	—	64	D41551
	4	2	30.00	24.00	10.00	31.56	22.50	0.375	—	—	—	67	D43292
	5 (Painted)	3	48.00	24.00	12.00	49.56	22.50	0.375	—	—	—		D65608007
	6, 7 (Painted)	3	48.00	24.00	12.00	49.56	22.50	0.375	—	—	—		D65608009
	8	3	60.00	38.00	16.00	61.56	26.50	0.375	—	—	—	275	D65632006

Note: Dimensions are in inches.

① G designates mounting screw size.

Figure 1

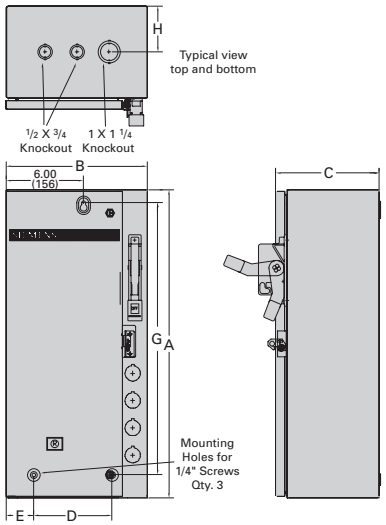


Figure 2

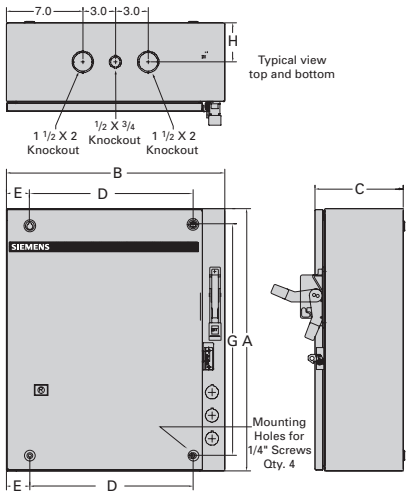


Figure 3

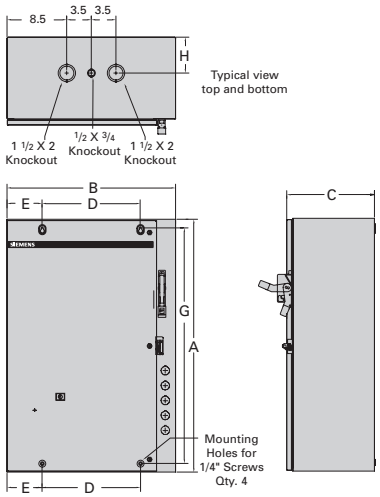
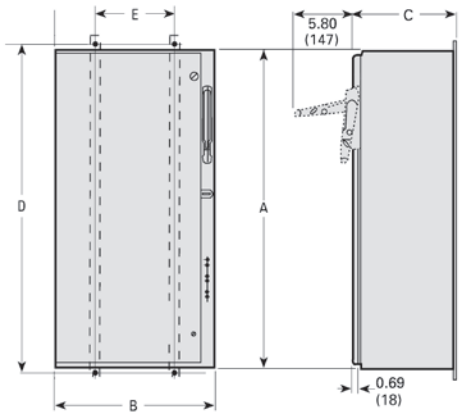


Figure 4



Enclosure Type	Size	Fig.	Outline Dimensions			Mounting Dimensions				Approx. Ship Wt Lbs	Reference Drawing
			A	B	C	D	E	G	H		
1 (Standard width)	0–2	1	24.00	11.00	8.00	6.13	2.13	21.00	3.50	35	D68774001
	2 1/2, 3 (except 200A Disc.)	2	24.00	20.00	8.00	15.00	2.13	21.00	3.50	48	D68774002
	3 (200A Disc.), 3 1/2, 4	3	36.00	24.00	8.00	14.00	5.00	33.50	5.00	101	D68774003
	5	4	72.16	20.00	11.03	71.00	16.00	—	—	250	D56032005
	6	4	60.00	38.00	12.00	36.50	0.75	61.56	—	275	D56032006
1 (Extra wide)	0–2	2	24.00	20.00	8.00	15.00	2.13	21.00	3.50	48	D68774002
	2 1/2, 3	3	36.00	24.00	8.00	14.00	5.00	33.50	5.00	101	D68774003

Note: Dimensions are in inches.

Figure 1

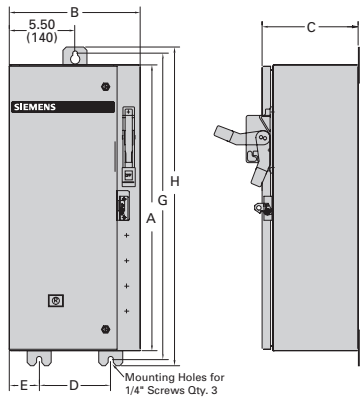


Figure 2

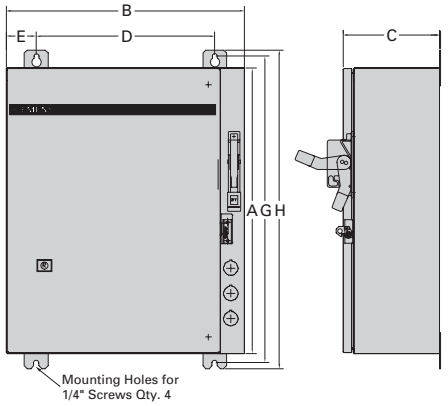


Figure 3

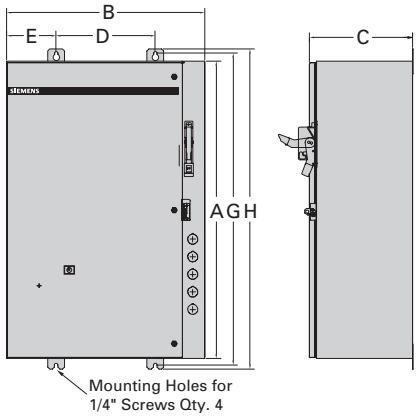


Figure 4

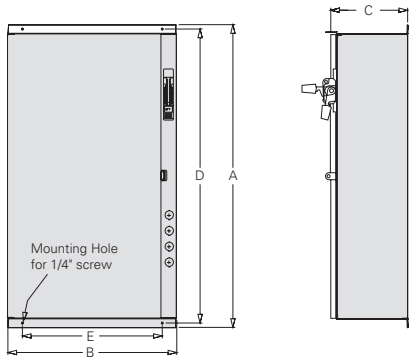
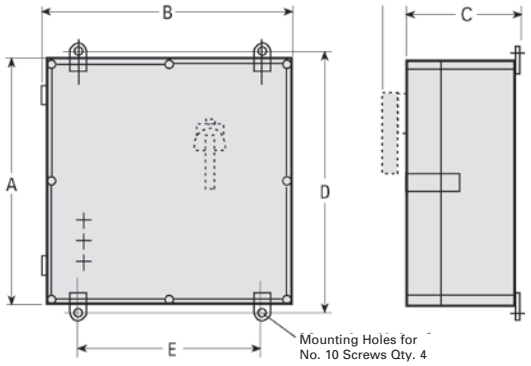


Figure 5



Enclosure Type	Size	Fig.	Outline Dimensions			Mounting Dimensions				Approx. Ship Wt Lbs	Reference Drawing
			A	B	C	D	E	G	H		
3/3R/4/4X/12 (Standard width)	0–2	1	24.00	11.00	8.00	6.00	2.50	25.75	26.75	35	D56033
	2 1/2, 3 (except 200A Disc.)	2	24.00	20.00	8.00	15.00	2.50	25.75	26.75	48	D56033
	3 (200A Disc.), 3 1/2, 4	3	36.00	24.00	8.00	12.00	6.00	37.75	38.75	101	D56033
	5 (Painted)	4	72.16	20.00	11.03	71.00	16.00	—	—	250	D56032005
	6 (Painted)	4	60.00	38.00	12.00	36.50	0.75	61.56	63.10	275	D56032006
3/3R/4/4X/12 (Extra wide)	0–2	2	24.00	20.00	8.00	15.00	2.50	25.75	26.75	48	D56033
	2 1/2, 3	3	36.00	24.00	8.00	12.00	6.00	37.75	38.75	101	D56033
4/4X Fiberglass (Standard width)	0–1 3/4	5	23.75	14.62	7.12	24.09	12.20	—	—	42	
	2–3 1/2	5	23.75	23.75	8.50	24.06	21.30	—	—	44	
	4	5	39.37	29.52	12.20	40.94	27.95	—	—	55	

Note: Dimensions are in inches.

Figure 1

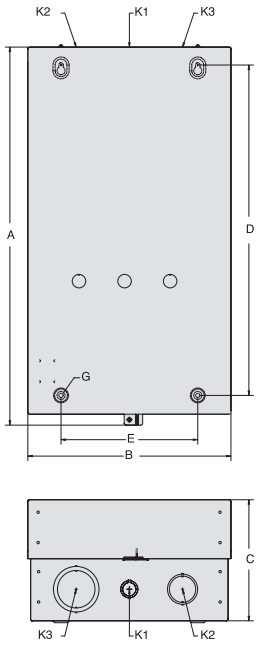


Figure 2

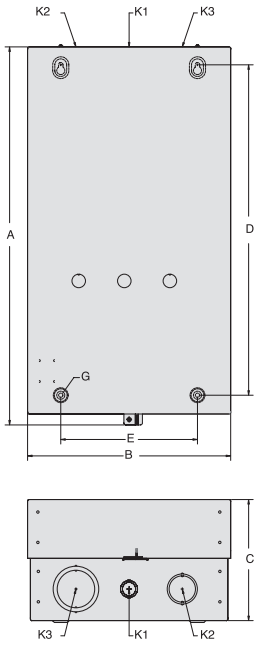
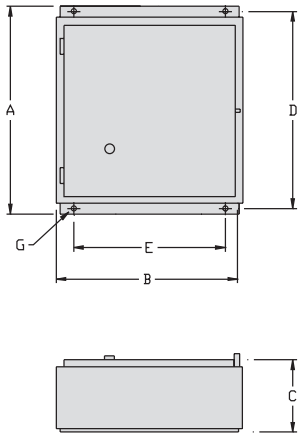


Figure 3



View is typical for bottom and top

Enclosure Type	Size	Fig.③	Outline Dimensions			Mounting		G①	Conduit Size				Approx. Ship Wt Lbs	Reference Drawing
			A	B	C	D	E		K1	K2	K3	K4		
1 (Standard width for use with or without CPT)	00–2 1/2	1	19.12	11.38	7.69	15.62	8.25	0.25	0.5-1.25	1-1.25	1.5-2	—	30	D68870
	3–4	2	24.88	13.38	8.12	21.75	9.00	0.25	1.25-1.5	1.25-1.5	2-2.5	—	52	D68870
	5	3	48.00	24.00	12.00	49.56	22.50	0.38	1.25-1.5	1.25-1.5	0.5-0.75	1.25-1.5	135	D65608
	6, 7	3	48.00	24.00	12.00	49.56	22.50	0.38	1.25-1.5	1.25-1.5	0.5-0.75	1.25-1.5	150	D65608013
4/4X Stainless Steel (Standard width for use without CPT)	0–1 3/4	3	12.00	12.00	6.00	12.75	8.00	0.38	—	—	—	—	30	D41917
	2–2 1/2	3	16.00	14.00	6.00	16.75	12.00	0.38	—	—	—	—	33	D42935
	3–3 1/2 (w/o CPT)	3	24.00	20.00	8.00	25.56	18.50	0.38	—	—	—	—	53	D17423
	3–3 1/2 (w/ CPT),4	3	30.00	24.00	10.00	31.56	22.50	0.38	—	—	—	—	64	D43292
	5②	3	48.00	24.00	12.00	49.56	22.50	0.38	—	—	—	—		D65608007
	6, 7②	3	48.00	24.00	12.00	49.56	22.50	0.38	—	—	—	—		65608009

Note: Dimensions are in inches.

① G designates mounting screw size.
② Type 4 painted enclosure.

③ Enclosures shown in figures 1 and 2 have lift-off covers. Enclosures shown in figure 3 have hinged covers.

Figure 5

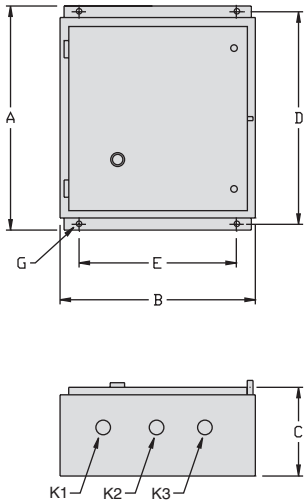


Figure 6

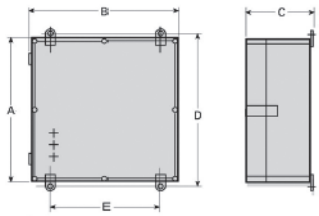
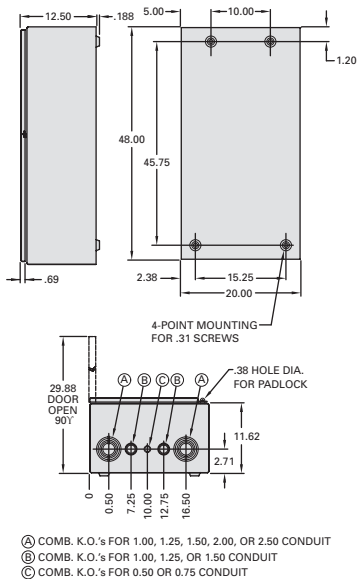


Figure 7



View is typical for bottom and top

Enclosure Type	Size	Fig.	Outline Dimensions A	B	C	Mounting D	E	G①	Conduit Size K1	K2	K3	Approx. Ship Wt Lbs	Reference Drawing
3/3R/4/12 (Standard width for use with or without CPT)	0–1 3/4	5	13.00	12.63	5.63	12.25	10.00	0.25	—	—	—	30	D17150
	2–2 1/2	5	16.00	13.25	6.13	15.25	11.00	0.25	—	—	—	33	D17150
	3–3 1/2 (w/o CPT)	5	24.00	20.00	8.00	25.56	18.50	0.380	—	—	—	53	D17150
	3–4 (w/ CPT)	5	30.00	24.00	10.00	31.56	22.50	0.380	—	—	—	64	D17150
	5	7	48.00	24.00	12.00	49.56	22.50	0.375	—	—	—		D65608007
	6	7	48.00	24.00	12.00	49.56	22.50	0.375	—	—	—		
4/4X Fiberglass (Standard width for use with or without CPT)	0–2 1/2	6	24.00	20.00	8.00	25.56	18.50	0.380	—	—	—	35	
	3–4	6	30.00	24.00	10.00	31.56	22.50	0.380	—	—	—	38	

Note: Dimensions are in inches.

① G designates mounting screw size.

Figure 1

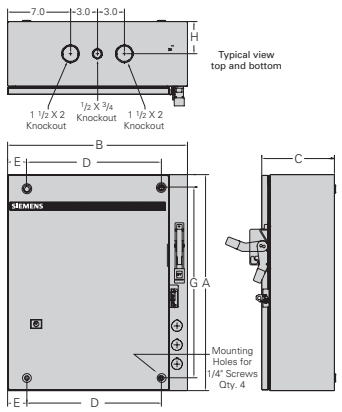


Figure 2

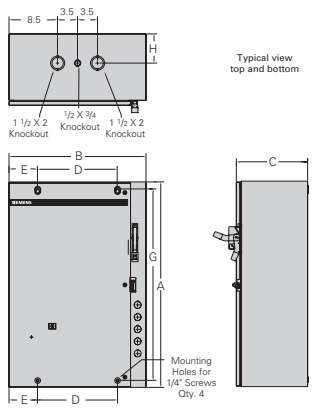


Figure 3

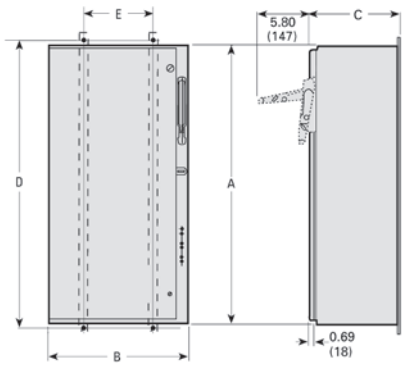


Figure 4

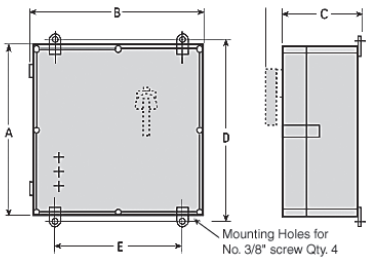
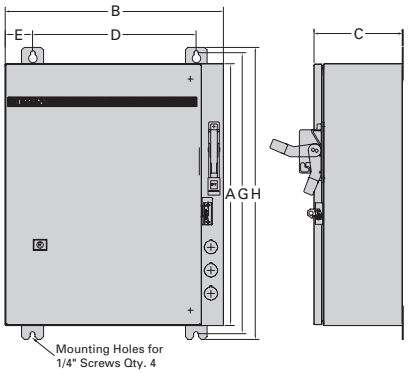


Figure 5



Enclosure Type	Size	Fig.	Outline Dimensions			Mounting Dimensions				Approx. Ship Wt Lbs	Reference Drawing
			A	B	C	D	E	G	H		
1 (Standard width)	0–2 1/2	1	24.00	20.00	8.00	15.00	2.13	21.00	3.50	60	D68774002
	3-4	2	36.00	24.00	8.00	14.00	5.00	33.50	5.00	121	D68774003
	5	3	72.16	20.00	11.03	71.00	16.00	—	—	250	D56032005
	6	3	72.10	40.20	18.10	78.00	18.00	—	—	275	D56032006
3/3R/4/4X/12 (Standard width)	0–2 1/2	5	24.00	20.00	8.00	15.00	3.50	25.75	26.75	63	D68774005
	3-4	5	36.00	24.00	8.00	14.00	6.00	37.75	38.75	124	D68774006
	5(Painted)	3	72.16	20.00	11.03	71.00	16.00	—	—	250	D56032005
	6(Painted)	3	72.10	40.20	18.10	78.00	18.00	—	—	275	D56032006

Enclosure Type	Size	Fig.	Outline Dimensions			Mounting		G①	Conduit Size			Approx. Ship Wt Lbs	Reference Drawing
			A	B	C	D	E		K1	K2	K3		
4/4X Fg (Standard width)	0-2 1/2	4	24.00	20.00	8.00	25.56	18.50	0.38	—	—	—	18	24-139-861-001
	3-4	4	30.00	24.00	10.00	31.56	22.50	0.38	—	—	—	28	24-139-861-003

Note: Dimensions are in inches.

① G designates mounting screw size.

Figure 1

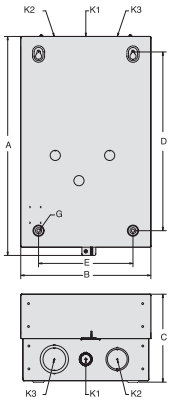


Figure 1a

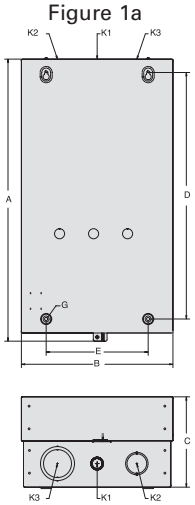


Figure 2

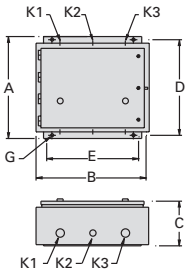


Figure 3

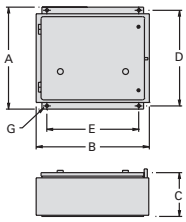
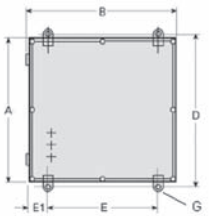


Figure 4



Starter Type (Enclosure Type)	Size	Fig.②	Outline Dimensions			Mounting			Conduit Size			Approx. Ship Wt Lbs	Reference Drawing
			A	B	C	D	E	G①	K1	K2	K3		
2 Speed 1 Winding (Type 1 for use with or without CPT)	0–1 3/4 w/o CPT	1	19.13	11.38	7.69	15.63	8.25	0.25	0.5-0.75	1.0-1.25	1.5-2	26	D68870
	0–1 3/4 w/ CPT	1a	24.88	13.38	8.13	21.75	9.00	0.25	0.5-0.75	1.25-1.5	2-2.5	52	D68870
	2–2 1/2	2	16.00	17.13	7.63	15.25	14.00	0.25	0.5-0.75	1.25-1.5	1.25-1.5	39	D42932001
	3–3 1/2	2	24.88	13.38	8.13	21.75	9.00	0.25	0.5-0.75	1.25–1.5	2–2.5	60	D72956002
	4	3	24.88	13.38	8.13	21.75	9.00	0.25	0.5-0.75	1.25–1.5	2–2.5	61	D43292001
2 Speed 1 Winding (Type 4/4X Stainless Steel for use with or without CPT)	0–1 3/4 w/o CPT	3	12.00	12.00	6.00	12.75	10.00	0.38	—	—	—	34	D41917000
	0–1 3/4 w/ CPT	3	16.00	16.00	8.00	17.60	14.50	0.38	—	—	—	47	
	2–2 1/2 w/o CPT	3	16.00	16.00	8.00	17.60	14.50	0.38	—	—	—	47	
	2–2 1/2 w/ CPT	3	30.00	24.00	10.00	31.56	22.50	0.38	—	—	—	55	
	3–3 1/2	3	30.00	24.00	10.00	31.56	22.50	0.38	—	—	—	61	D43292001
	4	3	30.00	24.00	10.00	31.56	22.50	0.38	—	—	—	61	D43292001
2 Speed 1 Winding (Type 3/3R/4/12 for use with or without CPT)	0–1 3/4 w/o CPT	3	13.00	12.63	5.38	12.25	10.00	0.25	—	—	—	34	
	0–1 3/4 w/ CPT	3	16.00	17.13	7.63	15.25	14.00	0.25	—	—	—	47	D17150010
	2–2 1/2 w/o CPT	3	16.00	17.13	7.63	15.25	14.00	0.25	—	—	—	47	D17150010
	2–2 1/2 w/ CPT	3	24.00	20.00	8.00	25.56	18.50	0.38	—	—	—	55	
	3–4	3	30.00	24.00	10.00	31.56	22.50	0.38	—	—	—	61	D19673000
2 Speed 1 Winding (Type 4/4X Fg. for use w/ or w/o CPT)	0–2 1/2	4	23.78	23.78	6.89	—	—	0.25	—	—	—	28	24139861003
	3–4	4	39.38	29.53	12.60	—	—	—	—	—	—		24139861004
2 Speed 2 Winding (Type 1 for use with or without CPT)	0–2 1/2 w/o CPT	1	19.13	11.38	7.69	15.63	8.25	0.25	0.5-0.75	1.0-1.25	1.5-2	30	D68870
	0–2 1/2 w/ CPT	1a	24.88	13.38	8.13	21.75	9.00	0.25	0.5-0.75	1.25-1.5	2-2.5	52	D68870
	3–4 w/o CPT	1a	24.88	13.38	8.13	21.75	9.00	0.25	0.5-0.75	1.25-1.5	2-2.5	52	D68870
2 Speed 2 Winding (Type 4/4X Stainless Steel for use with or without CPT)	0–1 3/4 w/o CPT	3	12.00	12.00	6.00	12.75	10.00	0.38	—	—	—	34	
	0–1 3/4 w/ CPT	3	16.00	16.00	8.00	17.60	14.50	0.38	—	—	—	41	
	2–2 1/2 w/o CPT	3	16.00	16.00	8.00	17.60	14.50	0.38	—	—	—	41	
	2–2 1/2 w/ CPT	3	16.00	16.00	8.00	17.60	14.50	0.38	—	—	—	41	
	3–3 1/2 w/o CPT	3	30.00	24.00	10.00	31.56	22.50	0.38	—	—	—	55	
	3–3 1/2 w/ CPT	3	30.00	24.00	10.00	31.56	22.50	0.38	—	—	—	61	D43292001
	4	3	30.00	24.00	10.00	31.56	22.50	0.38	—	—	—	61	D43292001
2 Speed 2 Winding (Type 3/3R/4/12 for use with or without CPT)	0–1 3/4 w/o CPT	3	13.00	12.63	5.38	12.25	10.00	0.25	—	—	—	34	
	0–1 3/4 w/ CPT	3	16.00	17.13	7.63	15.25	14.00	0.25	—	—	—	41	D17150010
	2–2 1/2 w/o CPT	3	16.00	13.25	6.13	15.25	11.00	0.25	—	—	—	41	
	2–2 1/2 w/ CPT	3	16.00	17.13	7.63	15.25	14.00	0.25	—	—	—	41	D17150010
	3–3 1/2 w/o CPT	3	24.00	20.00	8.00	25.56	18.50	0.38	—	—	—	55	
	3–4 w/CPT	3	30.00	24.00	10.00	31.56	22.50	0.38	—	—	—	61	D19673000
2 Speed 2 Winding (Type 4/4X Fg. for use w/ or w/o CPT)	0–2 1/2	4	23.78	23.78	6.89	—	—	0.25	—	—	—	28	24139861003
	3–4	4	39.38	29.53	12.60	—	—	—	—	—	—		24139861004

Note: Dimensions are in inches.

① G designates mounting screw size.

② Enclosures shown in figures 1and 1a have lift-off covers. Enclosures shown in figures 2, 3 and 4 have hinged covers.

Figure 1

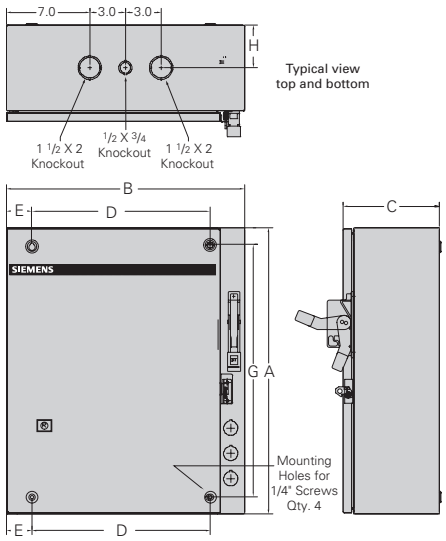


Figure 2

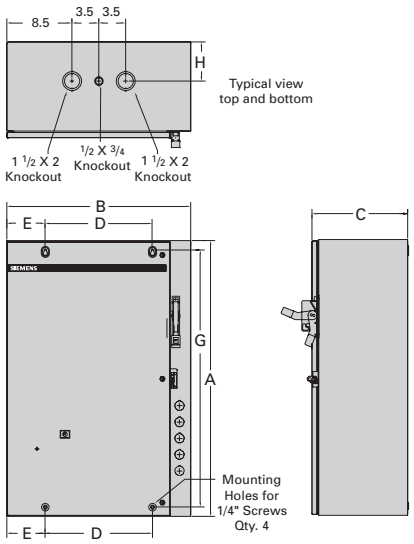


Figure 3

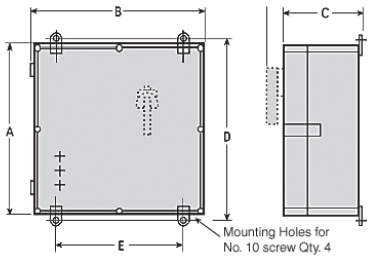
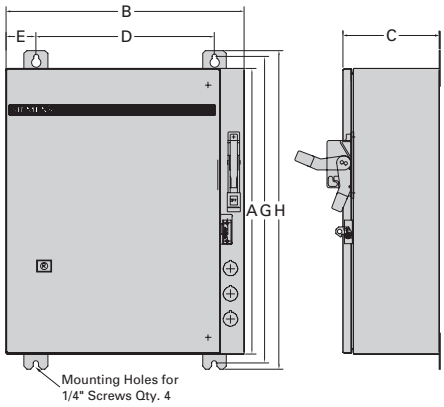


Figure 4



NEMA 1 Standard Width 0–4

Size	Figure	Outline Dimensions A	B	C	Mounting Dimensions D	E	G	H	Approx Ship Wt Lbs (Kg)	Ref Dwg
0–1¾ (1 Winding)	1	24 (610)	20 (508)	8 (203)	15.00 (381)	2.125 (54)	21.00 (533)	3.50 (90)	68 (31)	D68774
2–4 (1 Winding)	2	36 (914)	24 (610)	8 (203)	14.00 (356)	5.00 (127)	33.50 (851)	3.50 (90)	71 (32)	D68774
0–2½ (2 Winding)	1	24 (610)	20 (508)	8 (203)	15.00 (381)	2.125 (54)	21.00 (533)	3.50 (90)	135 (61)	D68774
3–4 (2 Winding)	2	36 (914)	24 (610)	8 (203)	14.00 (356)	5.00 (127)	33.50 (851)	3.50 (90)	138 (63)	D68774

NEMA 12/3/3R/4 (Painted), 4/4X Stainless Standard Width 0–4

0–1¾ (1 Winding)	4	24 (610)	20 (508)	8 (203)	15.00 (381)	2.50 (64)	25.75 (654)	26.75 (680)	68 (31)	D68774
2–4 (1 Winding)	4	36 (914)	24 (610)	8 (203)	12 (305)	6.00 (152)	37.75 (959)	38.75 (984)	71 (32)	D68774
0–2½ (2 Winding)	4	24 (610)	20 (508)	8 (203)	15.00 (381)	2.50 (64)	25.75 (654)	26.75 (680)	135 (61)	D68774
3–4 (2 Winding)	4	36 (914)	24 (610)	8 (203)	12 (305)	6.00 (152)	37.75 (959)	38.75 (984)	138 (63)	D68774

Nema 4X Fiberglass 0–4

Size	Figure	Outline Dimensions A	B	C	Mounting Dimensions D	E	Mtg Screw G	Conduit Size K1	K2	K3	Approx Ship Wt Lbs (Kg)	Ref Dwg
0–1¾	3	23.780 (604)	14.680 (373)	6.890 (175)	24.125 (613)	12.250 (311)	¼	—	—	—	18 (8)	—
2–4	3	23.780 (604)	23.780 (604)	6.890 (175)	24.125 (613)	21.250 (540)	¼	—	—	—	28 (13)	—

Note: Dimensions in inches (mm).
Dimensions for reference, not for construction.
Contact sales office for dimensions not listed.

Figure 1

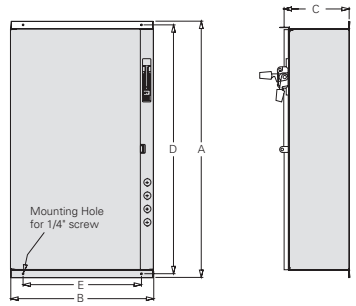
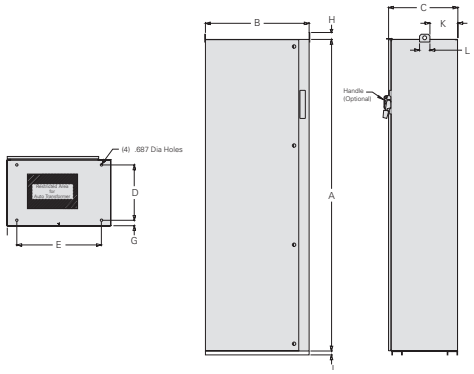


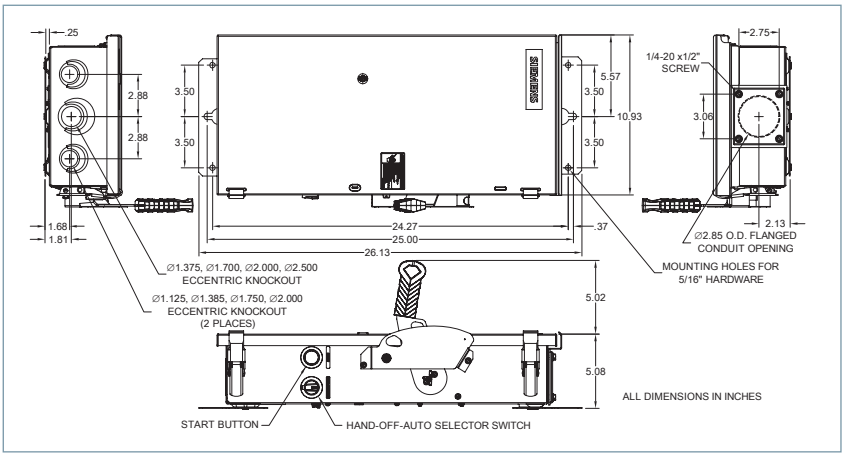
Figure 2



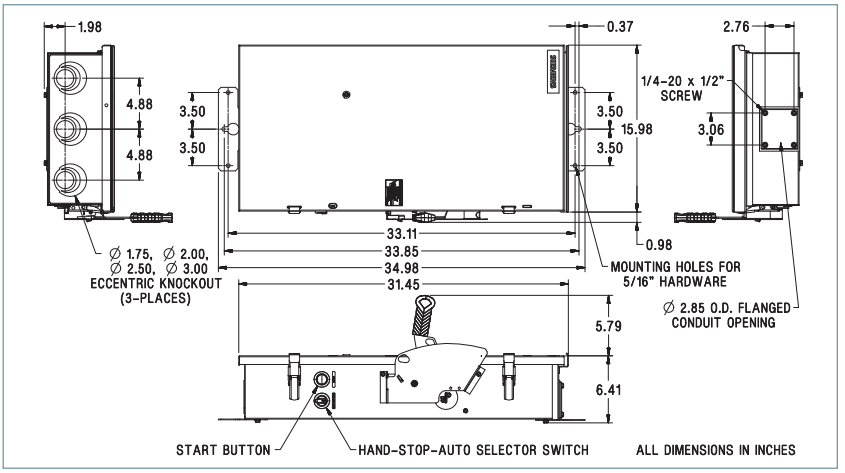
Class 36, 37, NEMA 1, 4, 4X, 12/3R, Combination and Non-combination

Enclosure Type	Size			Fig.	Outline Dimensions					Reference Drawing
	AutoTransformer	Part Winding & Wye Delta								
	Disc. & MCP Type	Disc. Type	MCP Type		A	B	C	D	E	
1, 4/4X & 12/3R	1 3/4–2 1/2	0–2	0–2 1/2	1	42.00	32.00	12.00	43.60	30.50	
	3–3 1/2	2 1/2–3 1/2	3–3 1/2	1	48.00	38.00	12.00	49.60	36.50	
	4	4	4	1	60.00	38.00	12.00	61.60	36.50	
	5, 6	5, 6	5, 6	2	90.00	29.97	20.00	16.00	24.44	

Class 82 size 1



Class 82 Size 1 1/2, 2



Note: Dimensions are in inches.

Figure 1

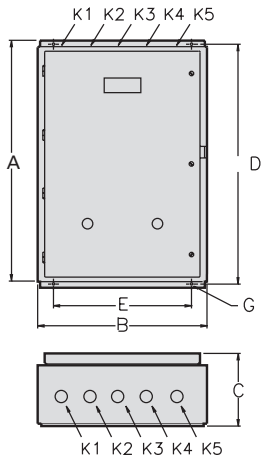


Figure 2

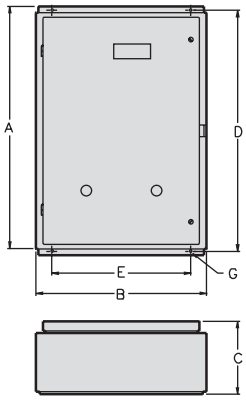
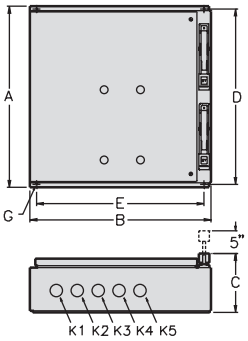


Figure 3



Class 83 Non-Combination Type

Enclosure Type	Size	Fig.	Outline Dimensions			Mounting		G①	Conduit Size					Approx. Ship Wt Lbs	Reference Drawing
			A	B	C	D	E		K1	K2	K3	K4	K5		
1	0–1 3/4	1	20.00	20.00	6.00	21.60	18.50	0.38	—	—	—	—	—	20	
	2, 2 1/2	1	24.00	20.00	8.00	25.60	18.50	0.38	—	—	—	—	—	57	
	3–4	1	30.00	24.00	10.00	31.60	22.50	0.38	—	—	—	—	—	93	
3/3R/4/12	0–1 3/4	2	20.00	20.00	6.00	21.60	18.50	0.38	—	—	—	—	—	20	
	2, 2 1/2	2	24.00	20.00	8.00	25.60	18.50	0.38	—	—	—	—	—	57	
	3–4	2	30.00	24.00	10.00	31.60	22.50	0.38	—	—	—	—	—	93	
4X Stainless Steel	0–1 3/4	2	20.00	16.00	6.00	21.60	14.50	0.38	—	—	—	—	—	20	
	2, 2 1/2	2	24.00	20.00	8.00	25.60	18.50	0.38	—	—	—	—	—	57	
	3–4	2	30.00	24.00	10.00	31.60	22.50	0.38	—	—	—	—	—	93	

Class 84 Combination Type

Enclosure Type	Size	Fig.	Outline Dimensions			Mounting		G①	Conduit Size					Approx. Ship Wt Lbs	Reference Drawing
			A	B	C	D	E		K1	K2	K3	K4	K5		
1, 12/3/3R/4	0–2	3	34.13	24.63	7.56	33.00	20.00	0.38	0.88–1.13	0.88–1.13	1.13–1.36	1.13–1.36	1.36–1.72	70	
	2 1/2–4	3	48.00	36.00	10.00	49.60	34.50	0.38	—	—	—	—	—	106	
4X Stainless Steel	0–2	3	36.00	24.00	10.00	37.60	22.50	0.38	—	—	—	—	—	70	
	2 1/2–4	3	48.00	36.00	12.00	49.60	34.50	0.38	—	—	—	—	—	106	

Note: Dimensions are in inches.

① G designates mounting screw size.

Outline Drawings

Figure 1

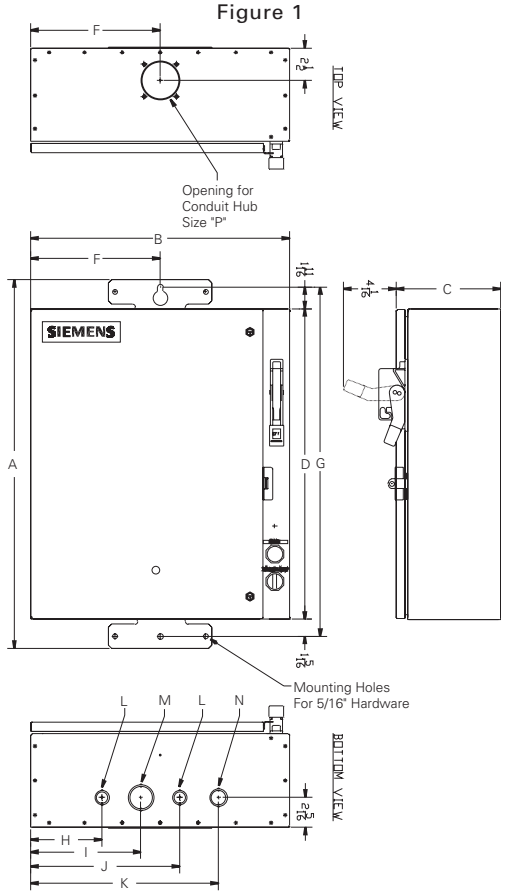


Figure 2

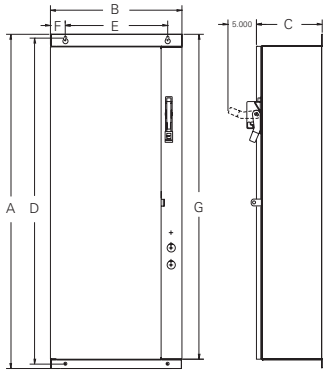


Figure 3

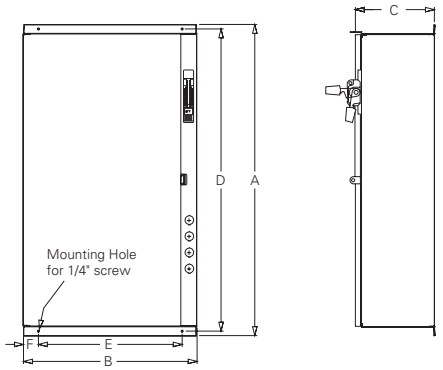
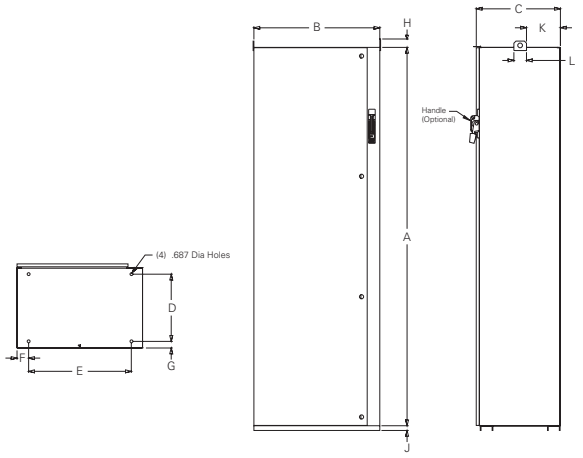


Figure 4



Open air contacts

Size	Fig.	Outline Dimensions			Mounting Dimensions								Conduit Knockout			Hub	Reference Drawing
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	
1–2 1/2	1	28.50	20.00	8.06	24.00	—	10.00	27.00	5.50	8.50	11.50	—	0.5–0.75	1.25–1	0.75–1	1.50	
3 – 4	1	40.50	24.00	8.09	36.00	—	12.00	39.00	8.44	11.94	15.44	—	1.97–2.47	0.88–1.13	—	2.50	
5	2	72.16	20.00	10.00	71.00	16.00	2.13	70.91	—	—	—	—	—	—	—	—	
6	2	60.00	38.00	16.00	61.60	36.50	0.75		—	—	—	—	—	—	—	—	

Vacuum contacts

Size	Fig.	Outline Dimensions			Mounting Dimensions								Conduit Knockout			Hub	Reference Drawing
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	
4	2	55.97	24.38	9.69	54.81	20.25	2.13	54.72	26.19	—	—	27.44	—	—	—	—	
5	2	72.16	20.00	10.00	71.00	16.00	2.13	70.91	—	—	—	—	—	—	—	—	
6	2	60.00	38.00	16.00	61.60	36.50	0.75		—	—	—	—	—	—	—	—	

Reduced voltage

Size			Fig.	Outline Dimensions					Reference Drawing
AutoTransformer	Part Winding & Wye Delta								
Disc. & MCP Type	Disc. Type	MCP Type		A	B	C	D	E	
2-2 1/2	1–2	1–2 1/2	3	42.00	32.00	12.00	43.60	30.50	
3-3 1/2	2 1/2–3 1/2	3–3 1/2	3	48.00	38.00	12.00	49.60	36.50	
4	4	4	3	60.00	38.00	16.00	61.60	36.50	
5, 6	5, 6	5, 6	4	90.00	30.00	20.00	16.00	24.44	

Note: Dimensions are in inches.
All enclosures are Type 3R

Figure 1

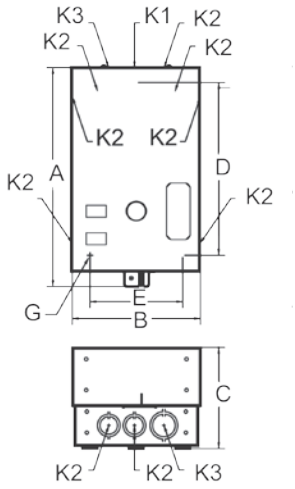


Figure 2

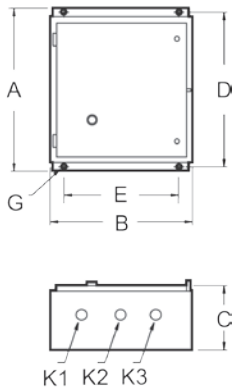
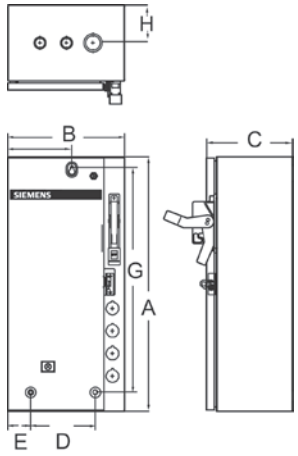


Figure 3



Class LC and LE Non-combo

Enclosure Type	Contactor Rating	Fig.	Outline Dimensions			Mounting①		Conduit Size					Reference Drawing
			A	B	C	D	E	K1	K2	K3	K4	K5	
1 without CPT	LE 20/30A 3-4P	1	10.97	6.41	5.03	8.22	4.62	0.5	0.50–0.75	0.75–1	—	—	
	LC 30A 2-12P, LE 60A 3P	1	13.53	7.97	6.38	10.25	6	0.50–0.75	0.75–1	1–1.25	—	—	
	LE 30/60A 6-12P, LE 100A 3P	1	19.12	11.38	7.69	15.62	8.25	0.50–0.75	1–1.25	1.5–2	—	—	
	LE 200-400A 3P	2	26	17.62	12.5	25.19	15.5	0.50–0.75	1.25–1.5	1.25–1.5	—	—	
1 with CPT	LC 30A 2-12P, LE 20A 3-4P, LE 30A 3-9P, LE 60A 3-9P, LE 100A 3P	1	19.12	11.38	7.69	15.62	8.25	0.50–0.75	1–1.25	1.5–2	—	—	
	LE 30/60A 12P	1	24.88	13.38	8.12	21.75	9	0.50–0.75	1.25–1.5	2–2.5	—	—	
	LE 200-400A 3P	2	26	17.62	12.5	25.19	15.5	—	1.25–1.5	1.25–1.5	—	—	
3/3R/4/12 without CPT	LE 20A 3-4P, LE 30/60A 3-9P, LC 30A 2-12P	2	16	13.25	6.12	15.25	11	—	—	—	—	—	
	LE 30/60A 12P	2	26	13.12	7.56	25.25	10	—	—	—	—	—	
	LE 100A 3P	2	26	13.12	7.56	25.25	10	—	—	—	—	—	
	LE 200-400A 3P	2	26	17.62	12.5	25.19	15.5	—	—	—	—	—	
4/4X without CPT	LE 20A 3-4P, LE 30/60A 3-9P,LC 30A 2-12P	2	16	14	6.02	16.75	12	—	—	—	—	—	
	LE 30/60A, 12P	2	24	16	8.76	22.5	14.5	—	—	—	—	—	
	LE 100A 3P	2	24	16	8.76	22.5	14.5	—	—	—	—	—	
	LE 200-400A,3P	2	24	20	10	22.5	18.5	—	—	—	—	—	
3/3R/4/12 with CPT	LE 20A 3-4P, LE 30/60A 3-9P,LC 30A 2-12P	2	16	13.25	6.12	15.25	11	—	—	—	—	—	
	LE 30/60A, 12P	2	26	13.12	7.56	25.25	10	—	—	—	—	—	
	LE 100A 3P	2	26	13.12	7.56	25.25	10	—	—	—	—	—	
	LE 200-400A,3P	2	26	17.62	12.5	25.19	15.5	—	—	—	—	—	
4/4X with CPT	LE 20A 3-4P, LE 30/60A 3-9P,LC 30A 2-12P	2	16	14	6.02	16.75	12	—	—	—	—	—	
	LE 30/60A, 12P	2	24	16	8.76	22.5	14.5	—	—	—	—	—	
	LE 100A 3P	2	24	16	8.76	22.5	14.5	—	—	—	—	—	
	LE 200-400A,3P	2	24	20	10	22.5	18.5	—	—	—	—	—	

Class LE Combo

Enclosure Type	Type	Contactor Rating	Fig.	Outline Dimensions			Reference Drawing
				A	B	C	
1, 12/3R & 4/4X with & without CPT	Fusible and Non-fusible Disconnect	20–60A	3	24	11	8	
		100A	3	24	20	8	
		200A	3	46	20	10	
		300A	3	76	22	13	
	Circuit Breaker	20–100A	3	24	11	8	

Note: Dimensions are in inches.

① Mounting screw G size is 0.25".

Figure 1

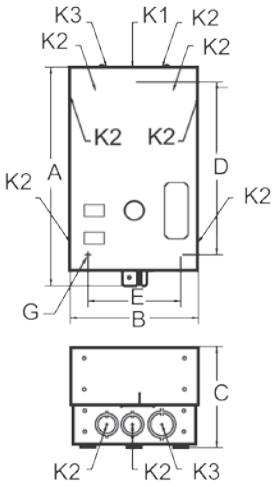


Figure 2

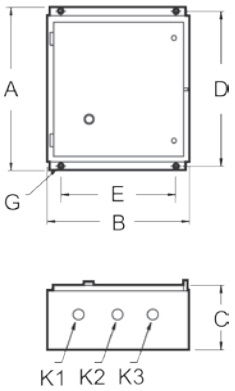
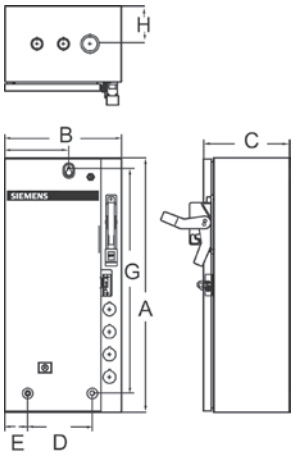


Figure 3



Class CLM Non-combo

Enclosure Type	Contactor Rating (Class CLM)	Fig.	Outline Dimensions			Mounting①		Conduit Size					Reference Drawing
			A	B	C	D	E	K1	K2	K3	K4	K5	
1 without CPT	30A (2-5p)	1	10.97	6.41	5.03	8.22	4.62	0.5	0.50–0.75	0.75–1	—	—	
	20A (2–12p), 60A (2-5p)	1	13.53	7.97	6.38	10.25	6.00	0.50–0.75	0.75–1	1–1.25	—	—	
	30–60A (6-12p)	2	16.00	17.12	7.62	15.25	14.00	0.50–0.75	1.25–1.5	1.25–1.5	—	—	
	100A (2-5p)	1	19.12	11.38	7.69	15.62	8.25	0.50–0.75	1–1.25	1.5–2	—	—	
	200A (2-5p)	1	24.88	13.38	8.12	21.75	9.00	0.50–0.75	1.25–1.5	2.5	—	—	
	300–400A (2-5p)	2	48.00	24.00	12.00	46.50	22.50	—	—	—	—	—	
1 with CPT	20A (2–12p), 30A (2–5p)	1	19.12	11.38	7.69	15.62	8.25	0.50–0.75	1–1.25	1.5–2	—	—	
	30–60A (6–12p)	2	16.00	17.12	7.62	15.25	14.00	0.50–0.75	1.25–1.5	1.25–1.5	—	—	
	100-200A (2-5p)	2	26.00	17.62	12.50	25.19	15.50	—	1.25–1.5	1.25–1.5	—	—	
	300–400A (2-5p)	2	48.00	24.00	12.00	46.50	22.50	—	—	—	—	—	
3/3R/4/12 without CPT	20A (2–12p), 30A (2–12p), 60A (2 - 10p)	2	16.00	13.25	6.12	15.25	11.00	—	—	—	—	—	
	100A (2-5p)	2	16.00	13.00	9.50	15.12	11.00	—	—	—	—	—	
	60A (12p)	2	19.00	22.00	8.00	—	—	—	—	—	—	—	
	200A (2-5p)	2	26.00	17.62	12.50	23.19	15.50	—	—	—	—	—	
	300A -400A (3p)	2	48.00	24.00	12.00	46.50	22.50	—	—	—	—	—	
3/3R/4/12 with CPT	20A (2-12p), 30A (2-5p)	2	16.00	13.25	6.12	15.25	11.00	—	—	—	—	—	
	30A (6-12p)	2	16.00	17.12	7.62	15.25	14.00	—	—	—	—	—	
	60-100A (2-5p)	2	16.00	13.00	9.50	15.12	11.00	—	—	—	—	—	
	60A (6-12p)	2	19.00	22.00	8.00	—	—	—	—	—	—	—	
	200A (3p)	2	26.00	17.62	12.50	25.19	15.50	—	—	—	—	—	
	300–400A (3p)	2	48.00	24.00	12.00	46.50	22.50	—	—	—	—	—	
4/4X without CPT	20A (2–12p), 30A (2–12p), 60A (2 - 10p)	2	16.00	14.00	6.02	16.75	12.00	—	—	—	—	—	
	100A (2-5p)	2	16.00	16.00	10.00	14.50	14.50	—	—	—	—	—	
	60A (12p)	2	19.00	22.00	8.00	—	—	—	—	—	—	—	
	200A (2-5p)	2	24.00	20.00	10.00	22.50	18.50	—	—	—	—	—	
	300A -400A (3p)	2	48.00	20.00	12.50	49.00	10.00	—	—	—	—	—	
4/4X with CPT	20A (2-12p), 30A (2-5p)	2	16.00	14.00	6.02	16.75	12.00	—	—	—	—	—	
	30A (6-12p)	2	16.00	20.00	8.00	14.50	18.50	—	—	—	—	—	
	60-100A (2-5p)	2	16.00	16.00	10.00	14.50	14.50	—	—	—	—	—	
	60A (6-12p)	2	24.00	20.00	8.00	22.50	18.50	—	—	—	—	—	
	200A (3p)	2	24.00	20.00	10.00	22.50	18.50	—	—	—	—	—	
	300–400A (3p)	2	48.00	20.00	12.50	49.00	10.00	—	—	—	—	—	

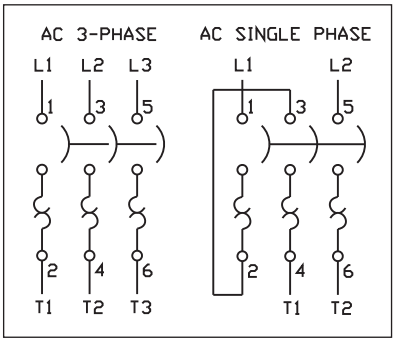
Class CM Combo

Enclosure Type	Type	Contactor Rating	Fig.	Outline Dimensions			Reference Drawing
				A	B	C	
1, 12/3R & 4/4X with & without CPT	Fusible and Non-fusible Disconnect	20–60A	3	24	11	8	
		100A	3	24	20	8	
		200A	3	42	30	12	
		300A	3	60	38	12	
	Circuit Breaker	20–100A	3	24	11	8	

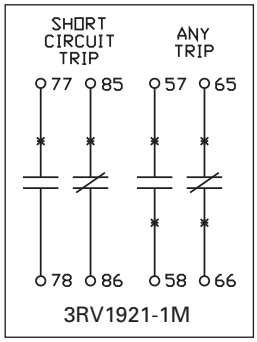
Note: Dimensions are in inches.

① Mounting screw G size is 0.25".

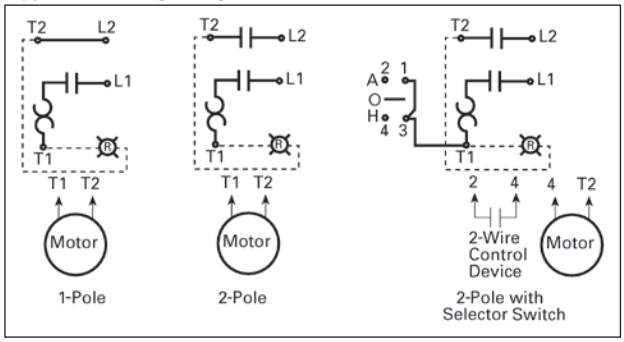
Class 11 - 3RV



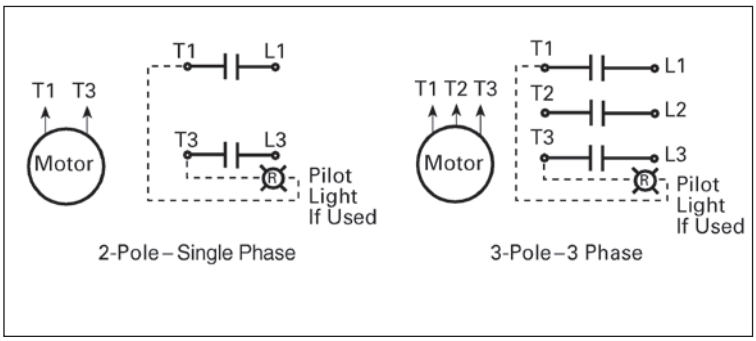
Signaling Contact for Class 11 - 3RV



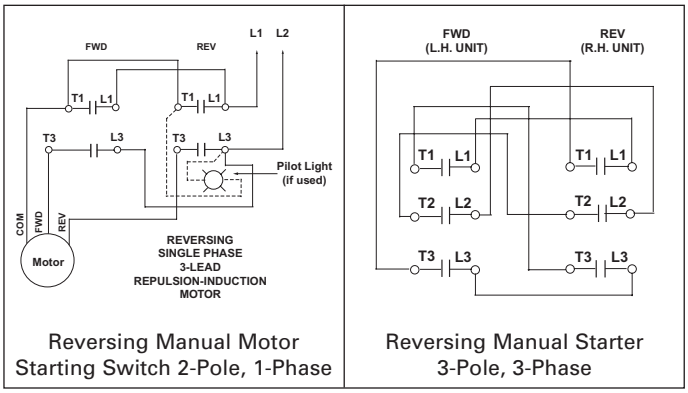
Typical Wiring Diagrams—Class SMF



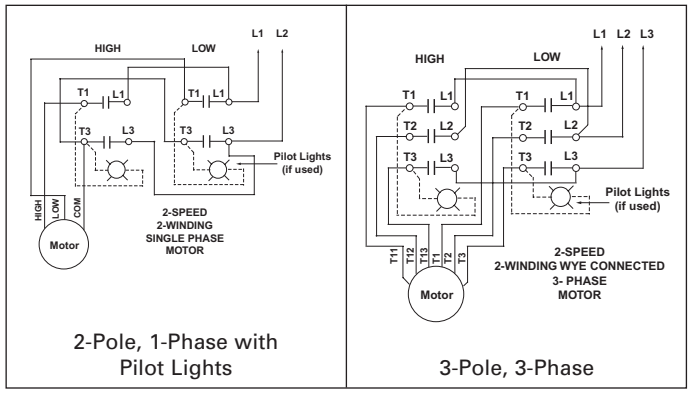
Typical Wiring Diagrams—MMS



AC Reversing Manual Starter and Manual Motor Starting Switches



AC 2-Speed Manual Motor Starting Switches



3-Pole Reversing Switches

THREE PHASE MOTOR			
LINE AND MOTOR LEADS		L.H. UNIT	R.H. UNIT
Line	L1 to L2 to L3 to	– – –	L1 L2 L3
Meter	T1 to T2 to T3 to	T1 T2 T3	– – –
Pilot Light Leads to		– –	T1 T3

T1 T2 T3
Motor

SINGLE PHASE CAPACITOR OR SPLIT PHASE MOTOR			
LINE AND MOTOR LEADS		L.H. UNIT	R.H. UNIT
Line	L1 to L2 to	– –	L1 L2
Meter	T1 to T4 to T5 to T8 to	T1 T3 L1 T2	– – – –
Furnish Jumper		L3 to	T2
Pilot Light Leads to		– –	T1 T3

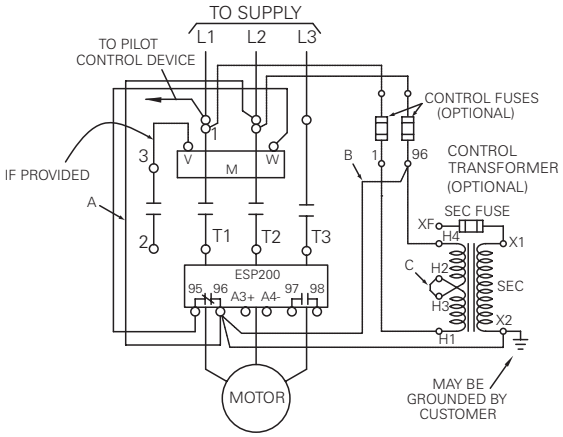
T8 T4 T1 T5
RUN
START

SINGLE PHASE 4-LEAD REPULSION - INDUCTION MOTOR			
LINE AND MOTOR LEADS		L.H. UNIT	R.H. UNIT
Line	L1 to L2 to	– –	L1 L2
Meter	T1 to T4 to T5 to T8 to	T2 L3 T3 T1	– – – –
Furnish Jumper		L3 to	T2
Pilot Light Leads to		– –	L1 T2

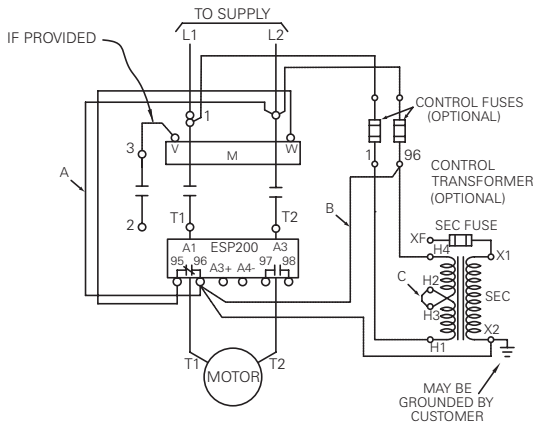
T8 T1 T5 T4

3-Phase and Single Phase Magnetic Starters

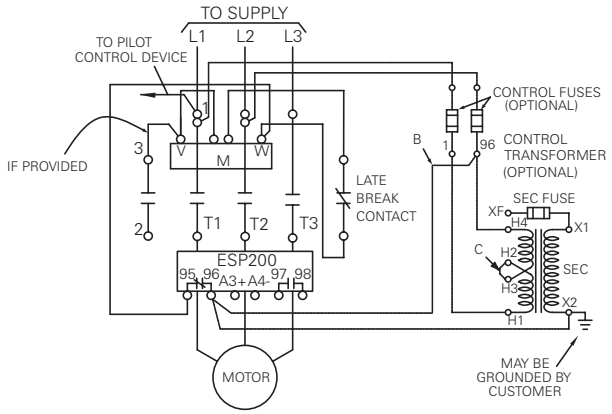
Three Phase Magnetic Starter, Size 00–4



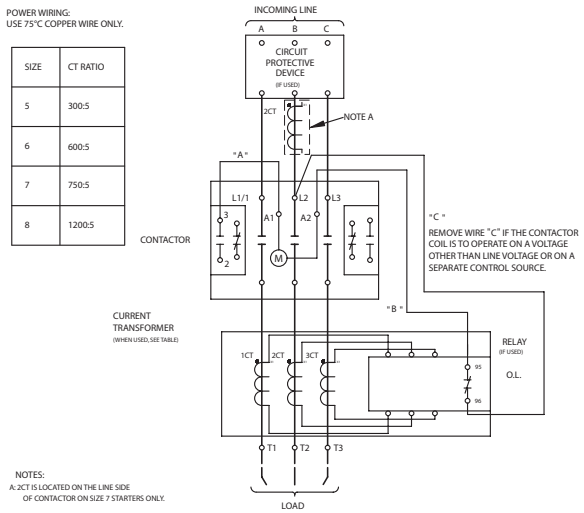
Single Phase Magnetic Starter①②



Three Phase Magnetic Starter with DC Coil, Sizes 00–4



Solid State Overload 3-Phase Sizes 5-8

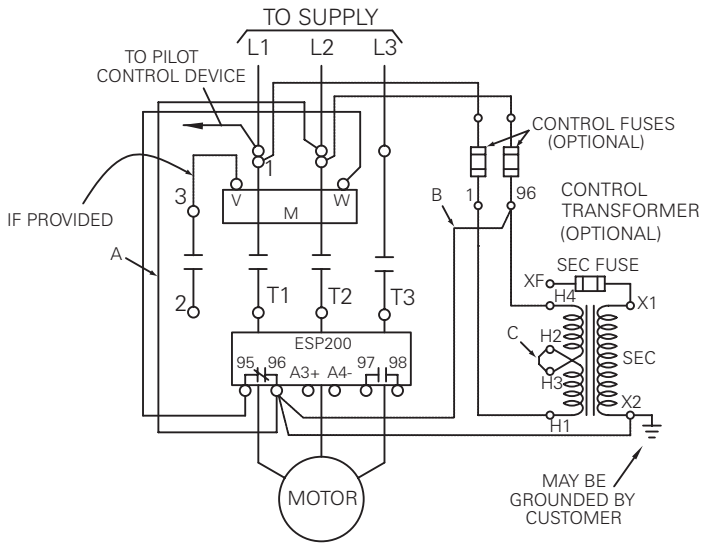


① Warning: The ESP200 Starter and Single Phase Motor must be wired as shown above. For L1, L2 do not use the middle terminal or hole.

② Full Load Amps (FLA): Adjustment of the ESP200 solid state overload relay accommodates the single phase motor.

3-Phase

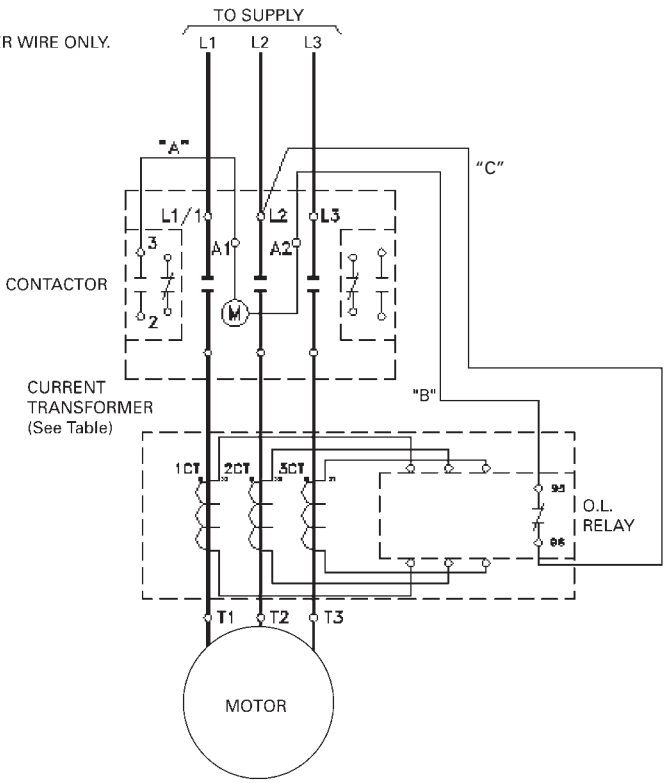
Size 00–4①



Size 5–8②

POWER WIRING:
USE 75°C COPPER WIRE ONLY.

SIZE	CT RATIO
5	300:5
6	600:5
7	750:5
8	1200:5

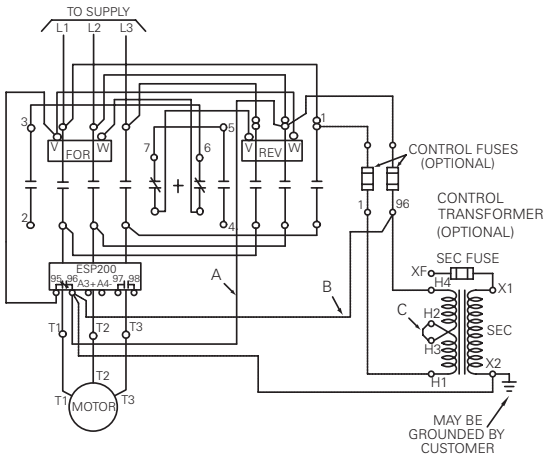


① Remove wire "C" if control transformer is used. For separate control voltage source, remove jumpers "A" and "B" and connect source to control fuse line terminals.

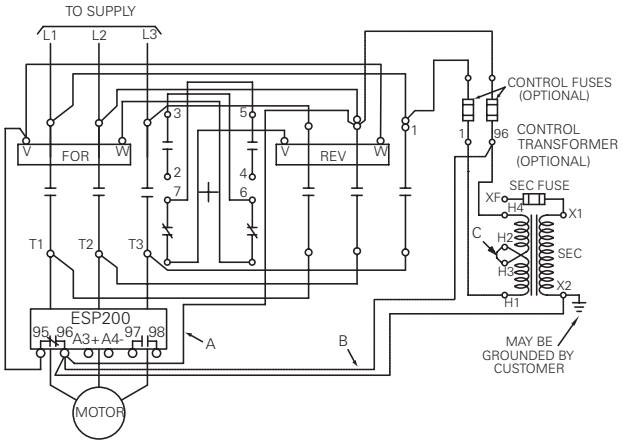
② Remove wire "C" if the contactor coil is to operate on a voltage other than line voltage or in a separate control source.

3-Phase Solid State Overload

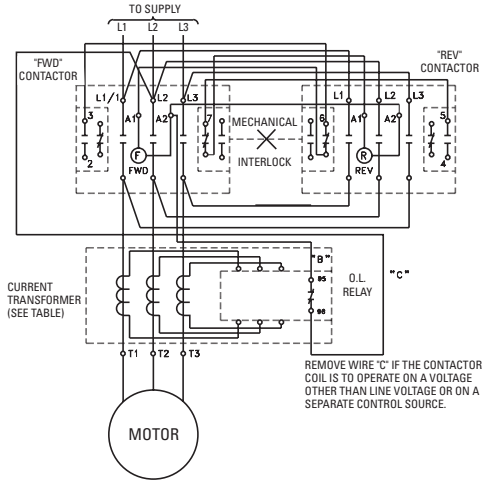
3-Phase Reversing Magnetic Starter
Sizes 00–1¾



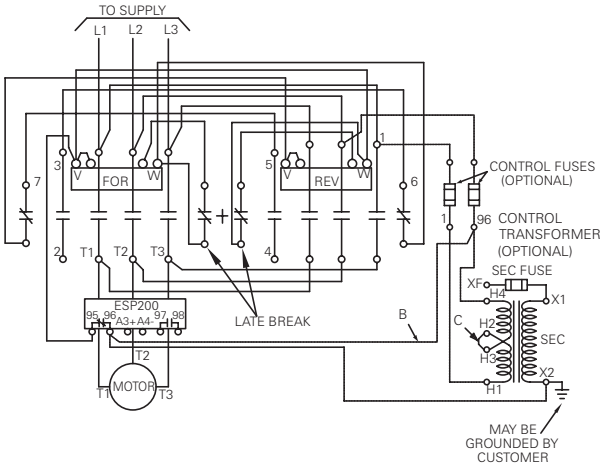
3-Phase Reversing Magnetic Starter
Sizes 2–4



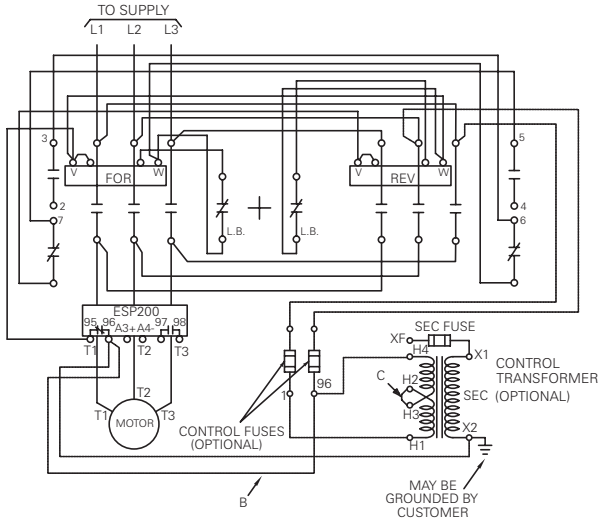
Solid State Overload
Sizes 5–6



3-Phase Reversing Magnetic Starter
with DC Coil, Sizes 00–1¾

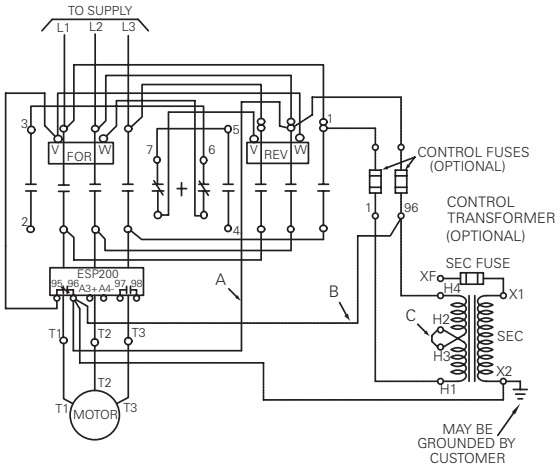


3-Phase Reversing Magnetic Starter
with DC Coil, Sizes 2–4

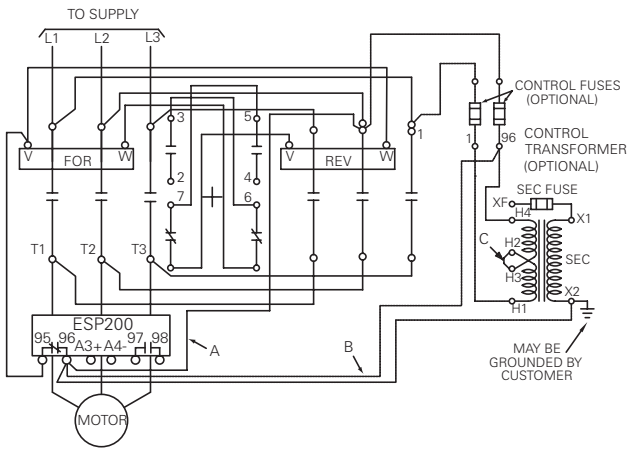


3-Phase

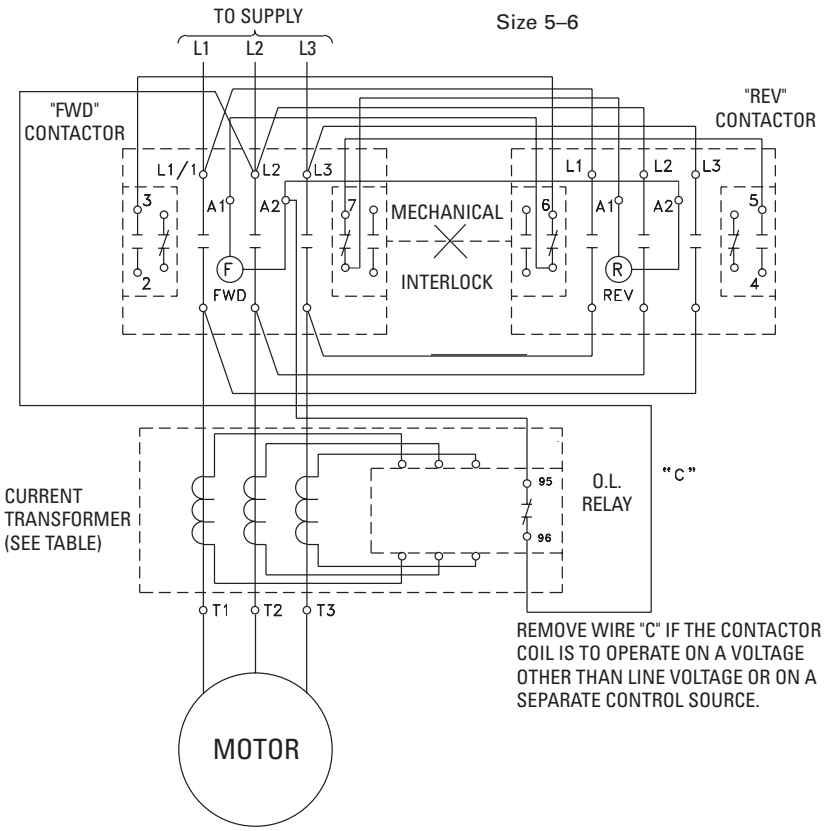
3-Phase Reversing Magnetic Starter
Sizes 00–1¾



3-Phase Reversing Magnetic Starter
Sizes 2–4

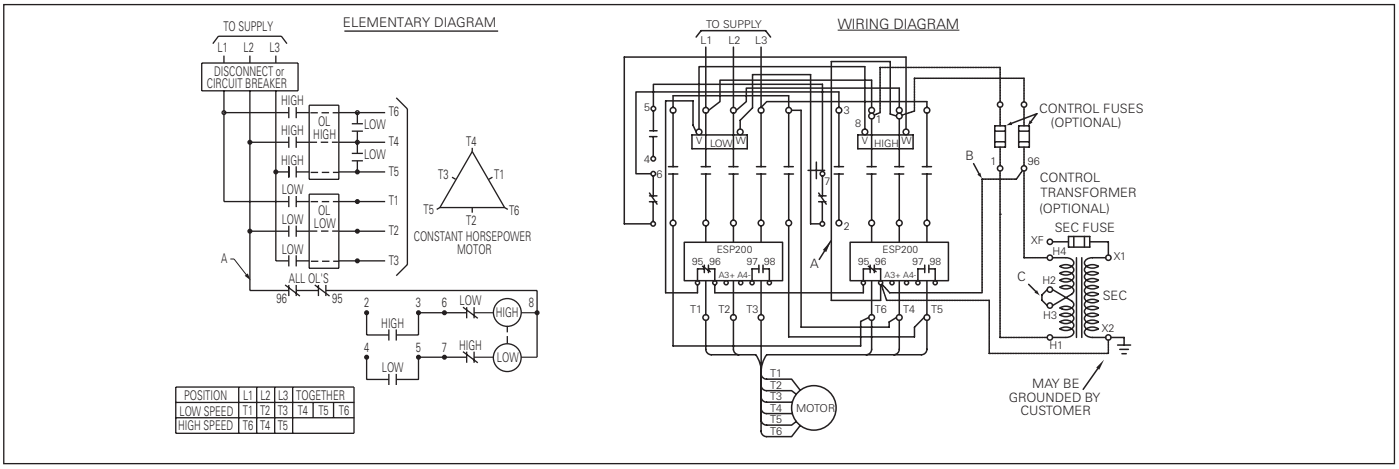


Size 5–6

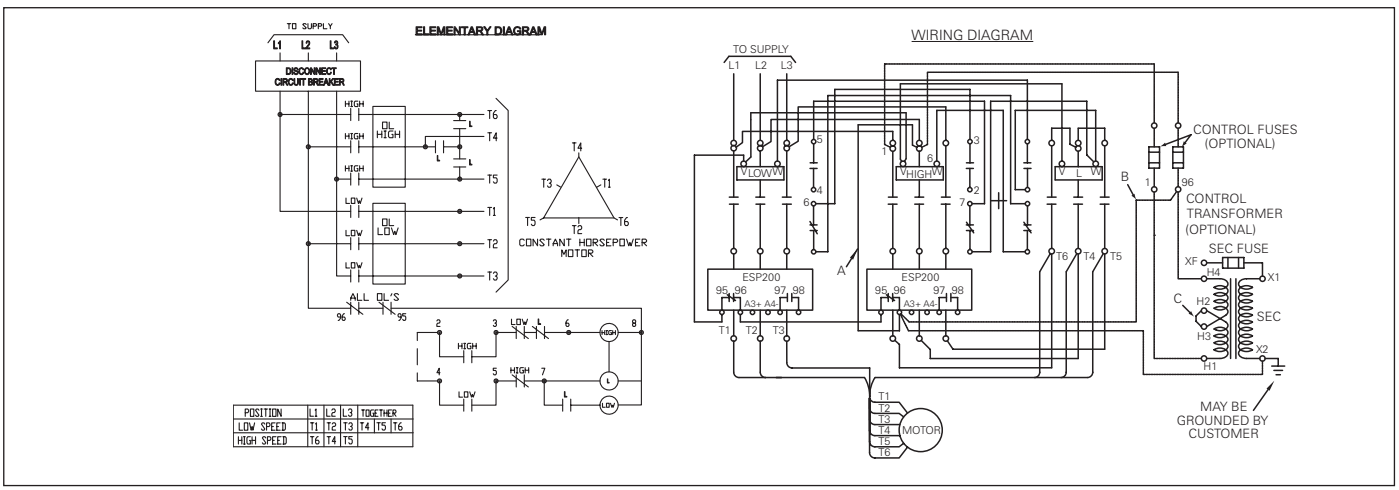


SIZE	CT RATIO
5	300:5
6	600:5

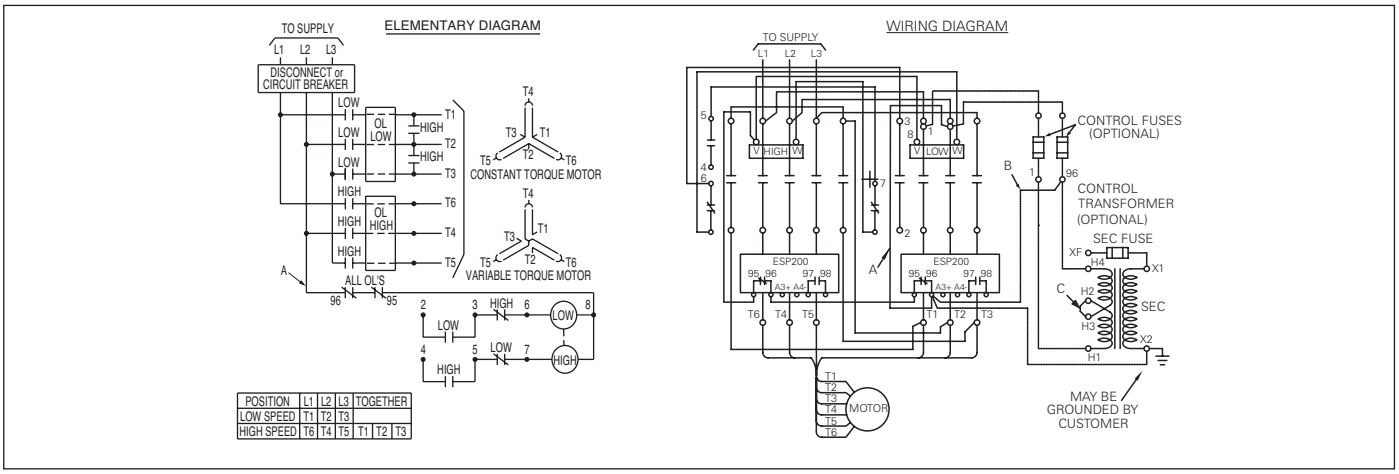
1 Winding Constant Horsepower Size 0–1 3/4



1 Winding Constant Horsepower Size 2–4

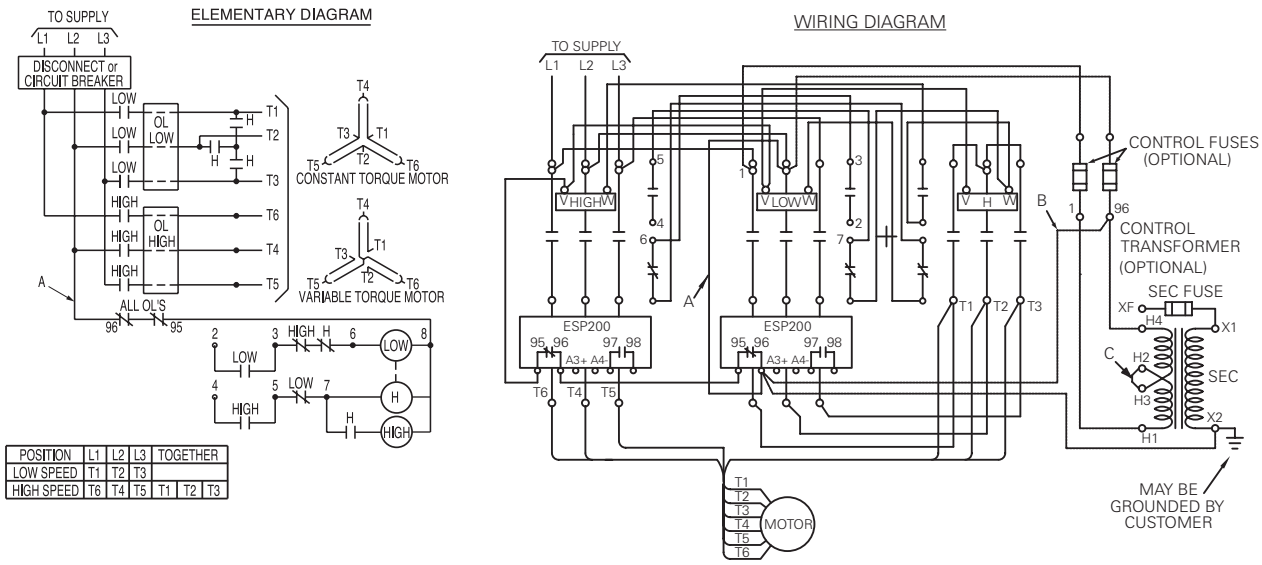


1 Winding Constant or Variable Torque Size 0–1 3/4



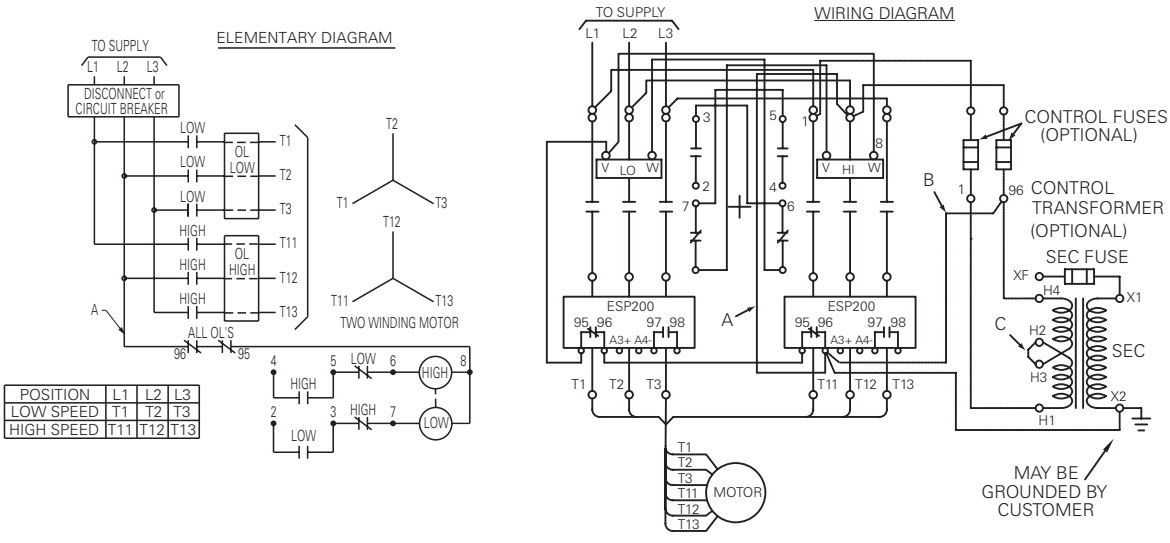
Note: For separate control voltage source, remove jumpers "A" and "B" and connect source to control fuse terminal. Remove jumper "C" if control transformer is used.

1 Winding Constant or Variable Torque Size 2–4



D68784002

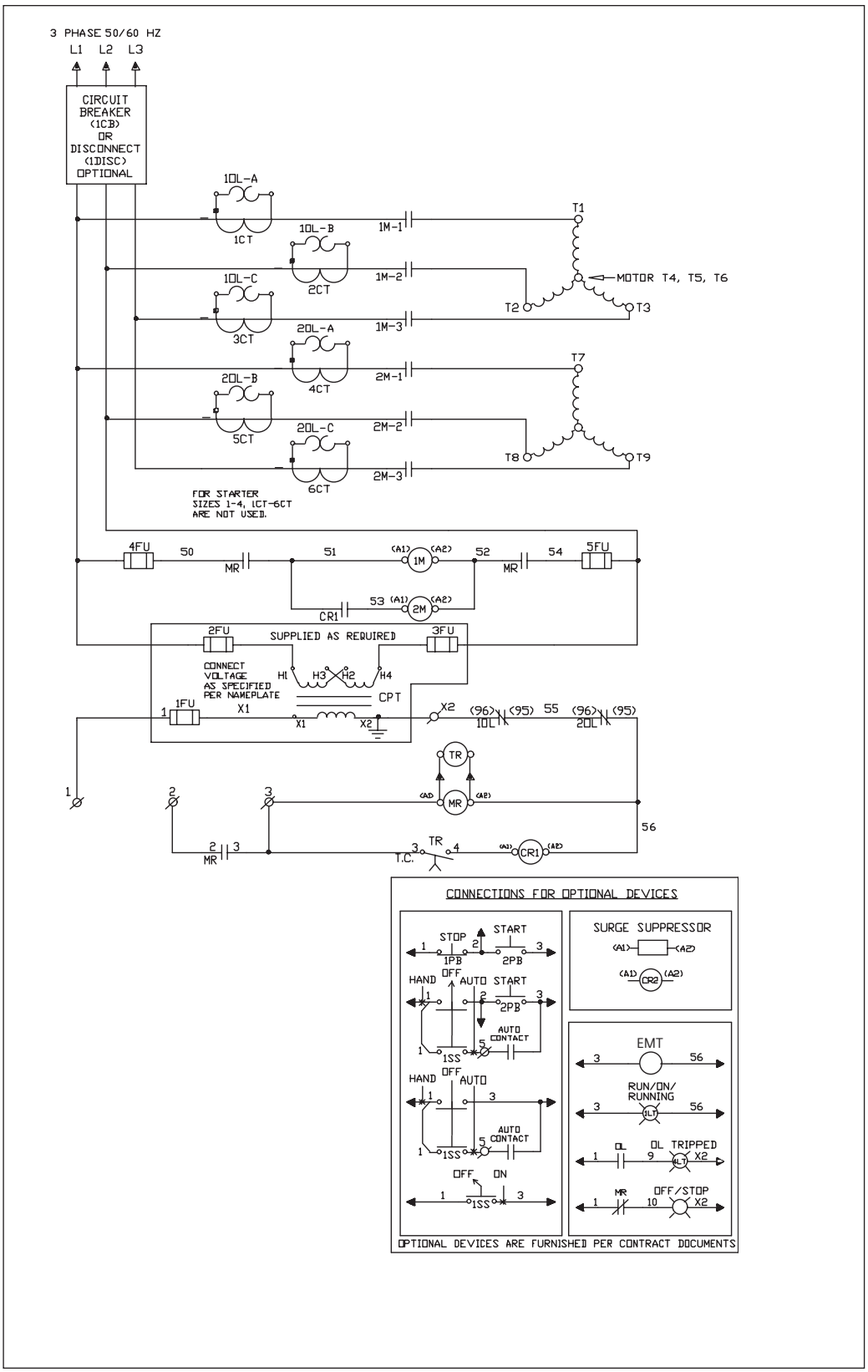
2 Winding Constant Horsepower & 2 Winding Constant or Variable Torque Size 0–4



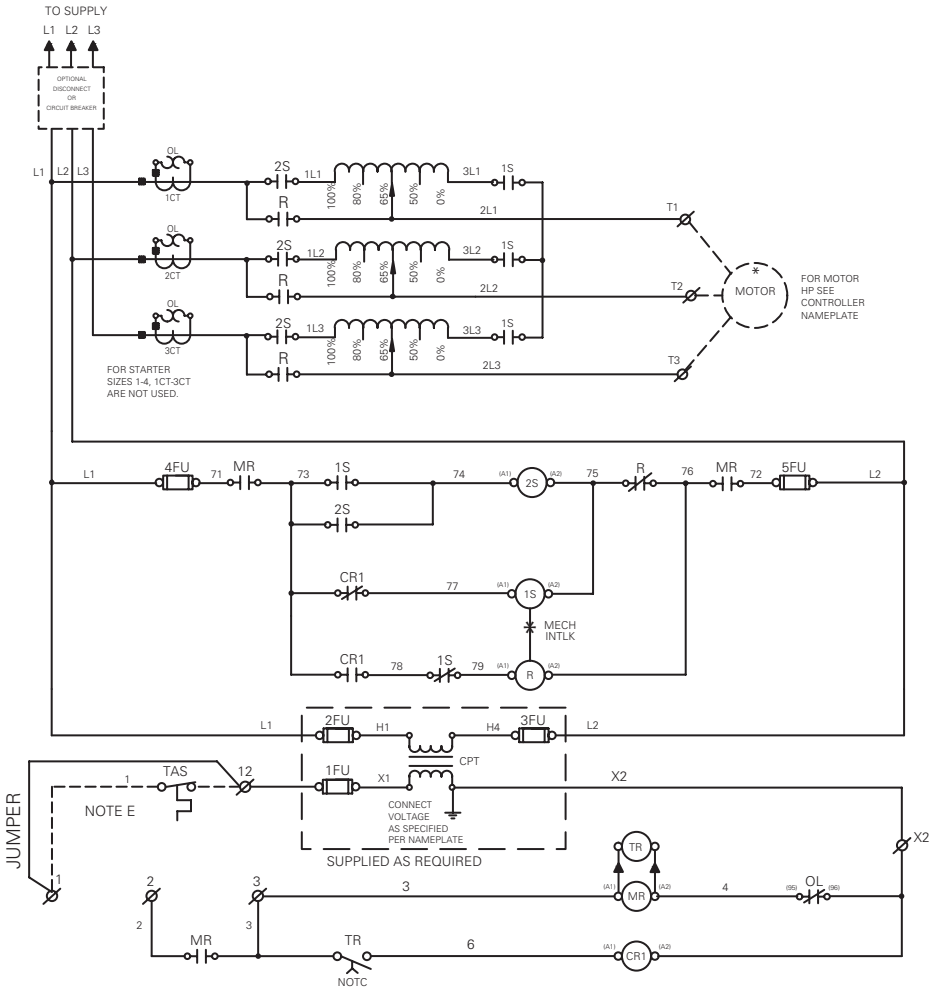
D68786001

Note: For separate control voltage source, remove jumpers "A" and "B" and connect source to control fuse terminal. Remove jumper "C" if control transformer is used.

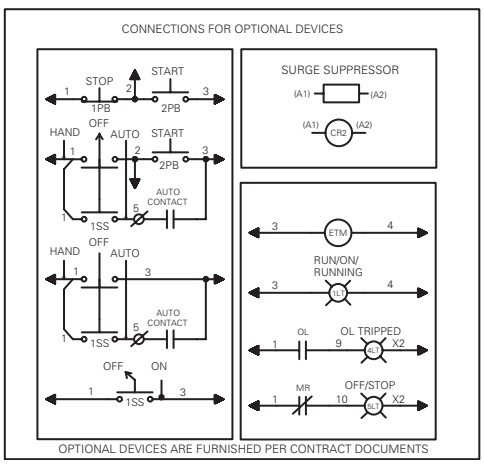
Part Winding



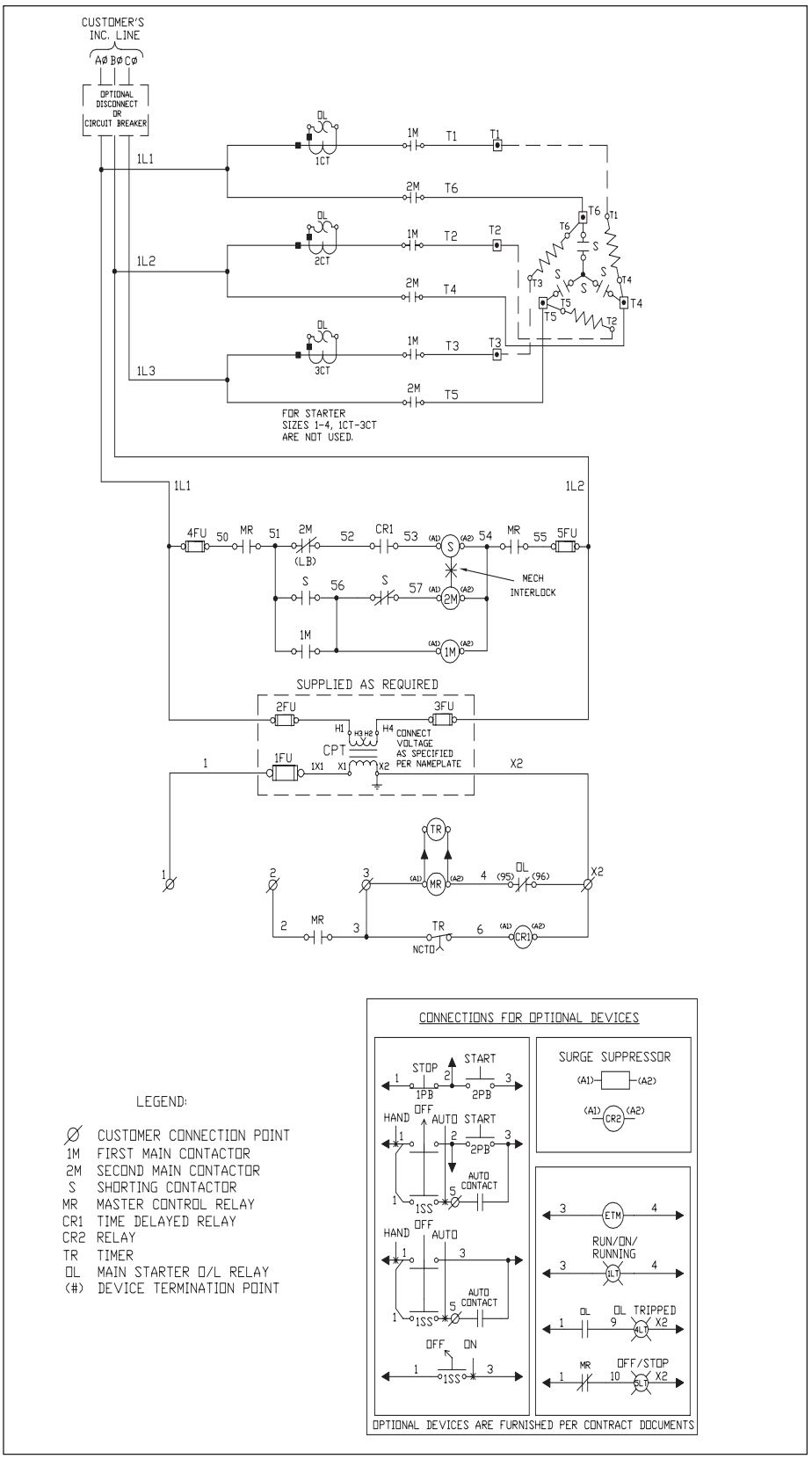
Auto Transformer



Note E:
Remove jumper if thermal protection switch is provided.



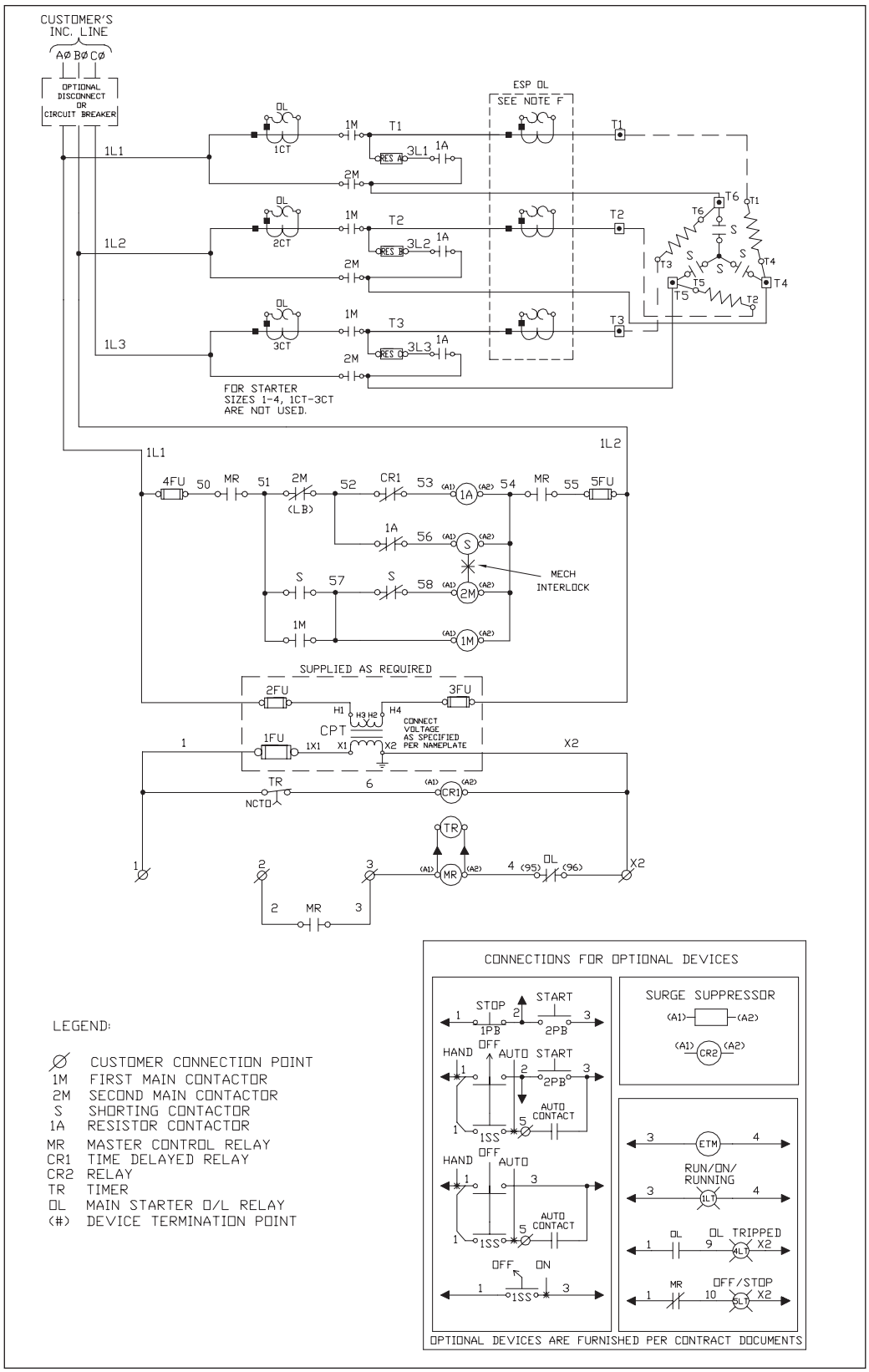
Wye Delta (Open Transition)



LEGEND:

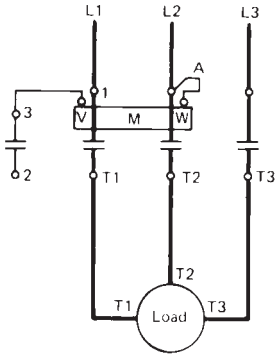
Ø	CUSTOMER CONNECTION POINT
1M	FIRST MAIN CONTACTOR
2M	SECOND MAIN CONTACTOR
S	SHORTING CONTACTOR
MR	MASTER CONTROL RELAY
CR1	TIME DELAYED RELAY
CR2	RELAY
TR	TIMER
OL	MAIN STARTER O/L RELAY
(#)	DEVICE TERMINATION POINT

Wye Delta (Closed Transition)

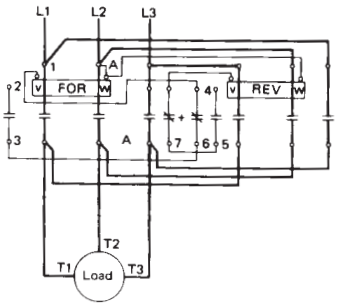


3-Phase Magnetic Contactors and Reversing Contactors

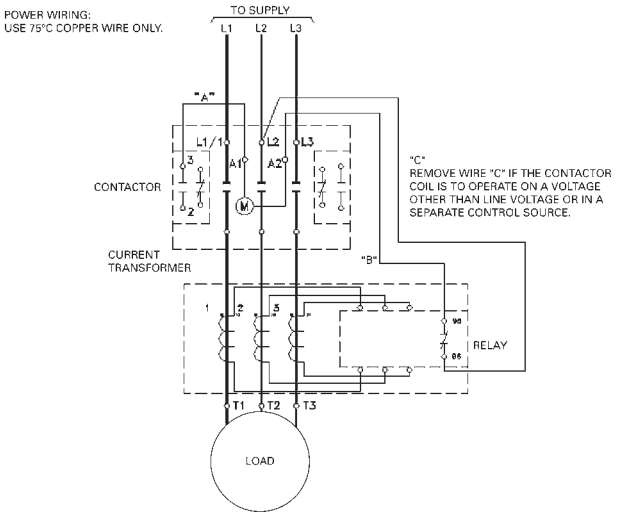
3-Phase Contactors—Size 00–4



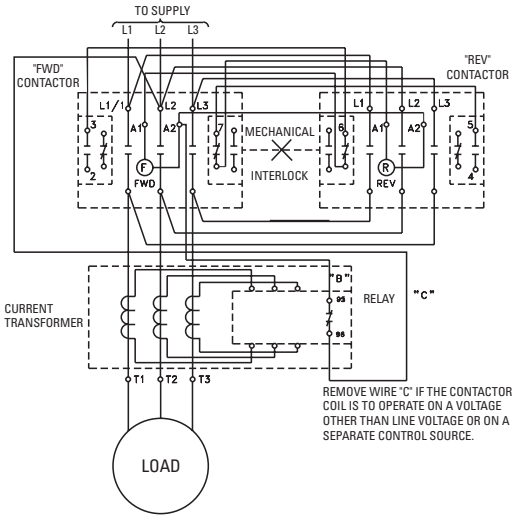
3-Phase Reversing Contactors—Size 00–4



3-Phase Contactors—Size 5, 6

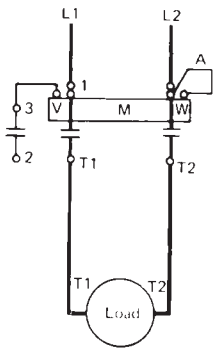


3-Phase Reversing Contactors—Size 5, 6

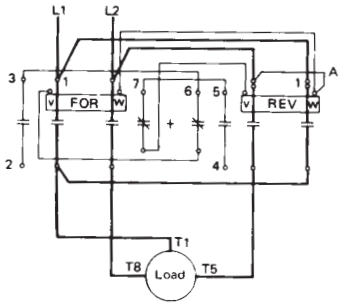


Single Phase Magnetic Contactors and Reversing Contactors

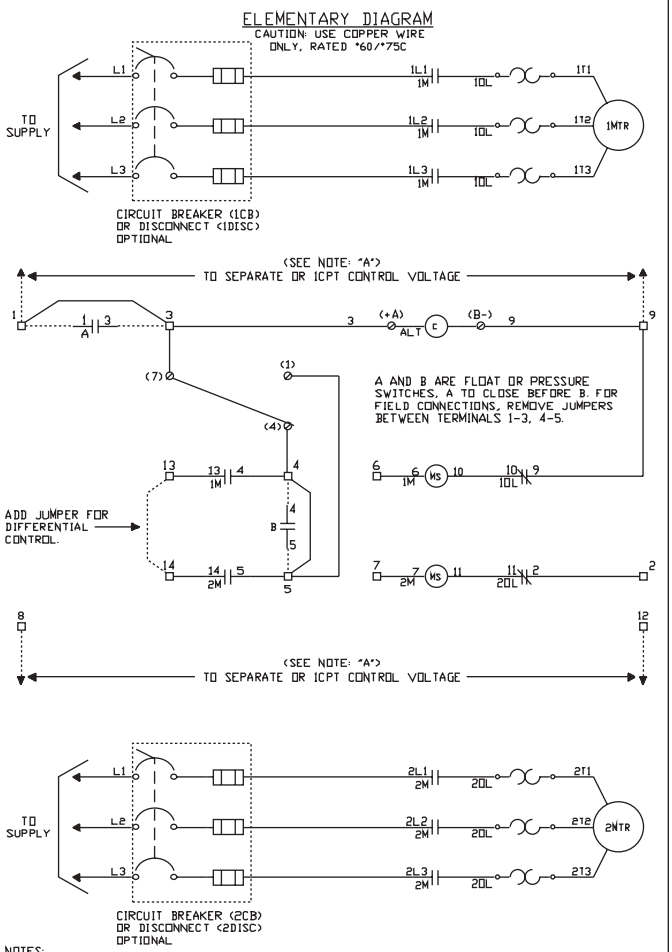
Single Phase Contactors—Size 00–4



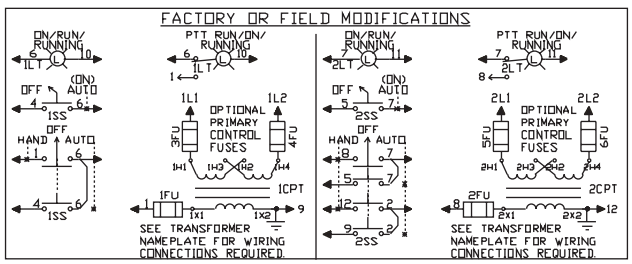
Single Phase Reversing Contactors—Size 00–1P



Standard Duplex Pump Panel (92)



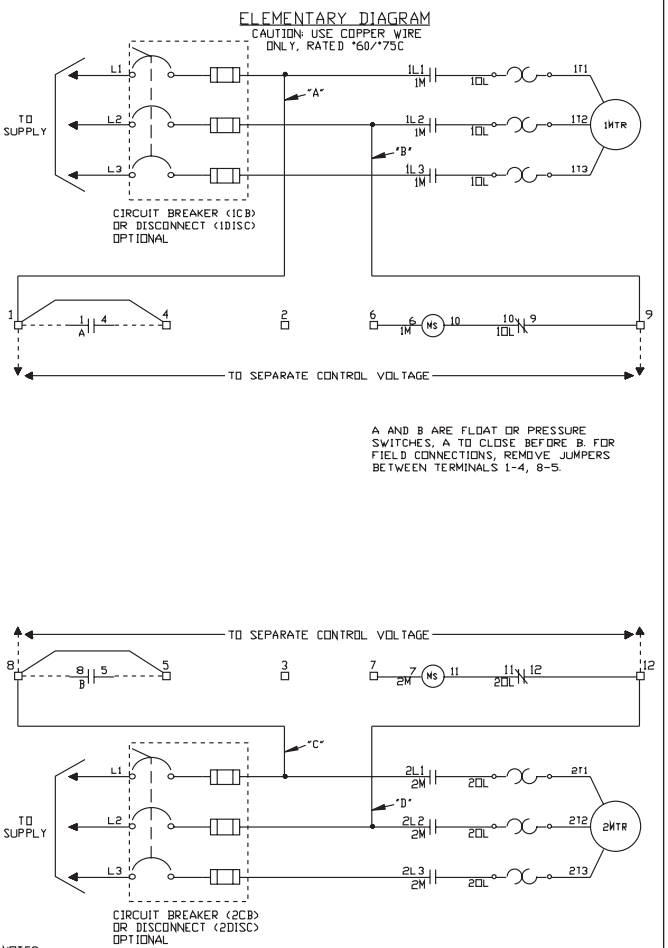
NOTES:
A. FOR SEPARATE OR CPT CONTROL VOLTAGE SOURCE: CONNECT PER DOTTED LINES OR TO 1 AND 2 CPT PRIMARIES PER FACTORY OR FIELD MODIFICATIONS.
B. FOR PROTECTION OF INTERNAL CONTROL CIRCUIT CONDUCTORS IN ACCORDANCE WITH THE N.E.C., USE FUSE KIT 49MAFB4.
C. TO USE THIS CONTROLLER W/O SELECTOR SWITCHES, JUMPER BETWEEN THE FOLLOWING PAIRS OF TERMINALS 4-6, 5-7, AND 9-2.
D. FOR TWO POSITION SELECTOR SWITCHES, WIRE AS SHOWN ALSO ADD JUMPER BETWEEN TERMINALS 9-2.
E. LINE OR SEPARATE SOURCE CONNECTIONS TO TERMINALS 8 AND 12 ARE REQUIRED ONLY WHEN THREE POSITION SELECTOR SWITCH IS BUILT IN.



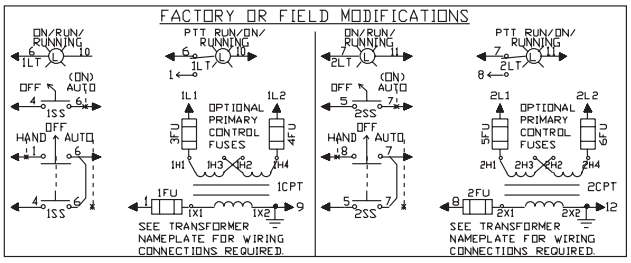
TB LAYOUT (REF)

1	2	3	4	5	6	7	8	9	12	13	14

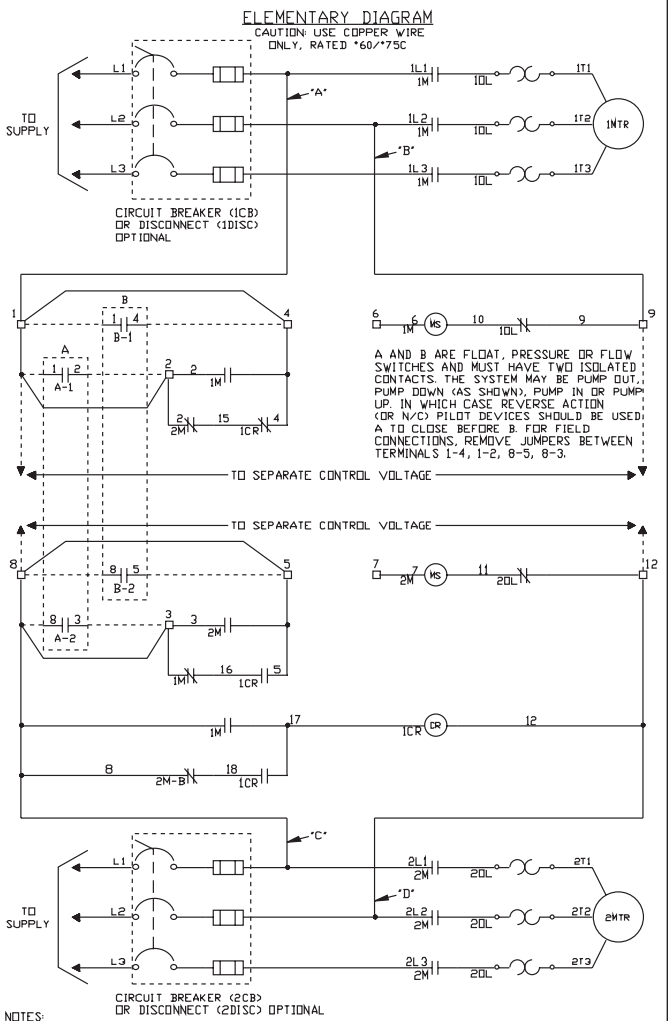
Duplex Panel w/o alternator (95)



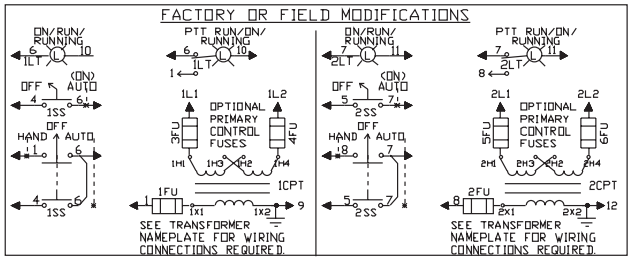
NOTES:
A. FOR SEPARATE OR CPT CONTROL VOLTAGE SOURCE, REMOVE JUMPERS "A","B","C", AND "D" AND CONNECT PER DOTTED LINES OR TO 1 AND 2 CPT PRIMARIES PER FACTORY OR FIELD MODIFICATIONS.
B. FOR PROTECTION OF INTERNAL CONTROL CIRCUIT CONDUCTORS IN ACCORDANCE WITH THE N.E.C., USE FUSE KIT 49MAFB4.
C. TO USE THIS CONTROLLER W/O SELECTOR SWITCHES, JUMPER BETWEEN THE FOLLOWING PAIRS OF TERMINALS 4-6, 5-7.



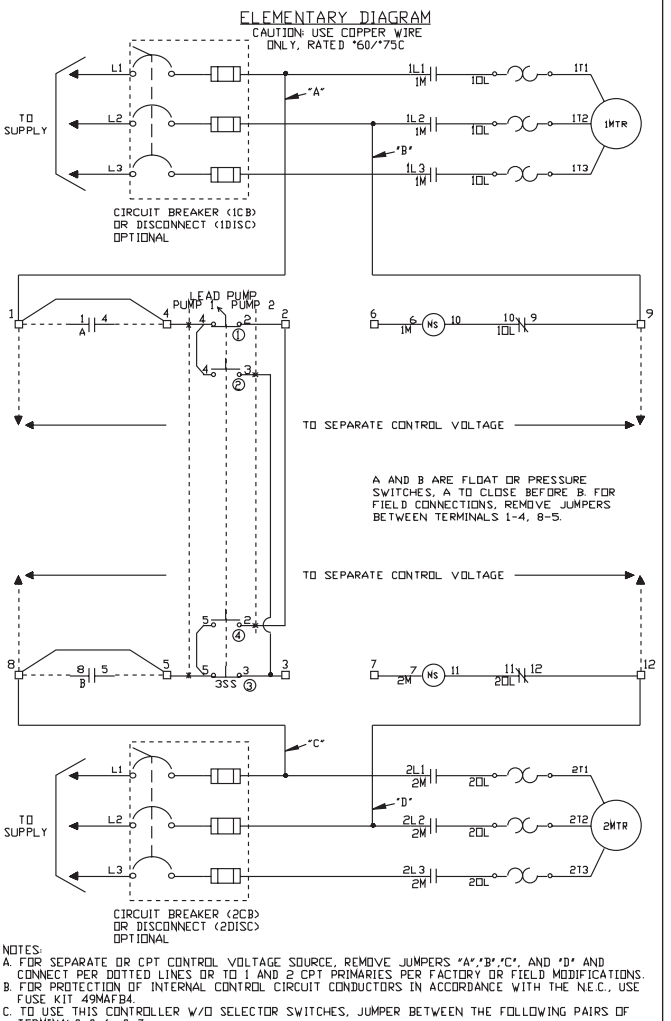
Duplex Panel with Relay Alternation (93)



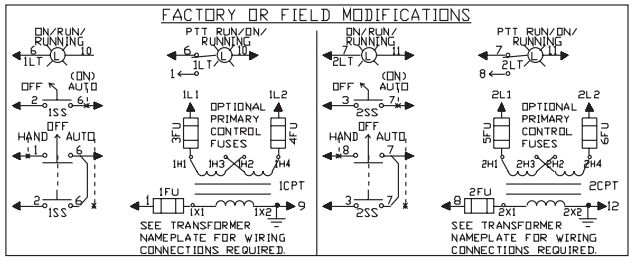
NOTES:
A. FOR SEPARATE OR CPT CONTROL VOLTAGE SOURCE, REMOVE JUMPERS "A","B","C", AND "D" AND CONNECT PER DOTTED LINES OR TO 1 AND 2 CPT PRIMARIES PER FACTORY OR FIELD MODIFICATIONS.
B. FOR PROTECTION OF INTERNAL CONTROL CIRCUIT CONDUCTORS IN ACCORDANCE WITH THE N.E.C., USE FUSE KIT 49MAFB4.



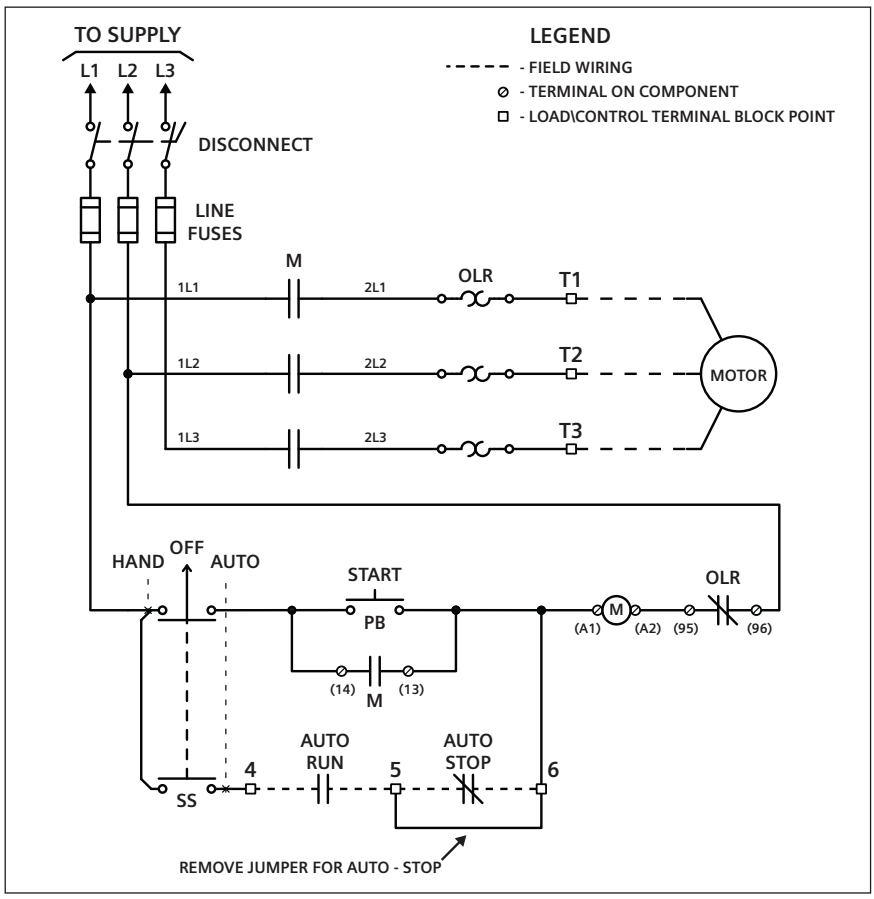
Duplex Panel with Lead Pump Transfer Switch (94)



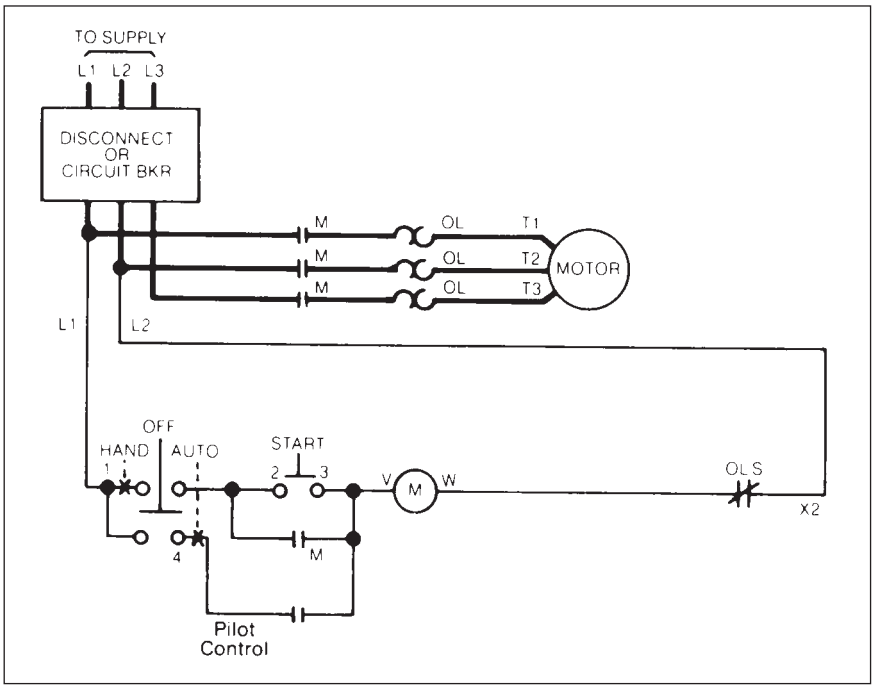
NOTES:
A. FOR SEPARATE OR CPT CONTROL VOLTAGE SOURCE, REMOVE JUMPERS "A","B","C", AND "D" AND CONNECT PER DOTTED LINES OR TO 1 AND 2 CPT PRIMARIES PER FACTORY OR FIELD MODIFICATIONS.
B. FOR PROTECTION OF INTERNAL CONTROL CIRCUIT CONDUCTORS IN ACCORDANCE WITH THE N.E.C., USE FUSE KIT 49MAFB4.
C. TO USE THIS CONTROLLER W/O SELECTOR SWITCHES, JUMPER BETWEEN THE FOLLOWING PAIRS OF TERMINALS 2-6, 3-7.
D. Ⓑ = SELECTOR SWITCH CONTACT LOCATION



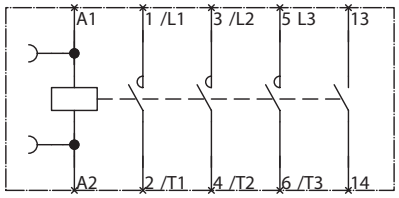
Class 82 Pump Panel



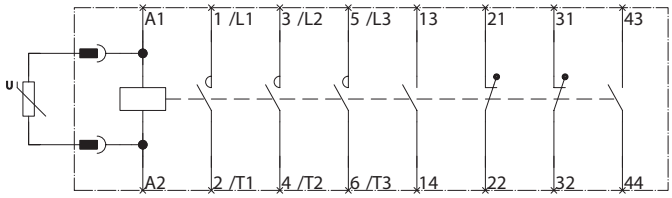
Standard Class 87 Pump Panel



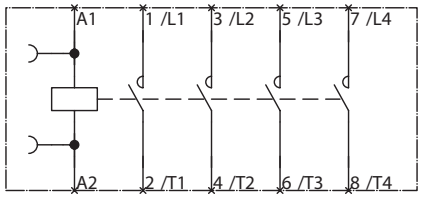
LEN00B003 (20A 3 Pole)



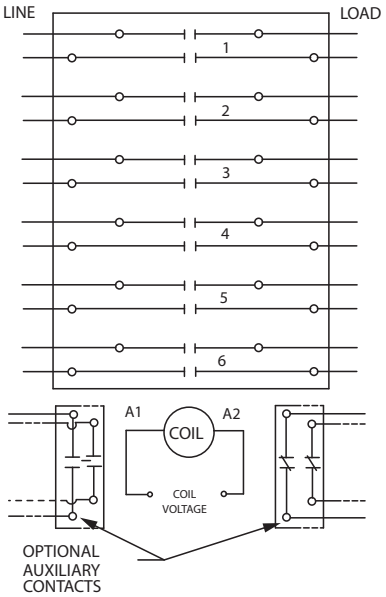
LEN00F003 (200A 3 Pole)
LEN00G003 (300A 3 Pole)
LEN00H003 (400A 3 Pole)



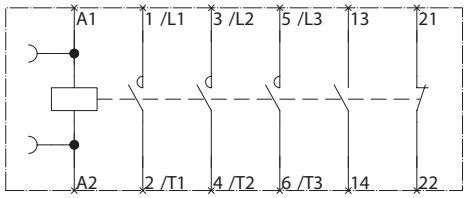
LEN00B004 (20A 4 Pole)



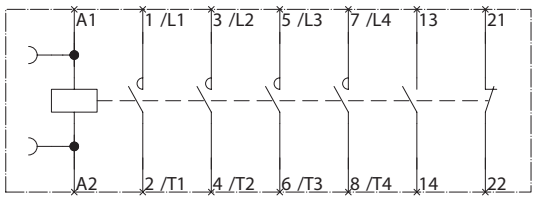
LCE00C (30A 2-12 Pole)



LEN00C003 (30A 3 Pole)
LEN00D003 (60A 3 Pole)
LEN00E003 (100A 3 Pole)

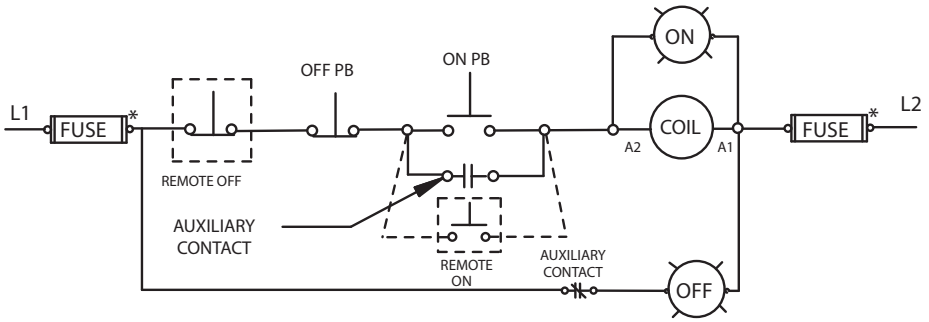


LEN00C004 (30A 4 Pole)

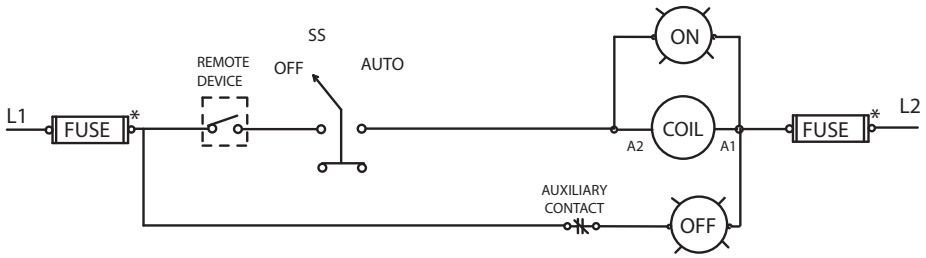


Optional Pilot Devices for Electrically Held Contactor

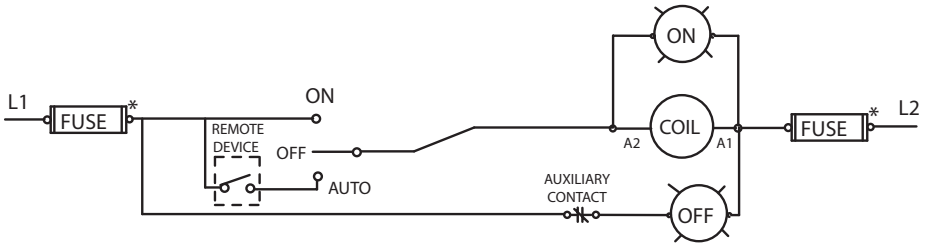
ON and OFF Push buttons



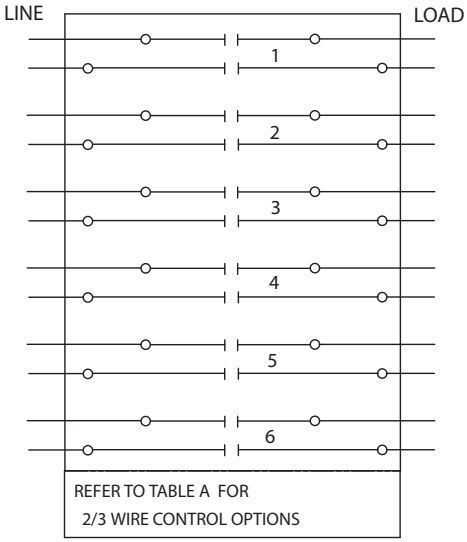
OFF-ON or OFF-AUTO Selector Switch



OFF-ON-AUTO HAND-OFF-AUTO Selector Switch



* -- IF USED


LINE
LOAD
1
2
3
4
5
6
REFER TO TABLE A FOR
2/3 WIRE CONTROL OPTIONS

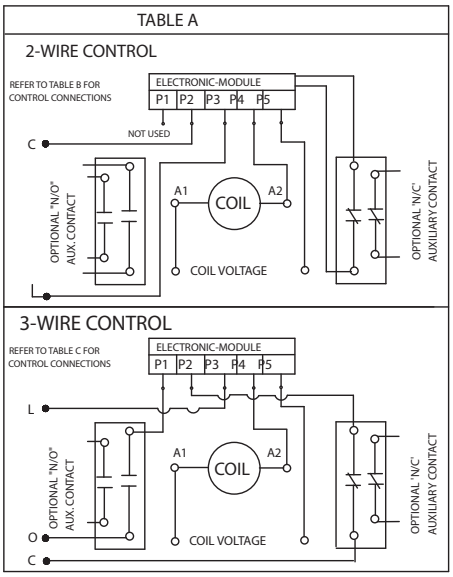


TABLE A
2-WIRE CONTROL
REFER TO TABLE B FOR CONTROL CONNECTIONS
ELECTRONIC-MODULE
P1 P2 P3 P4 P5
NOT USED
C
OPTIONAL "N/O" AUX. CONTACT
A1
COIL
A2
COIL VOLTAGE
OPTIONAL "N/C" AUXILIARY CONTACT
3-WIRE CONTROL
REFER TO TABLE C FOR CONTROL CONNECTIONS
L
O
C

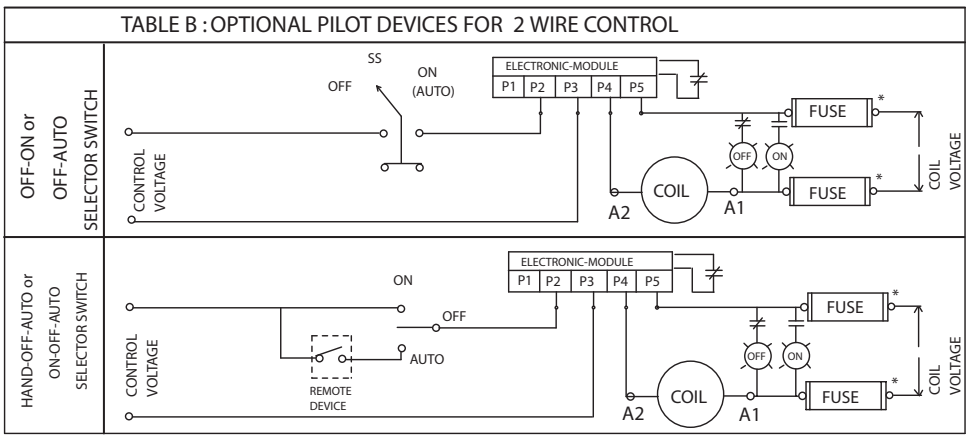


TABLE B : OPTIONAL PILOT DEVICES FOR 2 WIRE CONTROL
OFF-ON or OFF-AUTO SELECTOR SWITCH
SS
OFF
ON (AUTO)
ELECTRONIC-MODULE
P1 P2 P3 P4 P5
CONTROL VOLTAGE
FUSE
COIL
A2
A1
COIL VOLTAGE
HAND-OFF-AUTO or ON-OFF-AUTO SELECTOR SWITCH
ON
OFF
AUTO
REMOTE DEVICE

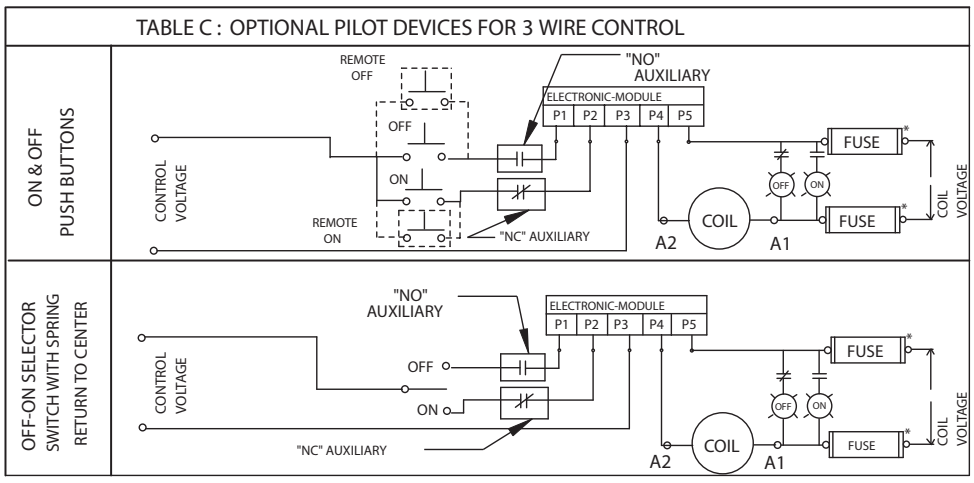
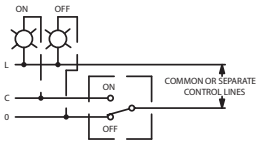
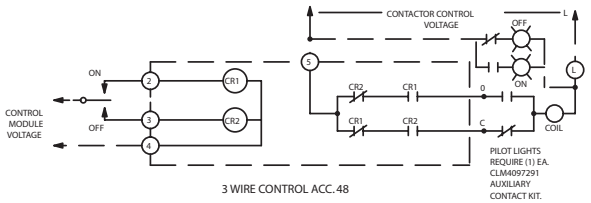


TABLE C : OPTIONAL PILOT DEVICES FOR 3 WIRE CONTROL
ON & OFF PUSH BUTTONS
REMOTE OFF
"NO" AUXILIARY
ELECTRONIC-MODULE
P1 P2 P3 P4 P5
OFF
ON
REMOTE ON
"NC" AUXILIARY
CONTROL VOLTAGE
FUSE
COIL
A2
A1
COIL VOLTAGE
OFF-ON SELECTOR SWITCH WITH SPRING RETURN TO CENTER

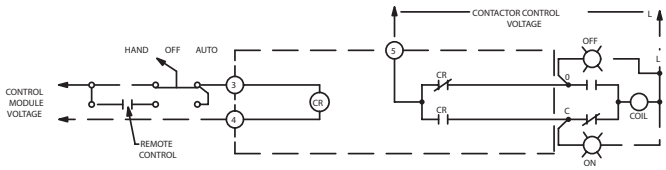
* -- IF USED



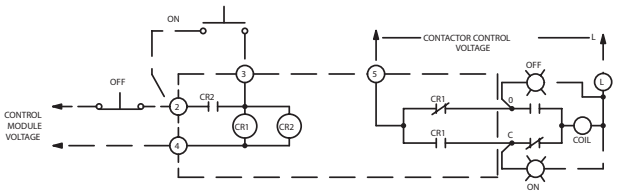
TYPICAL OFF-ON SELECTOR SWITCH



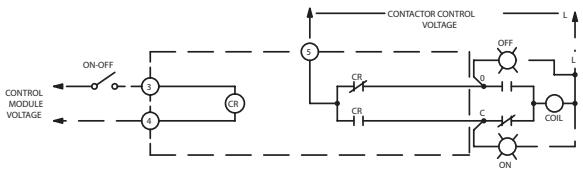
3 WIRE CONTROL ACC. 48



2 WIRE CONTROL ACC. 47



ON-OFF (FORM 3) CONTROL ACC. 49

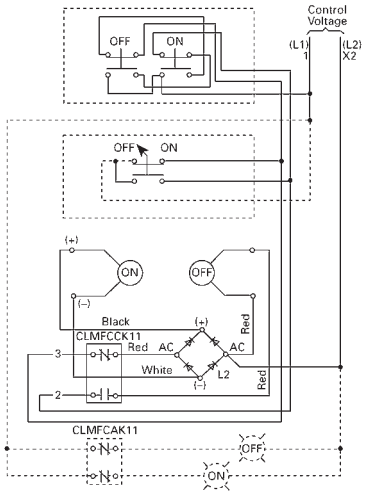


2 WIRE CONTROL ACC. 47

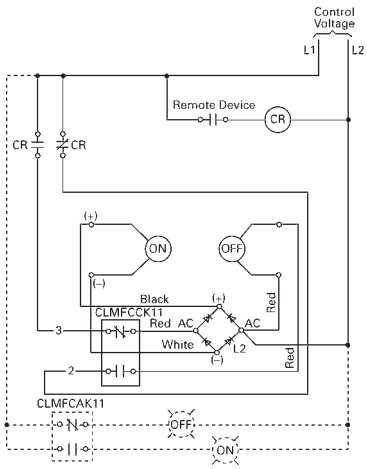
CONNECTIONS TO CONTROL MODULES	
MODULE TERMINAL	CONNECT TO:
1	NOT USED
2	CONT. STATION FOR ACC. 48 & 49
3	CONT. STATION FOR ACC. 47,48 & 49
4	MODULE CONTROL VOLTAGE *
5	CONTACTOR CONTROL VOLTAGE
O	TERMINAL O ON CONTACTOR
C	TERMINAL C ON CONTACTOR

* FOR 24 VDC CONTROL MODULES CONNECT TERMINAL 4 TO NEGATIVE (-)

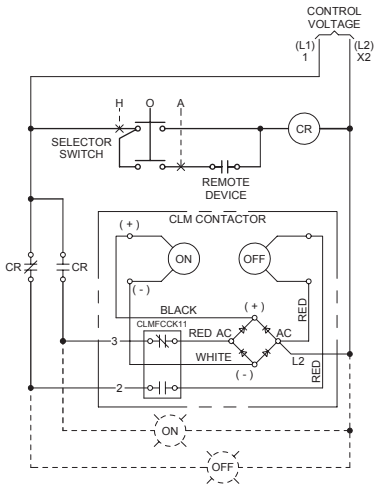
Mechanically Latched, CLM 30–200 Amps①



Connection Diagram for Common/Separate Control with Momentary Pushbutton or ON-OFF Selector Switch **CLMOC**, **CLMOD**, **CLMOE**, and **CLMOF**

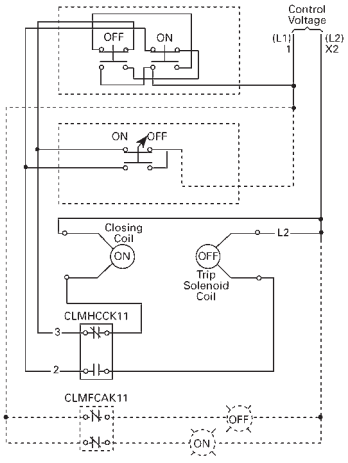


Connection for 2-Wire Control **CLMOC**, **CLMOD**, **CLMOE**, and **CLMOF**

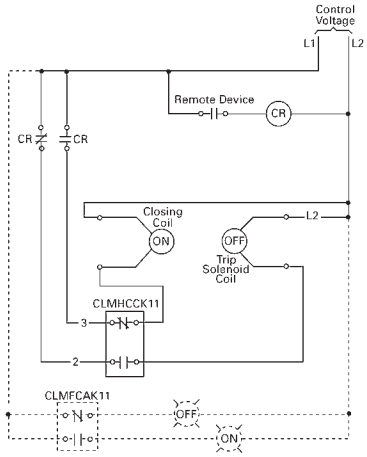


Connection for Hand/Off/Auto Control **CLMOC**, **CLMOD**, **CLMOE**, and **CLMOF**

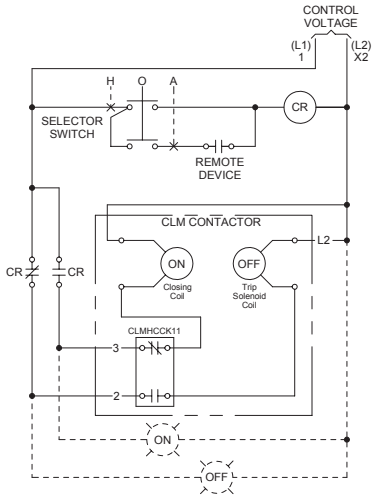
Mechanically Latched Type CLM 300 and 400 Amp①



Connection Diagram for Common/Separate Control with Momentary Pushbutton or ON-OFF Selector Switch **CLMOG** and **CLMOH**



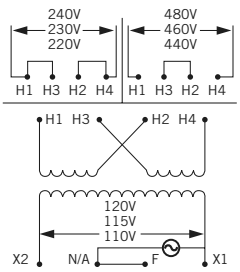
Connection for 2-Wire Control **CLMOG** and **CLMOH**



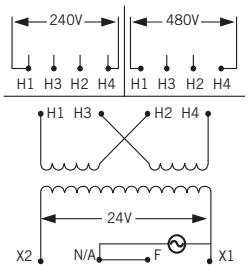
Connection for Hand/Off/Auto Control **CLMOG** and **CLMOH**

① Control relay is required for 2-wire and Hand/Off/Auto Control, as shown in diagram.

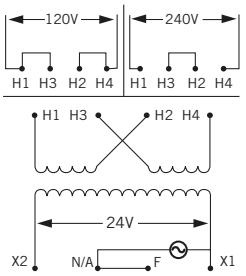
Voltage Letter A①③



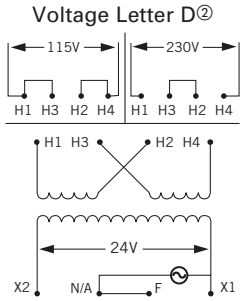
Voltage Letter B②③



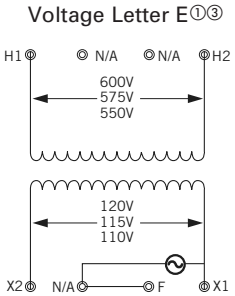
Voltage Letter C②③



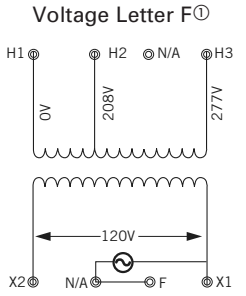
Voltage Letter D②



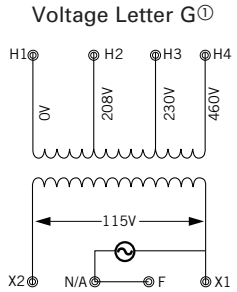
Voltage Letter E①③



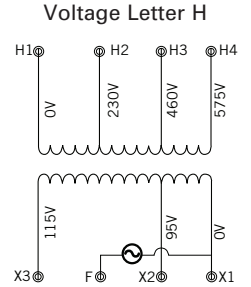
Voltage Letter F①



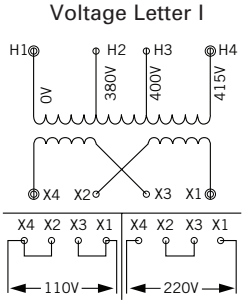
Voltage Letter G①



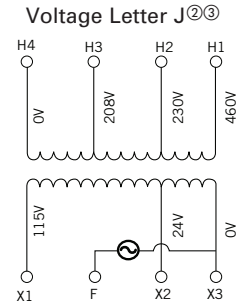
Voltage Letter H



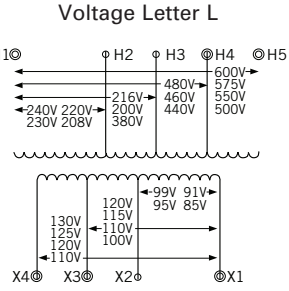
Voltage Letter I



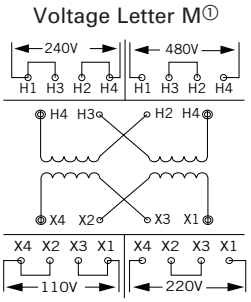
Voltage Letter J②③



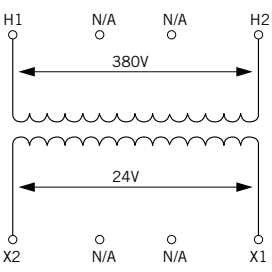
Voltage Letter L



Voltage Letter M①



Voltage Letter P

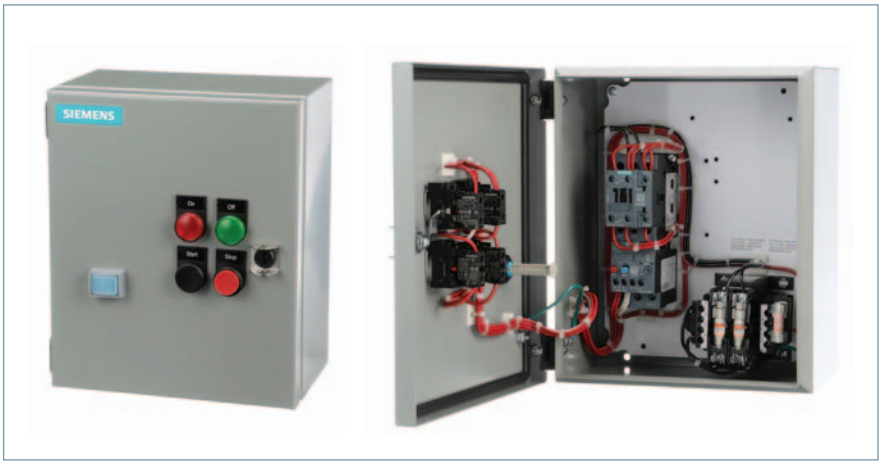


① Includes secondary fuse clips on sizes 50-750VA
② Includes secondary fuse clips on sizes 50-500VA
③ Secondary fuse clips are not included on MTG transformers.

3RE4 Enclosed IEC Controllers

Product overview

3RE4 Enclosed IEC motor controllers are well suited for both industrial and commercial applications. They are durable and dependable, particularly when it comes to motor protection. Protecting the performance of motors is a critical priority and the 3RE4 enclosed starters are offered with either thermal or solid-state overload relays to maximize your motor protection.



Controller Features

General

- UL motor horsepower rated
- From fractional up to 60 Hp at 575 V
- Non-combination type starters and contactors
- Reversing and non-reversing controllers
- Single phase and 3-phase loads
- Thermal and solid-state overload relays
- NEMA Type enclosures 1, 3/3R/4/12 and 4X 304 stainless steel
- Standard size and extra larger enclosures
- RoHS compliant
- Standards: UL 60947-4-1
- Certifications: cULus

Contactor

- Horsepower rated per UL
- High contact reliability
- NO and NC auxiliary contacts included as standard
- Permanently secured with screws on mounting panel
- Screw type terminal connections

Overload Relay Features

Thermal overload relays

- Trip Class 10
- Phase failure sensitivity
- UL for Single and three phase loads
- Includes NC trip contact and NO alarm contact
- Manual and automatic RESET (selectable)
- Switch position indicator
- TEST function
- STOP button
- Sealable cover (optional)
- Screw-type terminals

Solid-state overload relays

- Selectable Trip Class 5, 10, 20 and 30
- Overload, phase failure and unbalance protection
- Internal ground fault detection (selectable)
- Internal power supply
- Includes NC trip contact and NO alarm contact
- Manual and automatic RESET (selectable)
- Electrical remote RESET integrated
- Switch position indicator
- TEST function and self-monitoring
- Sealable cover (optional)
- Screw-type terminals

Available Factory Mods, Field Kits, Accessories

Factory modifications

- Push buttons
- Selector switches
- Pilot lights
- Control power transformers

Field kits and accessories

- Push buttons
- Selector switches
- Pilot lights
- Auxiliary contacts
- Control power transformers
- Control relays and timers
- Control circuit fuse block
- Terminal blocks
- etc.

Catalog Numbering System

3RE4 Nomenclature
Non-Combination Controllers

Controller Type

11 = Non-combination non-reversing starter,1-phase, 2-pole
12 = Non-combination non-reversing starter,3-phase, 3-pole
14 = Non-combination reversing starter, 3-phase, 3-pole
16 = Non-combination non-reversing contactor
18 = Non-combination reversing contactor

Frame Size: UL60947-4-1 Hp Rating

15 = S00: 1-Ph Hp (0.25@115V, 0.5@208V, 0.75@230V), 3-Ph Hp (1.5@208V, 2@230V, 3@460V, 5@575V)
17 = S00: 1-Ph Hp (0.5@115V, 1.5@208V, 2@230V), 3-Ph Hp (3@208V, 3@230V, 7.5@460V, 10@575V)
23 = S0: 1-Ph Hp (1@115V, 1@208V, 1@230V), 3-Ph Hp (2@208V, 3@230V, 5@460V, 7.5@575V)
24 = S0: 1-Ph Hp (1@115V, 2@208V, 2@230V), 3-Ph Hp (3@208V, 3@230V, 7.5@460V, 10@575V)
25 = S0: 1-Ph Hp (1@115V, 2@208V, 3@230V), 3-Ph Hp (5@208V, 5@230V, 10@460V, 15@575V)
26 = S0: 1-Ph Hp (2@115V, 3@208V, 3@230V), 3-Ph Hp (7.5@208V, 7.5@230V, 15@460V, 20@575V)
27 = S0: 1-Ph Hp (2@115V, 5@208V, 5@230V), 3-Ph Hp (10@208V, 10@230V, 20@460V, 25@575V)
28 = S0: 1-Ph Hp (3@115V, 5@208V, 5@230V), 3-Ph Hp (10@208V, 10@230V, 25@460V, 25@575V)
35 = S2: 1-Ph Hp (3@115V, 5@208V, 7.5@230V), 3-Ph Hp (10@208V, 15@230V, 30@460V, 40@575V)
36 = S2: 1-Ph Hp (3@115V, 7.5@208V, 10@230V), 3-Ph Hp (15@208V, 15@230V, 40@460V, 50@575V)
37 = S2: 1-Ph Hp (5@115V, 10@208V, 10@230V), 3-Ph Hp (20@208V, 20@230V, 50@460V, 50@575V)
38 = S2: 1-Ph Hp (5@115V, 10@208V, 15@230V), 3-Ph Hp (20@208V, 25@230V, 50@460V, 60@575V)

Enclosure Type and Size

A = NEMA Type 1 - standard size
B = NEMA Type 1 - large size①
C = NEMA Type 3/3R/4/12 - standard size
E = NEMA Type 4X 304 SS - standard size

Disconnect Type

A = None

Nominal Coil Voltage

1 = 24 V AC 50/60Hz
2 = 24 V DC
3 = 110/120 V AC 50/60Hz
4 = 208 V AC 50/60Hz
5 = 220/240 V AC 50/60Hz
6 = 277 V AC 60Hz
7 = 480 V AC 60Hz
8 = 600 V AC 60Hz

Overload Relay Type

0 = (none)
1 = Thermal fixed trip Class 10
5 = Solid-state selectable trip Class 5-10-20-30

Overload Relay Amp Range

0Y = No overload relay (contactor)
See amp range selection on page 4/15.

Special

Y0 = (none)
Factory modifications (See selection starting on page 4/47.)

① Large size enclosures are not applicable for some configurations.
Refer to product selection tables for specifics.

Ordering Information

- Replace the (●) with the code from the coil table on this page.
- Replace the (□) with the overload relay (OLR) code from this page.
- Replace the (♦♦) with the OLR current adjustment range from pg. 17-183.
- For factory modifications, see page 17-184 – 17-186.
- For accessories, see page 17-187 – 17-188.
- For replacement parts, see page 17-188.
- For dimensions, see page 17-189.
- For wiring diagrams, see page 17-190–17-192.

Coil Selection (●)①

Nominal Voltage	Code
24 VAC 50/60 Hz	1
24 VDC	2
110/120 VAC 50/60 Hz	3
208 VAC 50/60 Hz	4
220/240 VAC 50/60 Hz	5
277 VAC 60 Hz	6
480 VAC 60 Hz	7
600 VAC 60 Hz	8

Non-Reversing Starter, 3-Phase, 3-Pole, Thermal or Solid-State Overload Relay, Standard Enclosure

3-Phase Motor Hp Rating per UL				NEMA Type Enclosure (Standard Size)			Unused Auxiliary Contacts		Frame Size	Contactor (for ref. only)
				Type 1 General Purpose, Indoor only	Type 3/3R/4/12 Weatherproof, Watertight, Dust-tight	Type 4X 304 Stain. Steel Watertight, Dust-tight, Corrosion Resistant				
208 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	NO	NC		
1.5	2	3	5	3RE4121–5AA●□–♦♦Y0	3RE4121–5CA●□–♦♦Y0	3RE4121–5EA●□–♦♦Y0	1	0	S00	3RT2015
3	3	7.5	10	3RE4121–7AA●□–♦♦Y0	3RE4121–7CA●□–♦♦Y0	3RE4121–7EA●□–♦♦Y0	1	0	S00	3RT2017
2	3	5	7.5	3RE4122–3AA●□–♦♦Y0	3RE4122–3CA●□–♦♦Y0	3RE4122–3EA●□–♦♦Y0	1	1	S0	3RT2023
3	3	7.5	10	3RE4122–4AA●□–♦♦Y0	3RE4122–4CA●□–♦♦Y0	3RE4122–4EA●□–♦♦Y0	1	1	S0	3RT2024
5	5	10	15	3RE4122–5AA●□–♦♦Y0	3RE4122–5CA●□–♦♦Y0	3RE4122–5EA●□–♦♦Y0	1	1	S0	3RT2025
7.5	7.5	15	20	3RE4122–6AA●□–♦♦Y0	3RE4122–6CA●□–♦♦Y0	3RE4122–6EA●□–♦♦Y0	1	1	S0	3RT2026
10	10	20	25	3RE4122–7AA●□–♦♦Y0	3RE4122–7CA●□–♦♦Y0	3RE4122–7EA●□–♦♦Y0	1	1	S0	3RT2027
10	10	25	25	3RE4122–8AA●□–♦♦Y0	3RE4122–8CA●□–♦♦Y0	3RE4122–8EA●□–♦♦Y0	1	1	S0	3RT2028
10	15	30	40	3RE4123–5AA●□–♦♦Y0	3RE4123–5CA●□–♦♦Y0	3RE4123–5EA●□–♦♦Y0	1	1	S2	3RT2035
15	15	40	50	3RE4123–6AA●□–♦♦Y0	3RE4123–6CA●□–♦♦Y0	3RE4123–6EA●□–♦♦Y0	1	1	S2	3RT2036
20	20	50	50	3RE4123–7AA●□–♦♦Y0	3RE4123–7CA●□–♦♦Y0	3RE4123–7EA●□–♦♦Y0	1	1	S2	3RT2037
20	25	50	60	3RE4123–8AA●□–♦♦Y0	3RE4123–8CA●□–♦♦Y0	3RE4123–8EA●□–♦♦Y0	1	1	S2	3RT2038
				□	□	□				
Thermal overload relay Class 10 =				1	1	1				
Solid-state overload relay selectable Class =				5	5	5				

Non-Reversing Starter, 3-Phase, 3-Pole, Thermal or Solid-State Overload Relay, Large Enclosure

3-Phase Motor Hp Rating per UL				NEMA Type Enclosure (Large Size)			Unused Auxiliary Contacts		Frame Size	Contactor (for ref. only)
				Type 1 General Purpose, Indoor only	Type 3/3R/4/12 Weatherproof, Watertight, Dust-tight	Type 4X 304 Stain. Steel Watertight, Dust-tight, Corrosion Resistant				
208 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	NO	NC		
1.5	2	3	5	3RE4121–5BA●□–♦♦Y0	Not applicable — Standard enclosure includes extra mounting space for accessories.		1	0	S00	3RT2015
3	3	7.5	10	3RE4121–7BA●□–♦♦Y0			1	0	S00	3RT2017
2	3	5	7.5	3RE4122–3BA●□–♦♦Y0			1	1	S0	3RT2023
3	3	7.5	10	3RE4122–4BA●□–♦♦Y0			1	1	S0	3RT2024
5	5	10	15	3RE4122–5BA●□–♦♦Y0			1	1	S0	3RT2025
7.5	7.5	15	20	3RE4122–6BA●□–♦♦Y0			1	1	S0	3RT2026
10	10	20	25	3RE4122–7BA●□–♦♦Y0			1	1	S0	3RT2027
10	10	25	25	3RE4122–8BA●□–♦♦Y0			1	1	S0	3RT2028
				□						
Thermal overload relay Class 10 =				1						
Solid-state overload relay selectable Class =				5						

① For 3-phase controllers, 208 - 600 V coils will be wired for incoming voltage. 24 and120 V coils will be wired as separate source or control power transformer secondary (if ordered). For single phase controllers, 120 and 240 V coils will be wired for incoming voltage. 24 V coils will be wired as separate source or control power transformer secondary (if ordered). 277 - 600 V coils do not apply.

Ordering Information

- Replace the (●) with the code from the coil table on this page.
- Replace the (□) with the overload relay (OLR) code from this page.
- Replace the (♦♦) with the OLR current adjustment range from pg. 17-183.
- For factory modifications, see page 17-184 – 17-186.
- For accessories, see page 17-187 – 17-188.
- For replacement parts, see page 17-188.
- For dimensions, see page 17-189.
- For wiring diagrams, see page 17-190–17-192.

Coil Selection (●)①

Nominal Voltage	Code
24 VAC 50/60 Hz	1
24 VDC	2
110/120 VAC 50/60 Hz	3
208 VAC 50/60 Hz	4
220/240 VAC 50/60 Hz	5
277 VAC 60 Hz	6
480 VAC 60 Hz	7
600 VAC 60 Hz	8

Non-Reversing Starter, Single Phase, 2-Pole, Thermal Overload Relay, Standard Enclosure

1-Phase Motor Hp Rating per UL			NEMA Type Enclosure (Standard Size)			Unused Auxiliary Contacts		Frame Size	Contactor (for ref. only)
			Type 1 General Purpose, Indoor only	Type 3/3R/4/12 Weatherproof, Watertight, Dust-tight	Type 4X 304 Stain. Steel Watertight, Dust-tight, Corrosion Resistant				
115 V	208 V	230 V	Catalog Number	Catalog Number	Catalog Number	NO	NC		
0.25	0.5	0.75	3RE4111–5AA●1–♦♦Y0	3RE4111–5CA●1–♦♦Y0	3RE4111–5EA●1–♦♦Y0	1	0	S00	3RT2015
0.5	1.5	2	3RE4111–7AA●1–♦♦Y0	3RE4111–7CA●1–♦♦Y0	3RE4111–7EA●1–♦♦Y0	1	0	S00	3RT2017
1	1	1	3RE4112–3AA●1–♦♦Y0	3RE4112–3CA●1–♦♦Y0	3RE4112–3EA●1–♦♦Y0	1	1	S0	3RT2023
1	2	2	3RE4112–4AA●1–♦♦Y0	3RE4112–4CA●1–♦♦Y0	3RE4112–4EA●1–♦♦Y0	1	1	S0	3RT2024
1	2	3	3RE4112–5AA●1–♦♦Y0	3RE4112–5CA●1–♦♦Y0	3RE4112–5EA●1–♦♦Y0	1	1	S0	3RT2025
2	3	3	3RE4112–6AA●1–♦♦Y0	3RE4112–6CA●1–♦♦Y0	3RE4112–6EA●1–♦♦Y0	1	1	S0	3RT2026
2	5	5	3RE4112–7AA●1–♦♦Y0	3RE4112–7CA●1–♦♦Y0	3RE4112–7EA●1–♦♦Y0	1	1	S0	3RT2027
3	5	5	3RE4112–8AA●1–♦♦Y0	3RE4112–8CA●1–♦♦Y0	3RE4112–8EA●1–♦♦Y0	1	1	S0	3RT2028
3	5	7.5	3RE4113–5AA●1–♦♦Y0	3RE4113–5CA●1–♦♦Y0	3RE4113–5EA●1–♦♦Y0	1	1	S2	3RT2035
3	7	10	3RE4113–6AA●1–♦♦Y0	3RE4113–6CA●1–♦♦Y0	3RE4113–6EA●1–♦♦Y0	1	1	S2	3RT2036
5	10	10	3RE4113–7AA●1–♦♦Y0	3RE4113–7CA●1–♦♦Y0	3RE4113–7EA●1–♦♦Y0	1	1	S2	3RT2037
5	10	15	3RE4113–8AA●1–♦♦Y0	3RE4113–8CA●1–♦♦Y0	3RE4113–8EA●1–♦♦Y0	1	1	S2	3RT2038

Non-Reversing Starter, Single Phase, 2-Pole, Thermal Overload Relay, Large Enclosure

1-Phase Motor Hp Rating per UL			NEMA Type Enclosure (Large Size)			Unused Auxiliary Contacts		Frame Size	Contactor (for ref. only)
			Type 1 General Purpose, Indoor only	Type 3/3R/4/12 Weatherproof, Watertight, Dust-tight	Type 4X 304 Stain. Steel Watertight, Dust-tight, Corrosion Resistant				
115 V	208 V	230 V	Catalog Number	Catalog Number	Catalog Number	NO	NC		
0.25	0.5	0.75	3RE4111–5BA●1–♦♦Y0	Not applicable — Standard enclosure includes extra mounting space for accessories.		1	0	S00	3RT2015
0.5	1.5	2	3RE4111–7BA●1–♦♦Y0			1	0	S00	3RT2017
1	1	1	3RE4112–3BA●1–♦♦Y0			1	1	S0	3RT2023
1	2	2	3RE4112–4BA●1–♦♦Y0			1	1	S0	3RT2024
1	2	3	3RE4112–5BA●1–♦♦Y0			1	1	S0	3RT2025
2	3	3	3RE4112–6BA●1–♦♦Y0			1	1	S0	3RT2026
2	5	5	3RE4112–7BA●1–♦♦Y0			1	1	S0	3RT2027
3	5	5	3RE4112–8BA●1–♦♦Y0			1	1	S0	3RT2028

① For 3-phase controllers, 208 - 600 V coils will be wired for incoming voltage. 24 and120 V coils will be wired as separate source or control power transformer secondary (if ordered). For single phase controllers, 120 and 240 V coils will be wired for incoming voltage. 24 V coils will be wired as separate source or control power transformer secondary (if ordered). 277 - 600 V coils do not apply.

Ordering Information

- Replace the (●) with the code from the coil table on this page.
- Replace the (□) with the overload relay (OLR) code from this page.
- Replace the (♦♦) with the OLR current adjustment range from pg. 17-183.
- For factory modifications, see page 17-184 – 17-186.
- For accessories, see page 17-187 – 17-188.
- For replacement parts, see page 17-188.
- For dimensions, see page 17-189.
- For wiring diagrams, see page 17-190 – 17-192.

Coil Selection (●)①

Nominal Voltage	Code
24 VAC 50/60 Hz	1
24 VDC	2
110/120 VAC 50/60 Hz	3
208 VAC 50/60 Hz	4
220/240 VAC 50/60 Hz	5
277 VAC 60 Hz	6
480 VAC 60 Hz	7
600 VAC 60 Hz	8

Reversing Starter, 3-Phase, 3-Pole, Thermal or Solid-State Overload Relay, Standard Enclosure

3-Phase Motor Hp Rating per UL				NEMA Type Enclosure (Standard Size)			Unused Auxiliary Contacts		Frame Size	Contactor (for ref. only)
				Type 1 General Purpose, Indoor only	Type 3/3R/4/12 Weatherproof, Watertight, Dust-tight	Type 4X 304 Stain. Steel Watertight, Dust-tight, Corrosion Resistant				
208 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	NO	NC		
1.5	2	3	5	3RE4141–5AA●□–♦♦Y0	3RE4141–5CA●□–♦♦Y0	3RE4141–5EA●□–♦♦Y0	2	2	S00	3RA2315
3	3	7.5	10	3RE4141–7AA●□–♦♦Y0	3RE4141–7CA●□–♦♦Y0	3RE4141–7EA●□–♦♦Y0	2	2	S00	3RA2317
2	3	5	7.5	3RE4142–3AA●□–♦♦Y0	3RE4142–3CA●□–♦♦Y0	3RE4142–3EA●□–♦♦Y0	2	0	S0	3RA2323
3	3	7.5	10	3RE4142–4AA●□–♦♦Y0	3RE4142–4CA●□–♦♦Y0	3RE4142–4EA●□–♦♦Y0	2	0	S0	3RA2324
5	5	10	15	3RE4142–5AA●□–♦♦Y0	3RE4142–5CA●□–♦♦Y0	3RE4142–5EA●□–♦♦Y0	2	0	S0	3RA2325
7.5	7.5	15	20	3RE4142–6AA●□–♦♦Y0	3RE4142–6CA●□–♦♦Y0	3RE4142–6EA●□–♦♦Y0	2	0	S0	3RA2326
10	10	20	25	3RE4142–7AA●□–♦♦Y0	3RE4142–7CA●□–♦♦Y0	3RE4142–7EA●□–♦♦Y0	2	0	S0	3RA2327
10	10	25	25	3RE4142–8AA●□–♦♦Y0	3RE4142–8CA●□–♦♦Y0	3RE4142–8EA●□–♦♦Y0	2	0	S0	3RA2328
10	15	30	40	3RE4143–5AA●□–♦♦Y0	3RE4143–5CA●□–♦♦Y0	3RE4143–5EA●□–♦♦Y0	2	0	S2	3RA2335
15	15	40	50	3RE4143–6AA●□–♦♦Y0	3RE4143–6CA●□–♦♦Y0	3RE4143–6EA●□–♦♦Y0	2	0	S2	3RA2336
20	20	50	50	3RE4143–7AA●□–♦♦Y0	3RE4143–7CA●□–♦♦Y0	3RE4143–7EA●□–♦♦Y0	2	0	S2	3RA2337
20	25	50	60	3RE4143–8AA●□–♦♦Y0	3RE4143–8CA●□–♦♦Y0	3RE4143–8EA●□–♦♦Y0	2	0	S2	3RA2338
				□	□	□				
Thermal overload relay Class 10 =				1	1	1				
Solid-state overload relay selectable Class =				5	5	5				

Reversing Starter, 3-Phase, 3-Pole, Thermal or Solid-State Overload Relay, Large Enclosure

3-Phase Motor Hp Rating per UL				NEMA Type Enclosure (Large Size)			Unused Auxiliary Contacts		Frame Size	Contactor (for ref. only)
				Type 1 General Purpose, Indoor only	Type 3/3R/4/12 Weatherproof, Watertight, Dust-tight	Type 4X 304 Stain. Steel Watertight, Dust-tight, Corrosion Resistant				
208 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	NO	NC		
1.5	2	3	5	3RE4141–5BA●□–♦♦Y0			2	0	S00	3RA2315
3	3	7.5	10	3RE4141–7BA●□–♦♦Y0			2	0	S00	3RA2317
2	3	5	7.5	3RE4142–3BA●□–♦♦Y0			2	0	S0	3RA2323
3	3	7.5	10	3RE4142–4BA●□–♦♦Y0			2	0	S0	3RA2324
5	5	10	15	3RE4142–5BA●□–♦♦Y0	Not applicable — Standard enclosure includes extra mounting space for accessories.		2	0	S0	3RA2325
7.5	7.5	15	20	3RE4142–6BA●□–♦♦Y0			2	0	S0	3RA2326
10	10	20	25	3RE4142–7BA●□–♦♦Y0			2	0	S0	3RA2327
10	10	25	25	3RE4142–8BA●□–♦♦Y0			2	0	S0	3RA2328
				□						
Thermal overload relay Class 10 =				1						
Solid-state overload relay selectable Class =				5						

① For 3-phase controllers, 208 - 600 V coils will be wired for incoming voltage. 24 and120 V coils will be wired as separate source or control power transformer secondary (if ordered). For single phase controllers, 120 and 240 V coils will be wired for incoming voltage. 24 V coils will be wired as separate source or control power transformer secondary (if ordered). 277 - 600 V coils do not apply.

Ordering Information

- Replace the (●) with the code from the coil table on this page.
- For factory modifications, see page 17-184 – 17-186.
- For accessories, see page 17-187 – 17-188.
- For replacement parts, see page 17-188.
- For dimensions, see page 17-189.
- For wiring diagrams, see page 17-190–17-192.

Coil Selection (●)①

Nominal Voltage	Code
24 VAC 50/60 Hz	1
24 VDC	2
110/120 VAC 50/60 Hz	3
208 VAC 50/60 Hz	4
220/240 VAC 50/60 Hz	5
277 VAC 60 Hz	6
480 VAC 60 Hz	7
600 VAC 60 Hz	8

Non-Reversing Contactor, 3-Pole (for both 1-Phase and 3-Phase), Standard Enclosure

1-Phase Motor Hp Rating per UL			3-Phase Motor Hp Rating per UL				NEMA Type Enclosure (Standard Size)			Unused Auxiliary Contacts		Frame Size	Contactor (for ref. only)
							Type 1 General Purpose, Indoor only	Type 3/3R/4/12 Weatherproof, Watertight, Dust-tight	Type 4X 304 Stain. Steel Watertight, Dust-tight, Corrosion Resistant				
115V	208V	230V	208V	230V	460V	575V	Catalog Number	Catalog Number	Catalog Number	NO	NC		
0.25	0.5	0.75	1.5	2	3	5	3RE4161–5AA●0–0YY0	3RE4161–5CA●0–0YY0	3RE4161–5EA●0–0YY0	1	0	S00	3RT2015
0.5	1.5	2	3	3	7.5	10	3RE4161–7AA●0–0YY0	3RE4161–7CA●0–0YY0	3RE4161–7EA●0–0YY0	1	0	S00	3RT2017
1	1	1	2	3	5	7.5	3RE4162–3AA●0–0YY0	3RE4162–3CA●0–0YY0	3RE4162–3EA●0–0YY0	1	1	S0	3RT2023
1	2	2	3	3	7.5	10	3RE4162–4AA●0–0YY0	3RE4162–4CA●0–0YY0	3RE4162–4EA●0–0YY0	1	1	S0	3RT2024
1	2	3	5	5	10	15	3RE4162–5AA●0–0YY0	3RE4162–5CA●0–0YY0	3RE4162–5EA●0–0YY0	1	1	S0	3RT2025
2	3	3	7.5	7.5	15	20	3RE4162–6AA●0–0YY0	3RE4162–6CA●0–0YY0	3RE4162–6EA●0–0YY0	1	1	S0	3RT2026
2	5	5	10	10	20	25	3RE4162–7AA●0–0YY0	3RE4162–7CA●0–0YY0	3RE4162–7EA●0–0YY0	1	1	S0	3RT2027
3	5	5	10	10	25	25	3RE4162–8AA●0–0YY0	3RE4162–8CA●0–0YY0	3RE4162–8EA●0–0YY0	1	1	S0	3RT2028
3	5	7.5	10	15	30	40	3RE4163–5AA●0–0YY0	3RE4163–5CA●0–0YY0	3RE4163–5EA●0–0YY0	1	1	S2	3RT2035
3	7	10	15	15	40	50	3RE4163–6AA●0–0YY0	3RE4163–6CA●0–0YY0	3RE4163–6EA●0–0YY0	1	1	S2	3RT2036
5	10	10	20	20	50	50	3RE4163–7AA●0–0YY0	3RE4163–7CA●0–0YY0	3RE4163–7EA●0–0YY0	1	1	S2	3RT2037
5	10	15	20	25	50	60	3RE4163–8AA●0–0YY0	3RE4163–8CA●0–0YY0	3RE4163–8EA●0–0YY0	1	1	S2	3RT2038

Non-Reversing Contactor, 3-Pole (for both 1-Phase and 3-Phase), Large Enclosure

1-Phase Motor Hp Rating per UL			3-Phase Motor Hp Rating per UL				NEMA Type Enclosure (Large Size)			Unused Auxiliary Contacts		Frame Size	Contactor (for ref. only)
							Type 1 General Purpose, Indoor only	Type 3/3R/4/12 Weatherproof, Watertight, Dust-tight	Type 4X 304 Stain. Steel Watertight, Dust-tight, Corrosion Resistant				
115V	208V	230V	208V	230V	460V	575V	Catalog Number	Catalog Number	Catalog Number	NO	NC		
0.25	0.5	0.75	1.5	2	3	5	3RE4161–5BA●0–0YY0	Not applicable — Standard enclosure includes extra mounting space for accessories.		1	0	S00	3RT2015
0.5	1.5	2	3	3	7.5	10	3RE4161–7BA●0–0YY0			1	0	S00	3RT2017
1	1	1	2	3	5	7.5	3RE4162–3BA●0–0YY0			1	1	S0	3RT2023
1	2	2	3	3	7.5	10	3RE4162–4BA●0–0YY0			1	1	S0	3RT2024
1	2	3	5	5	10	15	3RE4162–5BA●0–0YY0			1	1	S0	3RT2025
2	3	3	7.5	7.5	15	20	3RE4162–6BA●0–0YY0			1	1	S0	3RT2026
2	5	5	10	10	20	25	3RE4162–7BA●0–0YY0			1	1	S0	3RT2027
3	5	5	10	10	25	25	3RE4162–8BA●0–0YY0			1	1	S0	3RT2028

① For 3-phase controllers, 208 - 600 V coils will be wired for incoming voltage. 24 and120 V coils will be wired as separate source or control power transformer secondary (if ordered). For single phase controllers, 120 and 240 V coils will be wired for incoming voltage. 24 V coils will be wired as separate source or control power transformer secondary (if ordered). 277 - 600 V coils do not apply.

Ordering Information

- Replace the (●) with the code from the coil table on this page.
- For factory modifications, see page 17-184 – 17-186.
- For accessories, see page 17-187 – 17-188.
- For replacement parts, see page 17-188.
- For dimensions, see page 17-189.
- For wiring diagrams, see page 17-190 – 17-192.

Coil Selection (●)①

Nominal Voltage	Code
24 VAC 50/60 Hz	1
24 VDC	2
110/120 VAC 50/60 Hz	3
208 VAC 50/60 Hz	4
220/240 VAC 50/60 Hz	5
277 VAC 60 Hz	6
480 VAC 60 Hz	7
600 VAC 60 Hz	8

Reversing Contactor, 3-Pole (for both 1-Phase and 3-Phase), Standard Enclosure

1-Phase Motor Hp Rating per UL		3-Phase Motor Hp Rating per UL				NEMA Type Enclosure (Standard Size)			Unused Auxiliary Contacts		Frame Size	Contactor (for ref. only)
						Type 1 General Purpose, Indoor only	Type 3/3R/4/12 Weatherproof, Watertight, Dust-tight	Type 4X 304 Stain. Steel Watertight, Dust-tight, Corrosion Resistant				
115V	230V	208V	230V	460V	575V	Catalog Number	Catalog Number	Catalog Number	NO	NC		
0.25	0.75	1.5	2	3	5	3RE4181–5AA●0–0YY0	3RE4181–5CA●0–0YY0	3RE4181–5EA●0–0YY0	2	2	S00	3RA2315
0.5	2	3	3	7.5	10	3RE4181–7AA●0–0YY0	3RE4181–7CA●0–0YY0	3RE4181–7EA●0–0YY0	2	0	S00	3RA2317
1	1	2	3	5	7.5	3RE4182–3AA●0–0YY0	3RE4182–3CA●0–0YY0	3RE4182–3EA●0–0YY0	2	0	S0	3RA2323
1	2	3	3	7.5	10	3RE4182–4AA●0–0YY0	3RE4182–4CA●0–0YY0	3RE4182–4EA●0–0YY0	2	0	S0	3RA2324
1	3	5	5	10	15	3RE4182–5AA●0–0YY0	3RE4182–5CA●0–0YY0	3RE4182–5EA●0–0YY0	2	0	S0	3RA2325
2	3	7.5	7.5	15	20	3RE4182–6AA●0–0YY0	3RE4182–6CA●0–0YY0	3RE4182–6EA●0–0YY0	2	0	S0	3RA2326
2	5	10	10	20	25	3RE4182–7AA●0–0YY0	3RE4182–7CA●0–0YY0	3RE4182–7EA●0–0YY0	2	0	S0	3RA2327
3	5	10	10	25	25	3RE4182–8AA●0–0YY0	3RE4182–8CA●0–0YY0	3RE4182–8EA●0–0YY0	2	0	S0	3RA2328
3	7.5	10	15	30	40	3RE4183–5AA●0–0YY0	3RE4183–5CA●0–0YY0	3RE4183–5EA●0–0YY0	2	0	S2	3RA2335
3	10	15	15	40	50	3RE4183–6AA●0–0YY0	3RE4183–6CA●0–0YY0	3RE4183–6EA●0–0YY0	2	0	S2	3RA2336
5	10	20	20	50	50	3RE4183–7AA●0–0YY0	3RE4183–7CA●0–0YY0	3RE4183–7EA●0–0YY0	2	0	S2	3RA2337
5	15	20	25	50	60	3RE4183–8AA●0–0YY0	3RE4183–8CA●0–0YY0	3RE4183–8EA●0–0YY0	2	0	S2	3RA2338

Reversing Contactor, 3-Pole (for both 1-Phase and 3-Phase), Large Enclosure

1-Phase Motor Hp Rating per UL		3-Phase Motor Hp Rating per UL				NEMA Type Enclosure (Large Size)			Unused Auxiliary Contacts		Frame Size	Contactor (for ref. only)
						Type 1 General Purpose, Indoor only	Type 3/3R/4/12 Weatherproof, Watertight, Dust-tight	Type 4X 304 Stain. Steel Watertight, Dust-tight, Corrosion Resistant				
115V	230V	208V	230V	460V	575V	Catalog Number	Catalog Number	Catalog Number	NO	NC		
0.25	0.75	1.5	2	3	5	3RE4181–5BA●0–0YY0	Not applicable — Standard enclosure includes extra mounting space for accessories.		2	0	S00	3RA2315
0.5	2	3	3	7.5	10	3RE4181–7BA●0–0YY0			2	0	S00	3RA2317
1	1	2	3	5	7.5	3RE4182–3BA●0–0YY0			2	0	S0	3RA2323
1	2	3	3	7.5	10	3RE4182–4BA●0–0YY0			2	0	S0	3RA2324
1	3	5	5	10	15	3RE4182–5BA●0–0YY0			2	0	S0	3RA2325
2	3	7.5	7.5	15	20	3RE4182–6BA●0–0YY0			2	0	S0	3RA2326
2	5	10	10	20	25	3RE4182–7BA●0–0YY0			2	0	S0	3RA2327
3	5	10	10	25	25	3RE4182–8BA●0–0YY0			2	0	S0	3RA2328

① For 3-phase controllers, 208 - 600 V coils will be wired for incoming voltage. 24 and120 V coils will be wired as separate source or control power transformer secondary (if ordered). For single phase controllers, 120 and 240 V coils will be wired for incoming voltage. 24 V coils will be wired as separate source or control power transformer secondary (if ordered). 277 - 600 V coils do not apply.

Selection Tables for 3RE4 Overload Relays

Thermal Overload Relay

Solid-State Overload Relay

Selection Information

- Replace the (♦♦) within the incomplete 3RE4 catalog number with a code selected from the tables below. The frame size must match that of the 3RE4 product.

Thermal Overload Relays, Trip Class 10, Single and Three Phase

Features and technical characteristics:

- Phase failure sensitivity
- Includes NC trip contact and NO alarm contact
- Manual and automatic RESET (selectable)
- Switch position indicator
- TEST function
- STOP button
- Sealable cover (optional)
- Screw-type terminals

Current Adjustment Range (Amp)	Code ♦♦	Thermal Overload Relay (reference only)
Frame Size S00		
0.7 - 1	0J	**3RU2116-0JB0**
0.9 - 1.25	0K	**3RU2116-0KB0**
1.1 - 1.6	1A	**3RU2116-1AB0**
1.4 - 2	1B	**3RU2116-1BB0**
1.8 - 2.5	1C	**3RU2116-1CB0**
2.2 - 3.2	1D	**3RU2116-1DB0**
2.8 - 4	1E	**3RU2116-1EB0**
3.5 - 5	1F	**3RU2116-1FB0**
4.5 - 6.3	1G	**3RU2116-1GB0**
5.5 - 8	1H	**3RU2116-1HB0**
7 - 10	1J	**3RU2116-1JB0**
9 - 12.5	1K	**3RU2116-1KB0**
11 - 16	4A	**3RU2116-4AB0**

Current Adjustment Range (Amp)	Code ♦♦	Thermal Overload Relay (reference only)
Frame Size S0		
1.8 - 2.5	1C	**3RU2126-1CB0**
2.2 - 3.2	1D	**3RU2126-1DB0**
2.8 - 4	1E	**3RU2126-1EB0**
3.5 - 5	1F	**3RU2126-1FB0**
4.5 - 6.3	1G	**3RU2126-1GB0**
5.5 - 8	1H	**3RU2126-1HB0**
7 - 10	1J	**3RU2126-1JB0**
9 - 12.5	1K	**3RU2126-1KB0**
11 - 16	4A	**3RU2126-4AB0**
14 - 20	4B	**3RU2126-4BB0**
17 - 22	4C	**3RU2126-4CB0**
20 - 25	4D	**3RU2126-4DB0**
23 - 28	4N	**3RU2126-4NB0**
27 - 32	4E	**3RU2126-4EB0**
30 - 36	4P	**3RU2126-4PB0**
34 - 40	4F	**3RU2126-4FB0**

Current Adjustment Range (Amp)	Code ♦♦	Thermal Overload Relay (reference only)
Frame Size S2		
22 - 32	4E	**3RU2136-4EB0**
28 - 40	4F	**3RU2136-4FB0**
36 - 45	4G	**3RU2136-4GB0**
40 - 50	4H	**3RU2136-4HB0**
47 - 57	4Q	**3RU2136-4QB0**
54 - 65	4J	**3RU2136-4JB0**
62 - 73	4K	**3RU2136-4KB0**
70 - 80	4R	**3RU2136-4RB0**

Solid-State Overload Relays, Selectable Trip Class 5, 10, 20 and 30, Three Phase Only

Features and technical characteristics:

- Overload, phase failure and unbalance protection
- Internal ground fault detection (selectable)
- Internal power supply
- Includes NC trip contact and NO alarm contact
- Manual and automatic RESET (selectable)
- Electrical remote RESET integrated
- Switch position indicator
- TEST function and self-monitoring
- Sealable cover (optional)
- Screw-type terminals

Current Adjustment Range (Amp)	Code ♦♦	Solid-State Overload Relay (reference only)
Frame Size S00		
0.32 - 1.25	4N	**3RB3113-4NB0**
1 - 4	4P	**3RB3113-4PB0**
3 - 12	4S	**3RB3113-4SB0**
4 - 16	4T	**3RB3113-4TB0**

Current Adjustment Range (Amp)	Code ♦♦	Solid-State Overload Relay (reference only)
Frame Size S0		
0.32 - 1.25	4N	**3RB3123-4NB0**
1 - 4	4P	**3RB3123-4PB0**
3 - 12	4S	**3RB3123-4SB0**
6 - 25	4Q	**3RB3123-4QB0**
10 - 40	4V	**3RB3123-4VB0**

Current Adjustment Range (Amp)	Code ♦♦	Solid-State Overload Relay (reference only)
Frame Size S2		
12 - 50	4U	**3RB3133-4UB0**
20 - 80	4W	**3RB3133-4WB0**

Selection Information

- These tables apply to 3RE4 products.
- Replace the last two characters of the 3RE4 catalog number (Y0), with a code selected from the tables below.

Start-Stop Push Button Combinations

Description	Code (Y0)	Restrictions
(No modifications included)	Y0	—
Start-Stop Push Buttons	B0	1
Start-Stop Push Buttons, Red On Pilot Light	B1	1
Start-Stop Push Buttons, Red On Pilot Light, Green Off Pilot Light	B2	1
Start-Stop Push Buttons, CPT Std Capacity① 208:120V	B3	1 and 2
Start-Stop Push Buttons, CPT Std Capacity① 208:120V, Red On Pilot Light	B4	1 and 2
Start-Stop Push Buttons, CPT Std Capacity① 208:120V, Red On Pilot Light, Green Off Pilot Light	B5	1 and 2
Start-Stop Push Buttons, CPT Std Capacity① 208:24V	B6	1 and 2
Start-Stop Push Buttons, CPT Std Capacity① 208:24V, Red On Pilot Light	B7	1 and 2
Start-Stop Push Buttons, CPT Std Capacity① 208:24V, Red On Pilot Light, Green Off Pilot Light	B8	1 and 2
Start-Stop Push Buttons, CPT Std Capacity① 240:120V	C0	1 and 2
Start-Stop Push Buttons, CPT Std Capacity① 240:120V, Red On Pilot Light	C1	1 and 2
Start-Stop Push Buttons, CPT Std Capacity① 240:120V, Red On Pilot Light, Green Off Pilot Light	C2	1 and 2
Start-Stop Push Buttons, CPT Std Capacity① 240:24V	C3	1 and 3
Start-Stop Push Buttons, CPT Std Capacity① 240:24V, Red On Pilot Light	C4	1 and 3
Start-Stop Push Buttons, CPT Std Capacity① 240:24V, Red On Pilot Light, Green Off Pilot Light	C5	1 and 3
Start-Stop Push Buttons, CPT Std Capacity① 480/240:120V	C6	1, 2 and 4
Start-Stop Push Buttons, CPT Std Capacity① 480/240:120V, Red On Pilot Light	C7	1, 2 and 4
Start-Stop Push Buttons, CPT Std Capacity① 480/240:120V, Red On Pilot Light, Green Off Pilot Light	C8	1, 2 and 4
Start-Stop Push Buttons, CPT Std Capacity① 480/240:24V	D0	1, 3 and 4
Start-Stop Push Buttons, CPT Std Capacity① 480/240:24V, Red On Pilot Light	D1	1, 3 and 4
Start-Stop Push Buttons, CPT Std Capacity① 480/240:24V, Red On Pilot Light, Green Off Pilot Light	D2	1, 3 and 4
Start-Stop Push Buttons, CPT Std Capacity① 600:120V, Red On Pilot Light	P0	1, 2 and 4

Fwd-Rev-Stop Push Button Combinations

Description	Code (Y0)	Restrictions
(No modifications included)	Y0	—
Fwd-Rev-Stop Push Buttons	D3	5
Fwd-Rev-Stop Push Buttons, Red On Pilot Light	D4	5
Fwd-Rev-Stop Push Buttons, Red On Pilot Light, Green Off Pilot Light	D5	5
Fwd-Rev-Stop Push Buttons, CPT Std Capacity① 208:120V	D6	2 and 5
Fwd-Rev-Stop Push Buttons, CPT Std Capacity① 208:120V, Red On Pilot Light	D7	2 and 5
Fwd-Rev-Stop Push Buttons, CPT Std Capacity① 208:120V, Red On Pilot Light, Green Off Pilot Light	D8	2 and 5
Fwd-Rev-Stop Push Buttons, CPT Std Capacity① 208:24V	E0	3 and 5
Fwd-Rev-Stop Push Buttons, CPT Std Capacity① 208:24V, Red On Pilot Light	E1	3 and 5
Fwd-Rev-Stop Push Buttons, CPT Std Capacity① 208:24V, Red On Pilot Light, Green Off Pilot Light	E2	3 and 5
Fwd-Rev-Stop Push Buttons, CPT Std Capacity① 240:120V	E3	2 and 5
Fwd-Rev-Stop Push Buttons, CPT Std Capacity① 240:120V, Red On Pilot Light	E4	2 and 5
Fwd-Rev-Stop Push Buttons, CPT Std Capacity① 240:120V, Red On Pilot Light, Green Off Pilot Light	E5	2 and 5
Fwd-Rev-Stop Push Buttons, CPT Std Capacity① 240:24V	E6	3 and 5
Fwd-Rev-Stop Push Buttons, CPT Std Capacity① 240:24V, Red On Pilot Light	E7	3 and 5
Fwd-Rev-Stop Push Buttons, CPT Std Capacity① 240:24V, Red On Pilot Light, Green Off Pilot Light	E8	3 and 5
Fwd-Rev-Stop Push Buttons, CPT Std Capacity① 480/240:120V	F0	2, 4 and 5
Fwd-Rev-Stop Push Buttons, CPT Std Capacity① 480/240:120V, Red On Pilot Light	F1	2, 4 and 5
Fwd-Rev-Stop Push Buttons, CPT Std Capacity① 480/240:120V, Red On Pilot Light, Green Off Pilot Light	F2	2, 4 and 5
Fwd-Rev-Stop Push Buttons, CPT Std Capacity① 480/240:24V	F3	3, 4 and 5
Fwd-Rev-Stop Push Buttons, CPT Std Capacity① 480/240:24V, Red On Pilot Light	F4	3, 4 and 5
Fwd-Rev-Stop Push Buttons, CPT Std Capacity① 480/240:24V, Red On Pilot Light, Green Off Pilot Light	F5	3, 4 and 5

① A CPT in a NEMA type 1 enclosure with a size S00 or S0 controller requires a large size enclosure. A CPT in a NEMA type 1 enclosure with a size S2 controller requires a standard size enclosure. All other enclosure types may be standard size.

Restrictions:

1. Valid only with non-reversing controllers.
2. Valid only with 120 V coil.
3. Valid only with 24 VAC coil.
4. Not valid with single-phase controllers.
5. Not valid in NEMA Type 1 enclosures.

Selection Information

- These tables apply to 3RE4 products.
- Replace the last two characters of the 3RE4 catalog number (Y0), with a code selected from the tables below.

Hand-Off-Auto Selector Switch Combinations

Description	Code (Y0)	Restrictions
(No modifications included)	Y0	—
Hand-Off-Auto Selector Switch	F6	1
Hand-Off-Auto Selector Switch, Red On Pilot Light	F7	1
Hand-Off-Auto Selector Switch, Red On Pilot Light, Green Off Pilot Light	F8	1
Hand-Off-Auto Selector Switch, CPT Std Capacity① 208:120V	G0	1 and 2
Hand-Off-Auto Selector Switch, CPT Std Capacity① 208:120V, Red On Pilot Light	G1	1 and 2
Hand-Off-Auto Selector Switch, CPT Std Capacity① 208:120V, Red On Pilot Light, Green Off Pilot Light	G2	1 and 2
Hand-Off-Auto Selector Switch, CPT Std Capacity① 208:24V	G3	1 and 3
Hand-Off-Auto Selector Switch, CPT Std Capacity① 208:24V, Red On Pilot Light	G4	1 and 3
Hand-Off-Auto Selector Switch, CPT Std Capacity① 208:24V, Red On Pilot Light, Green Off Pilot Light	G5	1 and 3
Hand-Off-Auto Selector Switch, CPT Std Capacity① 240:120V	G6	1 and 2
Hand-Off-Auto Selector Switch, CPT Std Capacity① 240:120V, Red On Pilot Light	G7	1 and 2
Hand-Off-Auto Selector Switch, CPT Std Capacity① 240:120V, Red On Pilot Light, Green Off Pilot Light	G8	1 and 2
Hand-Off-Auto Selector Switch, CPT Std Capacity① 240:24V	H0	1 and 3
Hand-Off-Auto Selector Switch, CPT Std Capacity① 240:24V, Red On Pilot Light	H1	1 and 3
Hand-Off-Auto Selector Switch, CPT Std Capacity① 240:24V, Red On Pilot Light, Green Off Pilot Light	H2	1 and 3
Hand-Off-Auto Selector Switch, CPT Std Capacity① 480/240:120V	H3	1, 2 and 4
Hand-Off-Auto Selector Switch, CPT Std Capacity① 480/240:120V, Red On Pilot Light	H4	1, 2 and 4
Hand-Off-Auto Selector Switch, CPT Std Capacity① 480/240:120V, Red On Pilot Light, Green Off Pilot Light	H5	1, 2 and 4
Hand-Off-Auto Selector Switch, CPT Std Capacity① 480/240:24V	H6	1, 3 and 4
Hand-Off-Auto Selector Switch, CPT Std Capacity① 480/240:24V, Red On Pilot Light	H7	1, 3 and 4
Hand-Off-Auto Selector Switch, CPT Std Capacity① 480/240:24V, Red On Pilot Light, Green Off Pilot Light	H8	1, 3 and 4
Hand-Off-Auto Selector Switch, CPT Std Capacity① 600:120V, Red On Pilot Light	P1	1, 2 and 4

On-Off Selector Switch Combinations

Description	Code (Y0)	Restrictions
(No modifications included)	Y0	—
On-Off Selector Switch	J0	1
On-Off Selector Switch, Red On Pilot Light	J1	1
On-Off Selector Switch, Red On Pilot Light, Green Off Pilot Light	J2	1
On-Off Selector Switch, CPT Std Capacity① 208:120V	J3	1 and 2
On-Off Selector Switch, CPT Std Capacity① 208:120V, Red On Pilot Light	J4	1 and 2
On-Off Selector Switch, CPT Std Capacity① 208:120V, Red On Pilot Light, Green Off Pilot Light	J5	1 and 2
On-Off Selector Switch, CPT Std Capacity① 208:24V	J6	1 and 3
On-Off Selector Switch, CPT Std Capacity① 208:24V, Red On Pilot Light	J7	1 and 3
On-Off Selector Switch, CPT Std Capacity① 208:24V, Red On Pilot Light, Green Off Pilot Light	J8	1 and 3
On-Off Selector Switch, CPT Std Capacity① 240:120V	K0	1 and 2
On-Off Selector Switch, CPT Std Capacity① 240:120V, Red On Pilot Light	K1	1 and 2
On-Off Selector Switch, CPT Std Capacity① 240:120V, Red On Pilot Light, Green Off Pilot Light	K2	1 and 2
On-Off Selector Switch, CPT Std Capacity① 240:24V	K3	1 and 3
On-Off Selector Switch, CPT Std Capacity① 240:24V, Red On Pilot Light	K4	1 and 3
On-Off Selector Switch, CPT Std Capacity① 240:24V, Red On Pilot Light, Green Off Pilot Light	K5	1 and 3
On-Off Selector Switch, CPT Std Capacity① 480/240:120V	K6	1, 2 and 4
On-Off Selector Switch, CPT Std Capacity① 480/240:120V, Red On Pilot Light	K7	1, 2 and 4
On-Off Selector Switch, CPT Std Capacity① 480/240:120V, Red On Pilot Light, Green Off Pilot Light	K8	1, 2 and 4
On-Off Selector Switch, CPT Std Capacity① 480/240:24V	L0	1, 3 and 4
On-Off Selector Switch, CPT Std Capacity① 480/240:24V, Red On Pilot Light	L1	1, 3 and 4
On-Off Selector Switch, CPT Std Capacity① 480/240:24V, Red On Pilot Light, Green Off Pilot Light	L2	1, 3 and 4

① A CPT in a NEMA type 1 enclosure with a size S00 or S0 controller requires a large size enclosure. A CPT in a NEMA type 1 enclosure with a size S2 controller requires a standard size enclosure. All other enclosure types may be standard size.

Restrictions:

1. Valid only with non-reversing controllers.
2. Valid only with 120 V coil.
3. Valid only with 24 VAC coil.
4. Not valid with single-phase controllers.

Selection Information

- These tables apply to 3RE4 products.
- Replace the last two characters of the 3RE4 catalog number (Y0), with a code selected from the tables below.

Fwd-Off-Rev Selector Switch Combinations

Description	Code (Y0)	Restrictions
(No modifications included)	Y0	—
Fwd-Off-Rev Selector Switch	L3	—
Fwd-Off-Rev Selector Switch, Red On Pilot Light	L4	—
Fwd-Off-Rev Selector Switch, Red On Pilot Light, Green Off Pilot Light	L5	—
Fwd-Off-Rev Selector Switch, CPT Std Capacity① 208:120V	L6	1
Fwd-Off-Rev Selector Switch, CPT Std Capacity① 208:120V, Red On Pilot Light	L7	1
Fwd-Off-Rev Selector Switch, CPT Std Capacity① 208:120V, Red On Pilot Light, Green Off Pilot Light	L8	1
Fwd-Off-Rev Selector Switch, CPT Std Capacity① 208:24V	M0	2
Fwd-Off-Rev Selector Switch, CPT Std Capacity① 208:24V, Red On Pilot Light	M1	2
Fwd-Off-Rev Selector Switch, CPT Std Capacity① 208:24V, Red On Pilot Light, Green Off Pilot Light	M2	2
Fwd-Off-Rev Selector Switch, CPT Std Capacity① 240:120V	M3	1
Fwd-Off-Rev Selector Switch, CPT Std Capacity① 240:120V, Red On Pilot Light	M4	1
Fwd-Off-Rev Selector Switch, CPT Std Capacity① 240:120V, Red On Pilot Light, Green Off Pilot Light	M5	1
Fwd-Off-Rev Selector Switch, CPT Std Capacity① 240:24V	M6	2
Fwd-Off-Rev Selector Switch, CPT Std Capacity① 240:24V, Red On Pilot Light	M7	2
Fwd-Off-Rev Selector Switch, CPT Std Capacity① 240:24V, Red On Pilot Light, Green Off Pilot Light	M8	2
Fwd-Off-Rev Selector Switch, CPT Std Capacity① 480/240:120V	N0	1 and 3
Fwd-Off-Rev Selector Switch, CPT Std Capacity① 480/240:120V, Red On Pilot Light	N1	1 and 3
Fwd-Off-Rev Selector Switch, CPT Std Capacity① 480/240:120V, Red On Pilot Light, Green Off Pilot Light	N2	1 and 3
Fwd-Off-Rev Selector Switch, CPT Std Capacity① 480/240:24V	N3	2 and 3
Fwd-Off-Rev Selector Switch, CPT Std Capacity① 480/240:24V, Red On Pilot Light	N4	2 and 3
Fwd-Off-Rev Selector Switch, CPT Std Capacity① 480/240:24V, Red On Pilot Light, Green Off Pilot Light	N5	2 and 3

Restrictions:

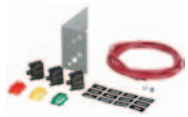
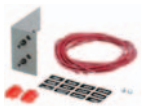
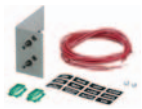
1. Valid only with 120 V coil.
2. Valid only with 24 VAC coil.
3. Not valid with single-phase controllers.

① A CPT in a NEMA type 1 enclosure with a size S00 or S0 controller requires a large size enclosure. A CPT in a NEMA type 1 enclosure with a size S2 controller requires a standard size enclosure. All other enclosure types may be standard size.

Pilot Devices

	Device①	Enclosure NEMA Type	Catalog Number
49SDPB5	Start-Stop Push Buttons, momentary②	1	**49SDPB5**
		3/3R/4/12 & 4X	**49SDP05**
49SDSBJ	Fwd-Rev-Stop Push Buttons, momentary②	1	**NA**
		3/3R/4/12 & 4X	**49SDP02**
49SDSB4	Hand-Off-Auto Selector Switch	1	**49SDSBJ**
		3/3R/4/12 & 4X	**49SDS01**
Start Push Button	On-Off Selector Switch	1	**49SDSB4**
Stop Push Button		3/3R/4/12 & 4X	**49SDS04**
2-Position Selector Switch	Fwd-Off-Rev Selector Switch	1	**49SDSBJ**
3-Position Selector Switch		3/3R/4/12 & 4X	**49SDS02**

Pilot Lights

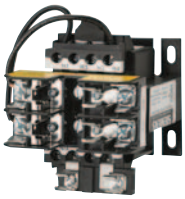
	Device①	Enclosure NEMA Type	Voltage	Catalog Number
	Light module and lens color: RED, GREEN, and AMBER. Legends include: ON, RUN, OFF③, OLR TRIPPED④	1	24 to 240 V AC/DC	**49SDLBU**
			277 V AC	**49SDLBL**
	Red FORWARD, Red REVERSE	1	24 to 240 V AC/DC	**49SDLB7RU**
			277 V AC	**49SDLB7RL**
		3/3R/4/12 & 4X 3/3R/4/12 & 4X	24 to 240 V AC/DC	**49SDL07RU**
			277 V AC	**49SDL07RL**
	Green FORWARD, Green REVERSE	1	24 to 240 V AC/DC	**49SDLB7GU**
			277 V AC	**49SDLB7GL**
		3/3R/4/12 & 4X 3/3R/4/12 & 4X	24 to 240 V AC/DC	**49SDL07GU**
			277 V AC	**49SDL07GL**
	Red ON	3/3R/4/12 & 4X 3/3R/4/12 & 4X	24 to 240 V AC/DC	**49SDL0BRU**
			277 V AC	**49SDL0BRL**
	Red OFF③	3/3R/4/12 & 4X 3/3R/4/12 & 4X	24 to 240 V AC/DC	**49SDL0ARU**
			277 V AC	**49SDL0ARL**
	Green ON	3/3R/4/12 & 4X 3/3R/4/12 & 4X	24 to 240 V AC/DC	**49SDL0BGU**
			277 V AC	**49SDL0BGL**
	Green OFF③	3/3R/4/12 & 4X 3/3R/4/12 & 4X	24 to 240 V AC/DC	**49SDL0AGU**
			277 V AC	**49SDL0AGL**

Auxiliary Contacts

	Device	Frame Size	Catalog Number
	1 NO & 1 NC laterally mounted, screw terminals	S00	**3RH2911-1DA11**
		S0 and S2	**3RH2921-1DA11**
	2 NO laterally mounted, screw terminals	S00	**NA**
		S0 and S2	**3RH2921-1DA20**
	2 NC laterally mounted, screw terminals	S00	**3RH2911-1DA02**
		S0 and S2	**3RH2921-1DA02**

① 3SU 22 mm devices. Pilot lights include LED bulbs.
② Each contactor must have a normally open (NO) auxiliary contact available for seal-in circuit. Order separately as needed.
③ To use as an OFF indicator, the contactor must have a normally closed (NC) auxiliary contact available for the circuit. Order separately as needed.
④ To use as an overload relay (OLR) trip indicator, the OLR must have a normally open (NO) auxiliary contact available for the circuit.

Control Power Transformers①



Device	Frame Size	Catalog Number	Transformer Table		
			Primary Volts	Secondary Volts	Code
45 VA, 1-secondary fuse	S00	**KT*050**	120	24	1
75 VA, 2-primary and 1-secondary fuses	S0 & S2	**KT*075**	208	24	G
			208	120	H
			240/480	24	4
			240/480	120	8
			277	24	5
			277	120	7
			600	24	6
			600	120	9

► Replace * with code from Transformer Table.
► 45VA CPT does not require primary fuses per NEC.

Control Relays and Timers①②

Relay Timer

Device	Catalog Number	Coil Voltage Table	
		Voltage	Code
Control relay, 4 NO / 0 NC	**3RH2140-1●●●0**	24 VAC 50/60 Hz	AB0
Control relay, 3 NO / 1 NC	**3RH2131-1●●●0**	24 VDC	BB4
Control relay, 2 NO / 2 NC	**3RH2122-1●●●0**	110/120 VAC 50/60 Hz	AK6
ON-delay timer, 0.05 sec. – 100 hr., 24 – 240V AC/DC	**3RP2525-1BW30**	208 VAC 50/60 Hz	AM2
OFF-delay timer, 0.05 sec. – 100 hr., 24 – 240V AC/DC	**3RP2535-1AW30**	220/240 VAC 50/60 Hz	AP6
		277 VAC 60 Hz	—
		480 VAC 60 Hz	AV6
		600 VAC 60 Hz	—

► Replace ●●● with code from Coil Voltage Table.
► Relays and timers include screw terminals.

Miscellaneous

3NW7513-0HG 8WA1808

8WA10111DF11

MTR5

Device	Catalog Number
1-pole fuse block for control circuit, 600V / 30A, DIN rail mounted, CC fuses (not included)	**3NW7513-0HG**
2-pole fuse block for control circuit, 600V / 30A, DIN rail mounted, CC fuses (not included)	**3NW7523-0HG**
Ground Lug, 3 Conductor, 2-14 AWG AL/CU Wire	**75D28182001**
Terminal block, 1-point unwired, DIN rail mounted, 6mm, 26A②	**8WA10111DF11**
End retainer for DIN rail②	**8WA1808**
DIN rail kit, 35mm x 5 in, for mounting optional accessories①	**MTR5**
Sealable cover for rotary dial on overload relay (10 per package)	**3RV29 08-0P**

Replacement Parts

Device	Catalog Number
Contactor parts (Obtain Cat. No. from device and refer to Industrial Control Catalog).	—
Overload relay (Obtain Cat. No. from device and refer to Industrial Control Catalog).	—
Overload Relay Reset Operator for all NEMA Type enclosures	**49MBRS**

Enclosure Kits

Controller Frame Size & Type NR = Non-Reversing R = Reversing	Type 1 Standard Size Catalog Number	Type 1 Large Size⑤ Catalog Number	Type 3/3R/4/12 Standard Size⑥ Catalog Number	Type 4X 304 S.S. Standard Size⑥ Catalog Number
S00 NR, S0 NR	**49EC14EB110705R**	**49EC14GB140807R③**	**49EFN121006XRX**	**49EFW121006XRX**
S00 R, S0 R	**49EC14GB140807R③**	**49EC14IB201208R④**	**49EFN121006XRX**	**49EFW121006XRX**
S2 NR, S2 R	**49EC14IB201208R④⑥**	—	**49EFN141208XRX**	**49EFW141208XRX**

① The accessory in a NEMA type 1 enclosure requires a large size enclosure. All other enclosure types may be standard size.
② Requires DIN rail kit or equivalent.
③ Enclosure 49EC14GB140807R requires mounting adaptor plate 49EFA070500XXA which is sold seperately.
④ Enclosure 49EC14IB201208R requires mounting adaptor plate 49EFA060800XXA which is sold seperately.
⑤ These large enclosures are required for certain accessories as indicated in the Field Modification pages.
⑥ These standard size enclosures include extra mounting space for accessories.

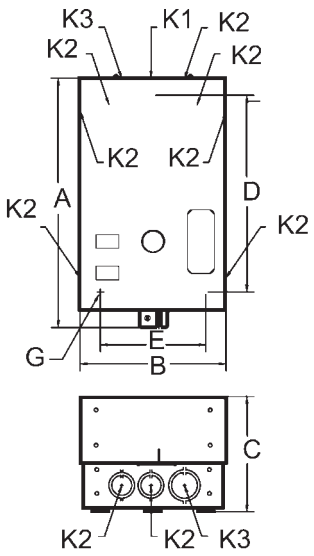


Figure 1

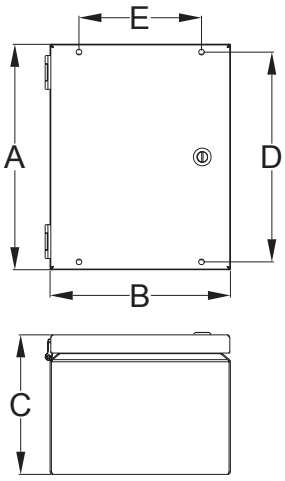


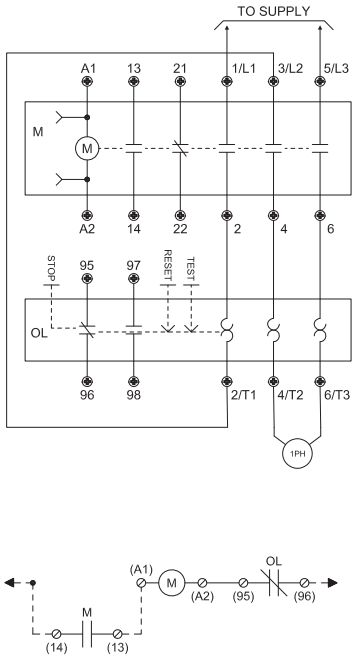
Figure 2

3RE4 Non-Combination Type Controllers

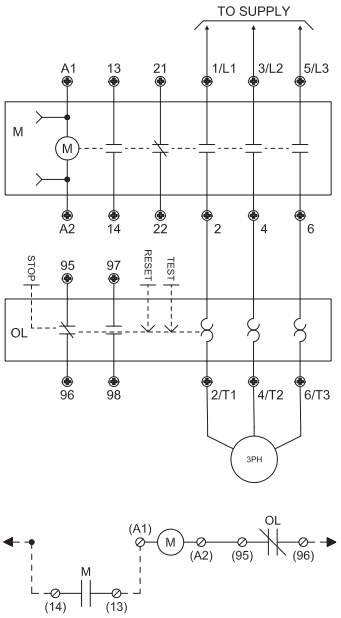
Enclosure Type	Contactor Rating	Fig.	Outline Dimensions			Mounting		Conduit Size		
			A	B	C	D	E	K1	K2	K3
1 (standard size)	S00 NR, S0 NR	1	10.97	6.41	5.03	8.22	4.62	0.5	0.50-0.75	0.75–1
	S00 R, S0 R	1	13.53	7.97	6.38	10.25	6.00	0.50-0.75	0.75-1	1-1.25
	S2 NR, S2 R	1	19.12	11.38	7.69	15.62	8.25	0.50-0.75	1-1.25	1.5-2
1 (large size)	S00 NR, S0 NR	1	13.53	7.97	6.38	10.25	6.00	0.50-0.75	0.75-1	1-1.25
	S00 R, S0 R	1	19.12	11.38	7.69	15.62	8.25	0.50-0.75	1-1.25	1.5-2
3/3R/4/12 & 4X 304 SS	S00 NR, S00 R, S0 NR, S0 R	2	12.00	10.00	6.00	11.30	7.44	—	—	—
	S2 NR, S2 R	2	14.00	12.00	8.00	13.30	9.44	—	—	—

Sxx = Frame size; NR = Non-reversing; R = Reversing
Mounting screw G is 0.25".
Dimensions are in inches.

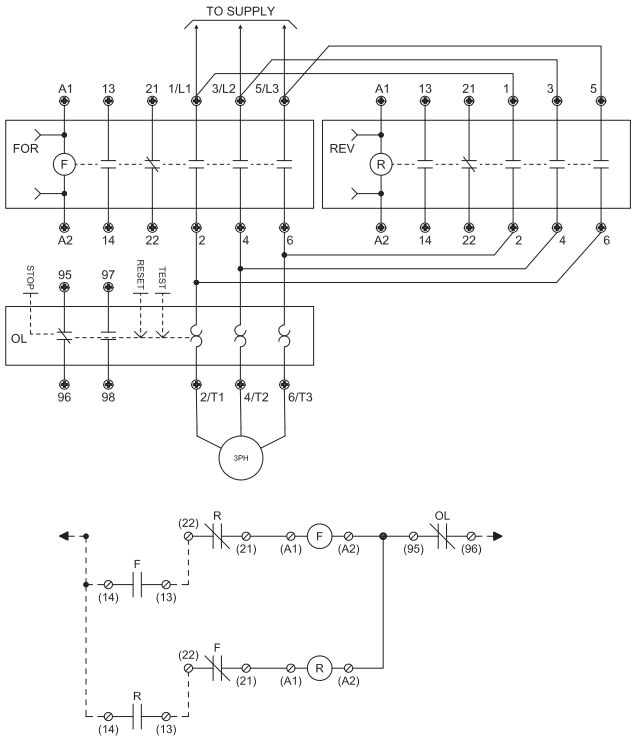
Non-combination non-reversing starter,1-phase, 2-pole



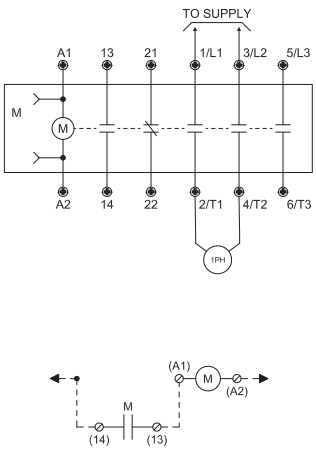
Non-combination non-reversing starter,3-phase, 3-pole



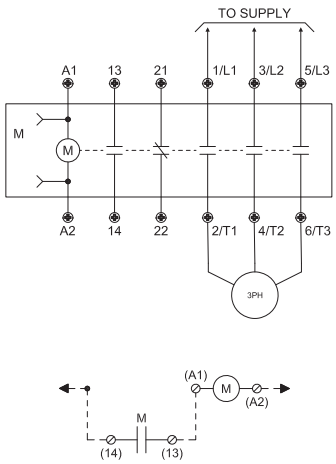
Non-combination reversing starter, 3-phase, 3-pole



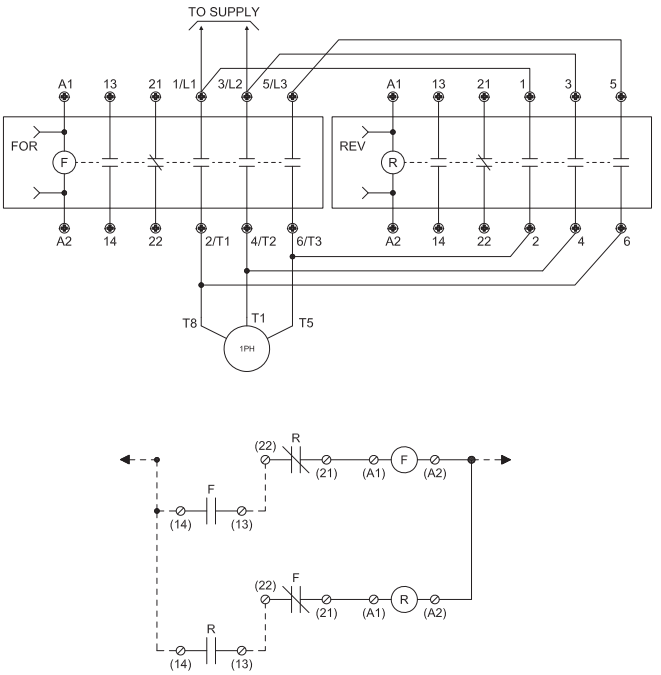
Non-combination non-reversing contactor,1-phase, 2-pole



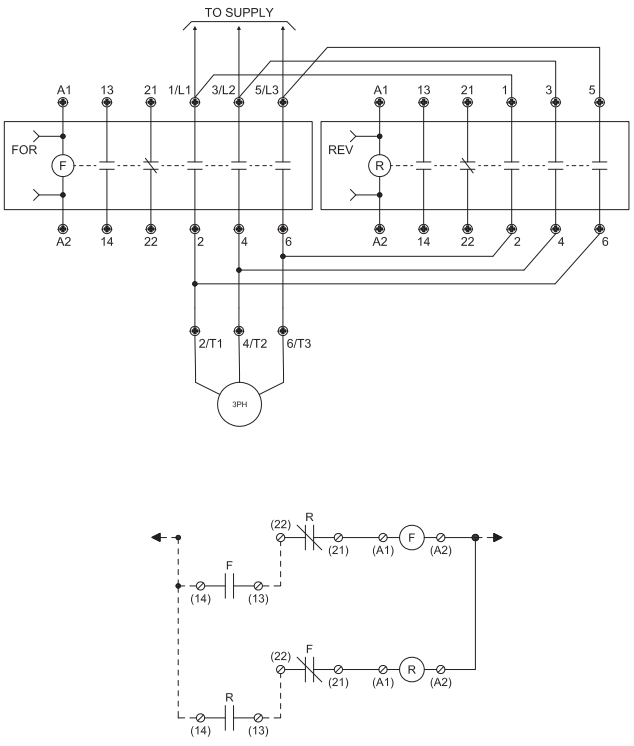
Non-combination non-reversing contactor,3-phase, 3-pole



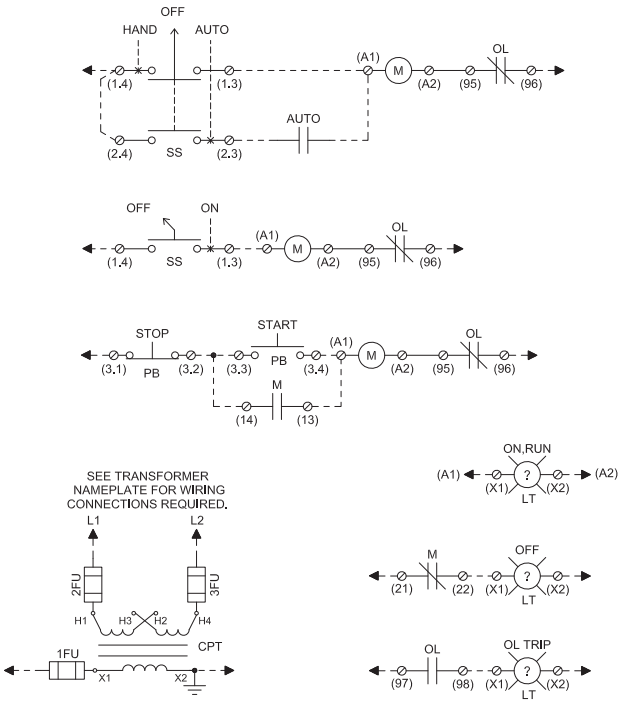
Non-combination reversing contactor, 1-phase, 3-wlre, 2-pole



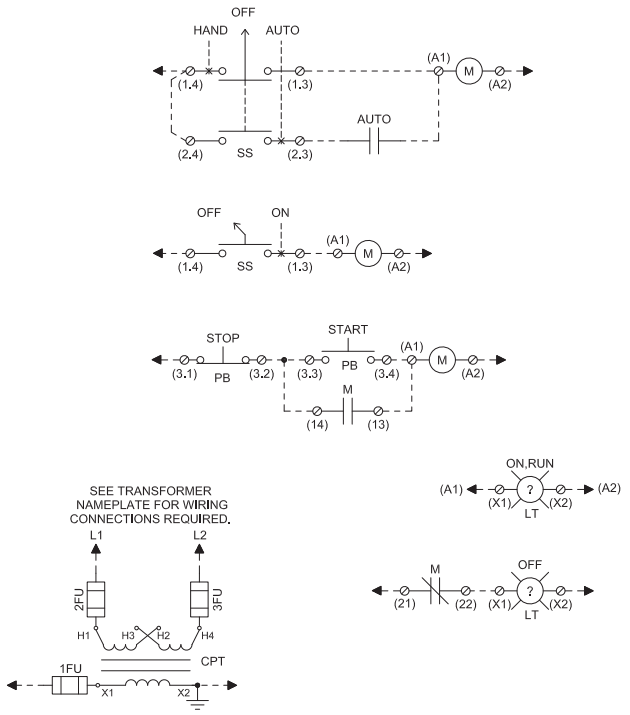
Non-combination reversing contactor, 3-phase, 3-pole



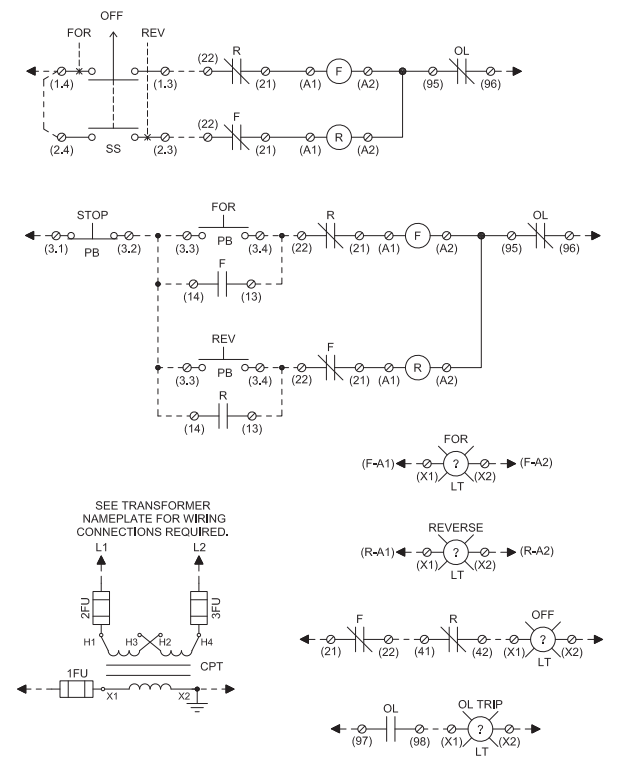
Control options for non-reversing starters



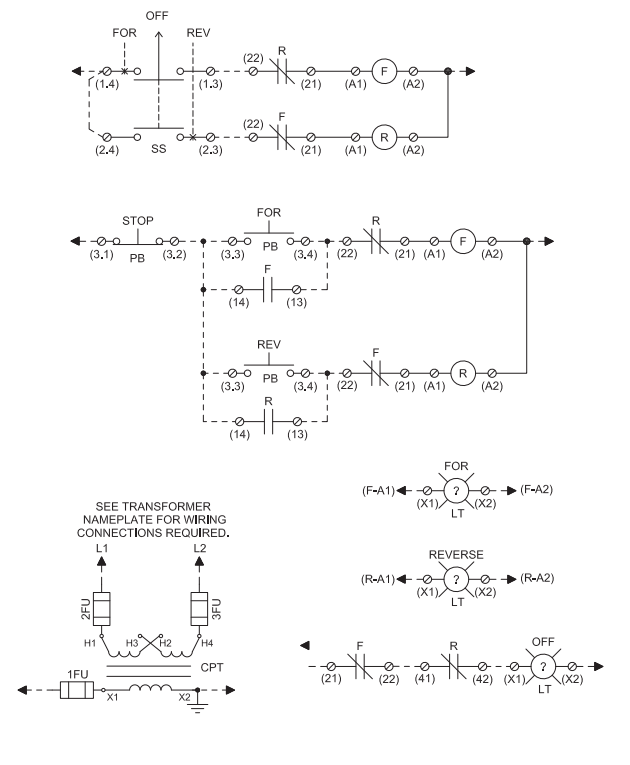
Control options for non-reversing contactors



Control options for reversing starters



Control options for reversing contactors



Notes

Soft Starters

Introduction

Overview

More information	
Homepage, see www.usa.siemens.com/soft-starter	Industry Online Support (SIOS) topic page, see https://support.industry.siemens.com/cs/ww/en/view/109747404
Industry Mall, see www.siemens.com/product?3RW	Simulation Tool for Soft Starters (STS), see page 6/8 or https://support.industry.siemens.com/cs/ww/en/view/101494917
TIA Selection Tool Cloud (TST Cloud), see https://www.siemens.com/tstcloud/?node=Sirius3rwFolder	

3RW55

3RW55 Failsafe

3RW52

3RW50

3RW40

3RW30

3RW soft starters		Page
High Performance soft starters		
3RW55 soft starters	• TIA integration optional • Plug-in communication modules for PROFINET, PROFIBUS, EtherNet/IP and Modbus • Removable HMI module with color display, local interface and slot for a micro SD memory card • Extended protection functions • Up to 1000HP @ 480V (600V and 690V ratings also available) • Automatic parameterization for simple commissioning and reliability even under changing load conditions • Hybrid switching devices for minimum power loss and three-phase motor control for optimum/symmetrical motor control • Pump stop for reduced mechanical loading and optimum pump stop control • ATEX/IECEx certification	17-204
3RW55 Failsafe soft starters	• TIA integration optional • Plug-in communication modules for PROFINET, PROFIBUS, EtherNet/IP and Modbus • Removable HMI module with color display, local interface and slot for a micro SD memory card • Extended protection functions • Up to 400HP @ 480V • SIL 1 - PL c / STO without additional components • SIL 3 - PL e / STO with additional contactor and safety relay • Hybrid switching devices for minimum power loss and three-phase motor control for optimum/symmetrical motor control • Pump stop for reduced mechanical loading and optimum pump stop control • ATEX/IECEx certification	17-228
General Performance soft starters		
3RW52 soft starters	• TIA integration optional • Plug-in communication modules for PROFINET, PROFIBUS, EtherNet/IP and Modbus • HMI modules optional • Soft starting and stopping • Current limiting • Motor overload protection (optionally with thermistor motor protection) • Analog output (optional) • Up to 400HP @ 480V (600V ratings also available) • Hybrid switching devices for minimum power loss and three-phase motor control for optimum/symmetrical motor control • Soft Torque for reduced mechanical loading and optimum pump stop • Parameterization using potentiometers	17-245

Soft Starters

Introduction

3RW55

3RW55 Failsafe

3RW52

3RW50

3RW40

3RW30

		Page
3RW soft starters		
Basic Performance soft starters		
3RW50 soft starters	• TIA integration optional • Communication modules for PROFINET, PROFIBUS, EtherNet/IP and Modbus • HMI modules optional • Soft starting and stopping • Current limiting • Motor overload protection (optionally with thermistor motor protection) • Analog output (optional) • Up to 400HP @ 480V (600V ratings also available) • Hybrid switching devices for minimum power loss and two-phase motor control • Soft Torque for reduced mechanical loading and optimum pump stop • Parameterization using potentiometers • ATEX/IECEx certification	17-263
3RW40 soft starters	• Soft starting and stopping • Current limiting • Motor overload protection (optionally with thermistor motor protection) • Up to 75HP @ 480V 600V ratings also available) • Hybrid switching devices for minimum power loss and two-phase motor control • ATEX certification	17-275
3RW30 soft starters	• Soft starting with voltage ramp • Up to 75HP @ 480V	17-286
For enclosed applications		
Enclosures in NEMA 1, 3, 4, & 12 types UL/CSA listed	• Complete starter includes 3RW40 or 3RW44 and CPT • Performance Range of up to 600 Hp (at 460 V) • Combination options include circuit breaker or fusible disconnect • Application areas: - Compressors - Pumps - Stamping presses - Cooling towers - Molding and extruding - Chippers and debarkers - Lumber processing - Pulp & paper processing - Conveyors - Textiles - HVAC	17-303

Use of soft starters in conjunction with IE3/IE4 motors

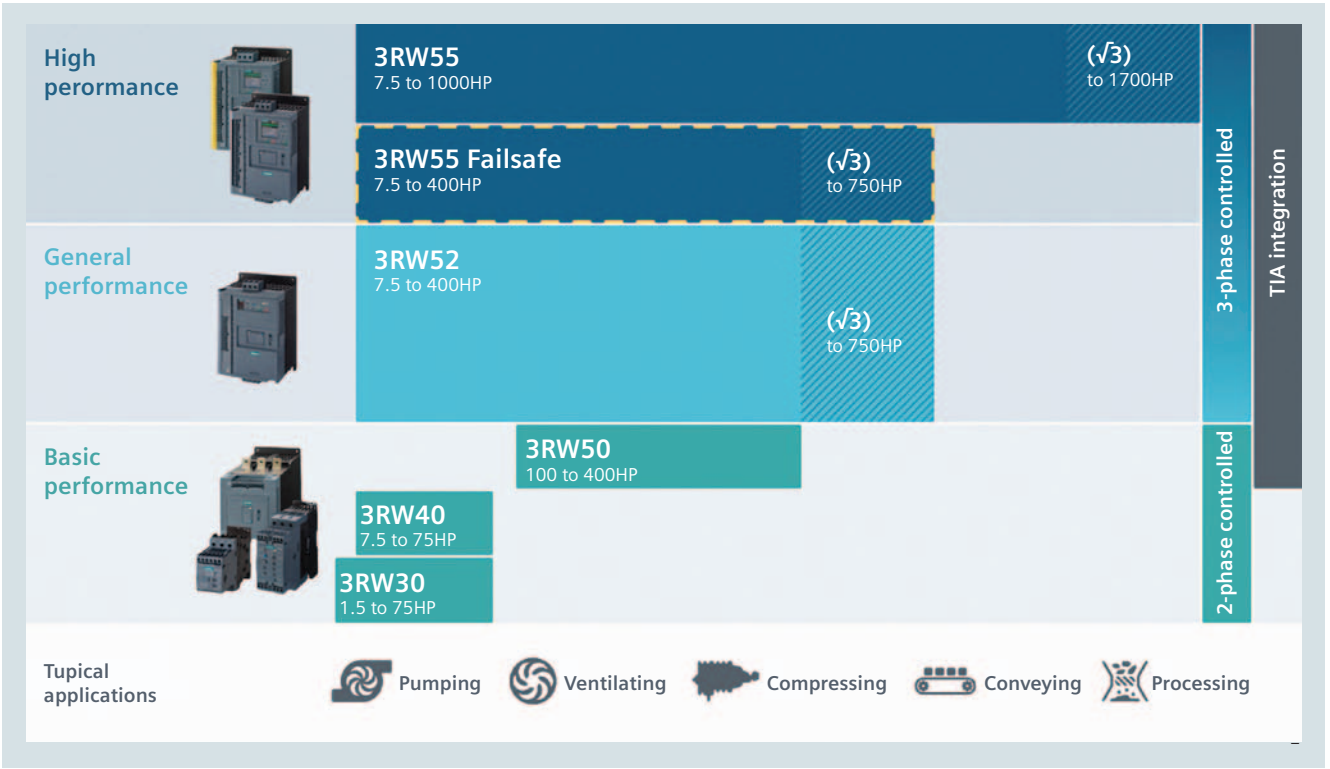
Note:

For the use of SIRIUS 3RW soft starters in conjunction with highly energy-efficient IE3/IE4 motors, please observe the information on dimensioning and configuring, see Application Manual.

Overview

More information	
Homepage, see www.usa.siemens.com/soft-starter Industry Mall, see www.siemens.com/product?3RW TIA Selection Tool Cloud (TST Cloud), see https://www.siemens.com/tstcloud/?node=Sirius3rwFolder	Industry Online Support (SIOS) topic page, see https://support.industry.siemens.com/cs/ww/en/view/109747404 Simulation Tool for Soft Starters (STS), see page 17-199 or https://support.industry.siemens.com/cs/ww/en/view/101494917

SIRIUS 3RW soft starters – as versatile as your application



Applications	High Performance	General Performance	Basic Performance		
SIRIUS soft starters	3RW55/3RW55-F	3RW52	3RW50	3RW40	3RW30
Selection aid for soft starters					
Normal starting (CLASS 10)					
Pumps	●	●	●	●	●
Pumps with special pump stop (to prevent water hammer)	●	❍	❍		
Heat pumps	●	●	●	●	●
Hydraulic pumps	●	●	●	●	❍
Presses	●	●	●	●	❍
Conveyor belts	●	●	●	●	❍
Roller conveyors	●	●	●	●	❍
Screw conveyors	●	●	●	●	❍
Escalators	●	●	●	●	
Piston compressors	●	●	●	●	
Screw compressors	●	●	●	●	
Small fans[1]	●	●	●	●	
Centrifugal blowers	●	●	●	●	
Bow thrusters	●	●	●	●	
Heavy starting (CLASS 20)					
Stirrers	●	❍	❍	❍	
Extruders	●	❍	❍	❍	
Lathes	●	❍	❍	❍	
Milling machines	●	❍	❍	❍	
Heavy starting (CLASS 30)					
Large fans[2]	●				
Circular saws/bandsaws	●				
Centrifuges	●				
Mills	●				
Crushers	●				

● Recommended soft starter

❍ Possible soft starter

[1] The mass inertia of the fan is <10 times the mass inertia of the motor.

[2] The mass inertia of the fan is ≥10 times the mass inertia of the motor.

Applications			High Performance		General Performance	Basic Performance		
SIRIUS soft starters			**3RW55**	**3RW55-F**	**3RW52**	**3RW50**	**3RW40**	**3RW30**
General technical specifications								
Operational current at 40 °C		A	13 ... 2 217	13 ... 987	13 ... 987	143 ... 570	12.5 ... 106	3 ... 106
Operational voltage		V	200 ... 690[1]	200 ... 480	200 ... 600	200 ... 600	200 ... 600	200 ... 480
Operating power for three-phase motors								
• At 400 V, at 40 °C	- Inline circuit	kW	5.5 ... 710	5.5 ... 315	5.5 ... 315	75 ... 315	5.5 ... 55	1.5 ... 55
	- Inside-delta circuit	kW	11 ... 1 200	11 ... 560	11 ... 560	--	--	--
• At 460/480 V at 50 °C	- Inline circuit	hp	7.5 ... 1 000	7.5 ... 400	7.5 ... 400	100 ... 400	7.5 ... 75	1.5 ... 75
	- Inside-delta circuit	hp	10 ... 1 700	10 ... 750	10 ... 750	--	--	--
Ambient temperature[2]		°C	-25 ... +60	-25 ... +60	-25 ... +60	-25 ... +60	-25 ... +60	-25 ... +60
Soft starting/ramp-down			✓	✓	✓	✓	✓	✓[3]
Voltage ramp			✓	✓	✓	✓	✓	✓
Starting voltage		%	20 ... 100	20 ... 100	30 ... 100	30 ... 100	40 ... 100	40 ... 100
Ramp-up and ramp-down time		s	0 ... 360	0 ... 360	0 ... 20	0 ... 20	0 ... 20	0 ... 20[3]
Pump stop (torque control)[4]			✓	✓	--	--	--	--
• Starting torque		%	10 ... 100	10 ... 100	--	--	--	--
• Torque limit		%	20 ... 200	20 ... 200	--	--	--	--
Soft Torque (torque limit)			--	--	✓	✓	--	--
Integral bypass contact system			✓	✓	✓	✓	✓	✓
Intrinsic device protection			✓	✓	✓	✓	✓	--
Motor overload protection			✓[5]	✓[5]	✓	✓[5]	✓[5]	--
Thermistor motor protection evaluation			✓	✓	✓[6]	✓[6]	✓[6]	--
Analog output			✓	✓	✓[6]	✓[6]	--	--
Remote RESET			✓	✓	✓	✓	✓	--
Adjustable current limiting			✓	✓	✓	✓	✓	--
Inside-delta circuit[1]			✓	✓	✓	--	--	--
Breakaway pulse			✓	✓	--	--	--	--
Automatic parameterization			✓	✓	--	--	--	--
Pump cleaning			✓	✓	--	--	--	--
Condition monitoring			✓	✓	--	--	--	--
User account administration[8]			✓	✓	--	--	--	--
Creep speed in both directions of rotation			✓	--	--	--	--	--
Reversing duty			✓	✓	--	--	--	--
Reversing DC braking[4][7]			✓	--	--	--	--	--
DC braking[4][7]			✓	--	--	--	--	--
Dynamic DC braking[4][7]			✓	--	--	--	--	--
Motor heating			✓	--	--	--	--	--
Communication function[9]			✓	✓	✓	✓	--	--
HMI module installable in the cabinet door			✓	✓	✓[9]	✓[9]	--	--
Operating measured value display			✓	✓	✓[9]	✓[9]	--	--
Logbooks			✓	✓	✓[9]	✓[9]	--	--
Statistical data and slave pointer function			✓	✓	✓[9]	✓[9]	--	--
Trace function[8]			✓	✓	--	--	--	--
Programmable control inputs and outputs			✓	✓	--	--	--	--
Number of parameter sets			3	3	1	1	1	1
Parameterizable via software[8]			✓	✓	--	--	--	--
Number of controlled phases			3	3	3	2	2	2
Heavy starting CLASS 30[4]			✓	✓	--	--	--	--

✓ Function available
-- Function not available

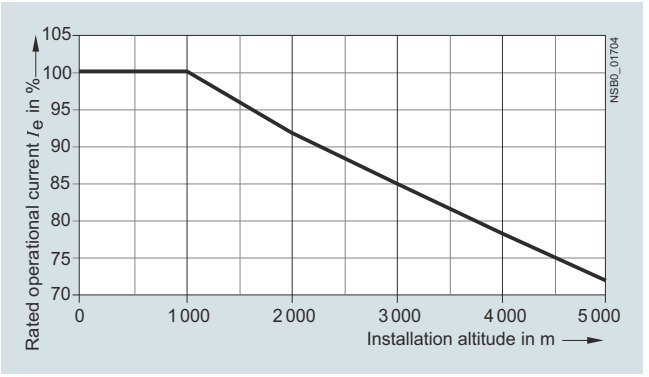
1) Inside-delta circuit only up to operational voltage 600 V.
2) Note derating above 40 °C.
3) Only soft starting available for 3RW30.
4) Calculate soft starter and motor with size allowance where required.
5) When using the motor overload protection according to ATEX/IECEx, an upstream contactor may be required, see page 17-202.
6) Special device versions only.
7) Not possible in inside-delta circuit.
8) With software Soft Starter ES (TIA Portal).
9) Only in conjunction with special accessories.

Constraints

The 3RW soft starters should always be designed on the basis of the required rated operational current of the motor.
The motor ratings listed in the selection and ordering data are rough guide values and designed for basic starting conditions (CLASS 10). For other starting conditions we recommend the Simulation Tool for Soft Starters (STS).

Motor rating data in kW and hp is based on IEC 60947-4-1.

At an installation altitude above 2 000 m, max. permissible operational voltage is reduced to 480 V.



Installation altitude for SIRIUS 3RW soft starters

The selection and ordering data were determined for the following constraints (stand-alone installation without auxiliary fan)

Applications		High Performance	General Performance	Basic Performance		
SIRIUS soft starters		**3RW55/3RW55-F**	**3RW52**	**3RW50**	**3RW40**	**3RW30**
Constraints						
Maximum starting time	s	20	10			3
Maximum starting current in % of motor current	I_e	300				
Maximum number of starts per hour	1/h	5				20

Simulation Tool for Soft Starters (STS)

The Simulation Tool for Soft Starters (STS) provides a convenient means of designing soft starters using a simple, quick and easy-to-use interface.
Entering the motor and load data will simulate the application and prompt suggestions for suitable soft starters.

Link to the free download of the Simulation Tool for Soft Starters (STS).

- Simple, quick and user-friendly interface
- Detailed and up-to-date Siemens motor database, including IE3/IE4 motors.
- Simulation of heavy starting up to CLASS 30
- Update-capable (e.g. motors, load types, functions)
- Fast simulations with minimum input data
- Immediate, graphical curve charts of start operations with limit values
- Table view of suitable soft starters for the application

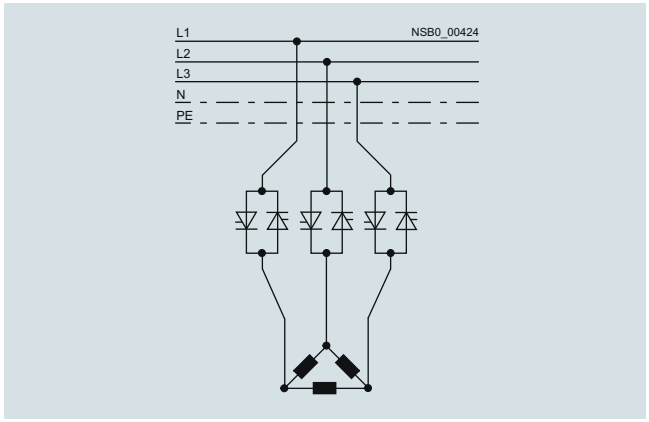
Everything at a glance: Simulation and results list

Circuit concept

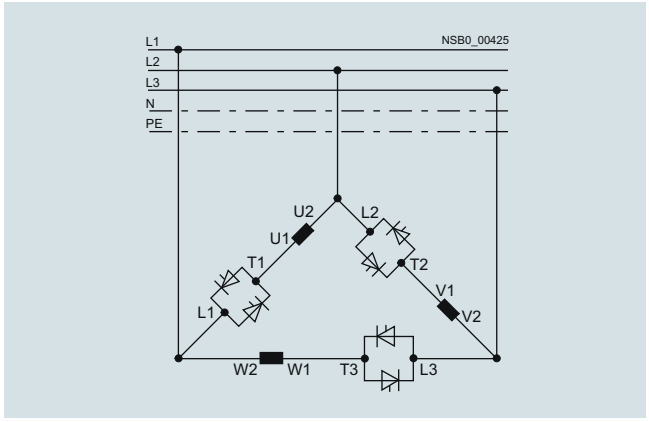
Three-phase controlled SIRIUS 3RW soft starters can be operated in two different types of circuit:

- Inline circuit
  The controls for isolating and protecting the motor are simply connected in series with the soft starter. The motor is connected to the soft starter with three leads.
- Inside-delta circuit
  The wiring is similar to that of wye-delta starters. The phases of the soft starter are connected in series with the individual motor windings. The soft starter then only has to carry the phase current, amounting to about 58% of the rated motor current (conductor current).

Comparison of the types of circuit



Inline circuit: Rated current I_e corresponds to the rated motor current I_n, three cables to the motor



Inside-delta circuit: Rated current I_e corresponds to approx. 58% of the rated motor current I_n, six cables to the motor (as for wye-delta starters)

Which circuit?

Using the inline circuit involves the lowest wiring outlay. If the soft starter to motor connections are long, this circuit is preferable.

The wiring complexity is twice as high when using the inside-delta circuit, but a smaller device can be used with the same rating. Thanks to the choice of operating mode between the inline circuit and inside-delta circuit, it is always possible to select the most favorable solution.

The braking function is possible only in the inline circuit. The inside-delta circuit cannot be used in 690 V line supplies.

Configuration

The solid-state 3RW soft starters are designed for normal starting. In case of heavy starting or increased starting frequency, a larger unit must be selected. The 3RW52 soft starters may be used in isolated supply networks (IT systems) up to 600 V AC and the 3RW55 soft starters even up to 690 V.

For long starting times it is recommended to have a PTC sensor or temperature switch in the motor. This also applies for the ramp-down modes torque control, pump stop and DC braking, because during the ramp-down time in these modes, an additional current loading applies in contrast to free ramp-down.

No capacitive elements are permitted in the motor feeder between the SIRIUS 3RW soft starter and the motor (e.g. no reactive-power compensation equipment). In addition, neither static systems for reactive-power compensation nor dynamic PFC (Power Factor Correction) must be operated in parallel during starting and ramp-down of the soft starter. This is important to prevent faults arising on the compensation equipment and/or the soft starter.

All elements of the main circuit (such as fuses and controls) should be dimensioned for direct-on-line starting, following the local short-circuit conditions. Fuses and switching devices must be ordered separately. The harmonic component load for starting currents must be taken into consideration for the selection of motor starter protectors (selection of release). Please observe the maximum switching frequencies specified in the technical specifications.

Notes:

When three-phase motors are switched on, voltage drops occur as a rule on starters of all types (direct-on-line starters, wye-delta starters, soft starters). The infeed transformer must always be dimensioned such that the voltage dip when starting the motor remains within the permissible tolerance. If the infeed transformer is dimensioned with only a small margin, it is best for the control voltage to be supplied from a separate circuit (independently of the main voltage) in order to avoid the potential switching off of the soft starter.

For dimensioning soft starters, we recommend our Simulation Tool for Soft Starters (STS), see page 17-199 or our Technical Support: https://support.industry.siemens.com/My/ww/en/requests.

Recommended parameters for the initial commissioning of our SIRIUS 3RW soft starters are listed in every report of our Simulation Tool for Soft Starters (STS). In addition, our High Performance soft starters provide support by means of their commissioning wizards.

Motor feeders with soft starters

The type of coordination according to which the motor feeder with soft starter is mounted depends on the application-specific requirements. Normally, fuseless mounting (combination of motor starter protector and soft starter) is sufficient.

If type of coordination "2" is to be fulfilled, then semiconductor fuses must be fitted in the motor feeder.

ToC 1	Type of coordination "1" according to IEC 60947-4-1: After a short-circuit incident, the unit is defective and therefore unsuitable for further use (protection of persons and system guaranteed).
ToC 2	Type of coordination "2" according to IEC 60947-4-1: After a short-circuit incident the unit is suitable for further use (protection of persons and system guaranteed). The type of coordination refers to soft starters in combination with the stipulated protective device (motor starter protector/fuse), not to any additional components in the feeder.
	The types of coordination are indicated in the corresponding tables by the symbols shown on orange backgrounds.

Feeder tests and events

To keep the scope of feeder tests with SIRIUS 3RW soft starters within economically reasonable limits, tests were conducted with feeder components (motor starter protectors/circuit breakers, fuses) that cover the greatest number of use cases (different soft starter versions depending on, for example, line voltage, type of circuit, or necessary overdimensioning). For the combined tests that were conducted, the values for the short-circuit breaking capacity I_q in kA were determined and documented.

If the short-circuit breaking capacity is the same, of course, smaller circuit breakers or fuses can also be used for the selected soft starter provided the dimensioning of the short-circuit components is suitable for the connected three-phase motor and the line protection for the cables used. For type of coordination "2" (with semiconductor protection), it is also necessary to compare the characteristics because the protection function would no longer be completely ensured if too small a fuse were selected. If the soft starter does not have a motor protection function, the motor protection must also be dimensioned appropriately.

Setting the motor current

If circuit breakers with an overload release are used (e.g. SIRIUS 3RV20 motor starter protector), we recommend activating the motor protection function of the SIRIUS 3RW soft starter to protect the motor and setting the soft starter to the rated operational current I_e of the motor. We recommend setting the circuit breaker in such a way that it provides line protection but does not usually trip before the soft starter when a motor overload occurs.

Line protection and motor protection

Line protection and motor protection are not ensured in all operating cases, depending on:

- How the motor feeder is constructed (e.g. with fuses or motor starter protectors)
- Whether the SIRIUS 3RW soft starters are operated within the specification relevant for the tests (IEC 60947-4-2)
- Or whether the documented constraints (see page 17-199) have been observed.

There are operating states of the thyristors (caused, for example, by high starting frequencies or heavy starting) that do not permit an overload to be disconnected by the SIRIUS 3RW soft starter. These cases are very rare but can not be ruled out in all cases.

In accordance with IEC 60947-4-2, the SIRIUS 3RW soft starters are dimensioned and checked for operation with up to 8 times the rated operational current I_e. For currents larger than this, reliable disconnection of an overcurrent by the SIRIUS 3RW soft starter is not ensured. Such large overcurrents have to be disconnected by a switching device at a higher level (e.g. by a circuit breaker or a fuse in conjunction with an optional line contactor).

Motor protection by the SIRIUS 3RW soft starter is ensured for currents up to 8 times the rated operational current I_e in any case. Line protection is covered by the line-side motor starter protector/circuit breaker or fuse. These motor feeder components must be dimensioned accordingly and the cable cross-sections must be chosen to match.

Line protection

Line protection in motor feeders with soft starters is always covered by a fuse or a circuit breaker both in case of an overload and in case of a short circuit. The circuit breaker must have an overload release. That is the case for motor starter protectors (e.g. SIRIUS 3RV20).

Circuit breakers without an overload release (e.g. SIRIUS 3RV23 motor starter protectors) must not be used because they do not provide overload protection. The feeder tests for these were therefore not performed. If the motor feeder with SIRIUS 3RW soft starters is configured without a fuse, motor starter protectors must be used that ensure tripping on an overload.

Motor protection

If fuses are used to provide protection against overload and short circuit of the cables, the motor is protected by the SIRIUS 3RW soft starter. If the constraints (simple starting conditions CLASS 10, listed maximum values for starting current, starting time and number of starts per hour) of page 17-199) are observed, the motor feeders can be configured according to IEC as described in the section about soft starters (an optional line contactor is not required). If these preconditions are met, the SIRIUS 3RW soft starters are able to trip on overloads to protect the motor in any case.

In other starting conditions and on heavy starting, the following must be considered:

Trip classes

Tested fuseless switchgear assemblies comprising SIRIUS 3RW soft starters and motor starter protectors only comply with CLASS 10.
To configure tested motor feeders, for example, for CLASS 20 or CLASS 30, fuses must be used together with SIRIUS 3RW soft starters.

Line contactor

In applications with high starting frequencies or heavy starting as of CLASS 20, we recommend combining fuses with the use of a line contactor on the line side so that a motor overload is disconnected by the fault signaling contact of the soft starter in any case (that is, even in rare cases in which disconnection by the SIRIUS 3RW soft starter is no longer possible due to the operating state of the thyristors).

ATEX/IECEx-certified motor overload protection

Ambient temperature during operation

The SIRIUS 3RW soft starters are approved for operation in a temperature range of -25 to +60 °C.

Please take into account derating of the rated operational current for ambient temperatures above 40 °C.

For more information, see Equipment Manual and the technical data sheet of the selected soft starter.

Trip class (electronic overload protection)

The motor and cables must be dimensioned for the selected trip class.

The rated data of the soft starters refers to normal starting (CLASS 10). For heavy starting (> CLASS 10), the soft starter may need to be overdimensioned as only a rated motor current that is lower than the soft starter rated current can be set.

Short-circuit protection

The SIRIUS 3RW soft starter does not have short-circuit protection. Short-circuit protection must be ensured.

Line protection

Avoid impermissibly high cable surface temperatures by correctly dimensioning the cross-sections.

The cable cross-section must be adequately dimensioned.

Line contactor or additional undervoltage release on the motor starter protector

In many ATEX/IECEx applications no additional measures (e.g. the use of a line contactor) are necessary with regard to the motor feeder configuration.

The operation of the selected soft starter may, depending on the amplitude of the line voltage and the type of motor connection (inline circuit or inside-delta circuit), result in the loss of the certified motor overload protection according to ATEX/IECEx if one of the two remedial measures listed below is not implemented.

Remedial measures

- An additional line contactor in the main circuit
- An additional undervoltage release for a motor feeder configuration with a motor starter protector

The line contactor or the undervoltage release are connected to error outputs 95, 96 and 98 of the selected soft starter

Note:

For ATEX/IECEx applications, the accompanying information on parameterization and commissioning must be observed in the ATEX/IECEx chapters of the Equipment Manual for the selected soft starter.

Article No. scheme

Product versions		Article number									
Device type	**High Performance soft starters**	**3RW55**	□	□	–	□	□	□	□	□	
	General Performance soft starters	**3RW52**	□	□	–	□	□	□	□	□	
	Basic Performance soft starters	**3RW50**	□	□	–	□	□	□	□	□	
		3RW40	□	□	–	□	□	□	□	□	
		3RW30	□	□	–	□	□	□	□	□	
Size/rated operational current I_e	e.g. 15 = 25 A in size S1		□	□							
Connection type	e.g. 1 = screw terminal					□					
Soft starter functionality	e.g. AC = with bypass and analog output, three-phase controlled						□	□			
Rated control supply voltage U_s	e.g. 0 = 24 V AC/DC								□		
Rated operational voltage U_e	e.g. 4 = 200 ... 480 V AC									□	
Example		**3RW52**	**1**	**5**	**–**	**1**	**A**	**C**	**0**	**4**	

Note:

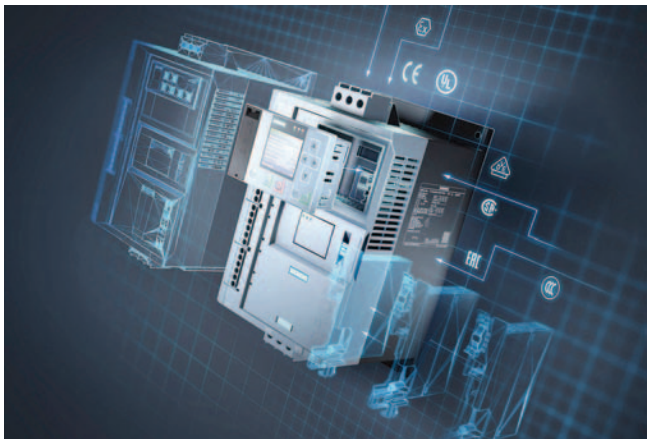
The Article No. scheme shows an overview of product versions for better understanding of the logic behind the article numbers.

For your orders please use the article numbers quoted in the selection and ordering data.

Benefits

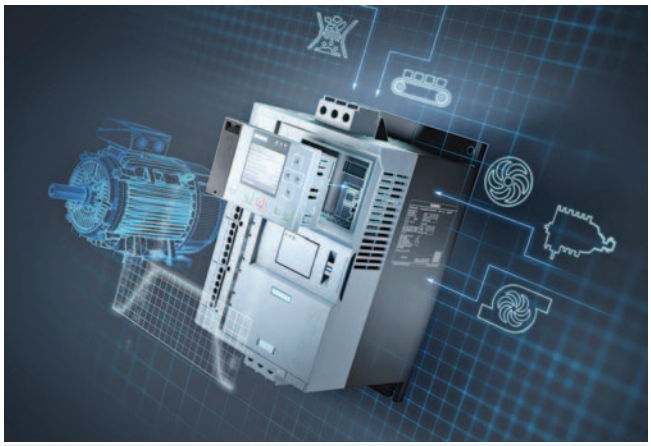
Can be flexibly deployed in many applications

Strong portfolio: comprehensive, coordinated soft starter portfolio



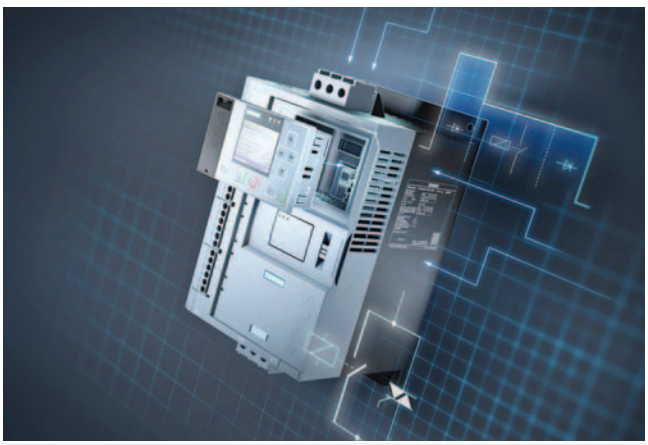
- The right hardware for all requirements, soft starters for tasks ranging from simple to demanding starting in Basic, General and High Performance versions
- Extensive portfolio for individual expansion: Optional HMIs for installation in the device or mounting on the control cabinet door
- Communication via PROFINET, PROFIBUS, EtherNet/IP and Modbus
- Design enclosure with removable terminals, space-saving thanks to compact design and rugged thanks to coated printed circuit boards
- Can be used worldwide thanks to numerous certificates and approvals: IEC, UL, CSA, CCC, ATEX/IECEx, shipbuilding

Intelligent operation: concentrated, application-specific functionality



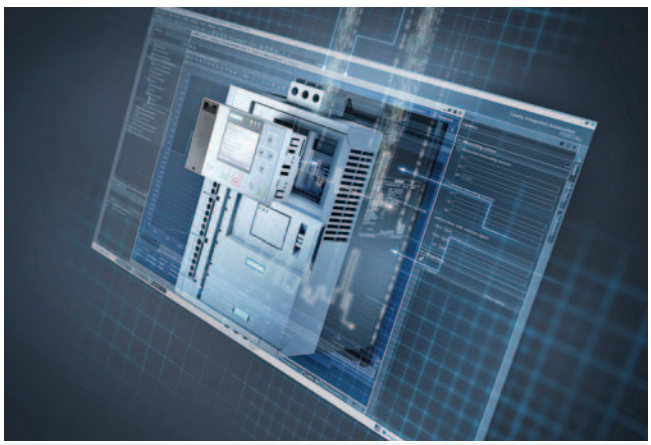
- Can be used in a wide variety of applications: Pumping, ventilating, compressing, moving and processing
- Integrated, self-learning automatic parameterization depending on motor starting conditions
- Application-specific functionality such as pump cleaning and pump stop
- Condition monitoring: Current and power monitoring with warning and alarm limits, starting time monitoring

Efficient switching: hybrid switching technology on board



- Energy-efficient switching and mechanical protection of the drive train thanks to soft starters with hybrid switching technology
- Low-wear switching extends the service life of the devices
- Soft starting prevents current peaks, thereby increasing the network stability
- Protection against disturbances in the application. Mechanical protection for the drive train

Ready for a digital future: data available whenever and wherever needed



- Support from tools and data during engineering
- Simulation Tool for Soft Starters for support during product selection
- Very simple, standardized commissioning and configuration via Soft Starter ES in TIA Portal
- Integration in the automation system via communication interfaces
- Data availability and analysis: large volumes of data at any time and anywhere, even into MindSphere

Overview

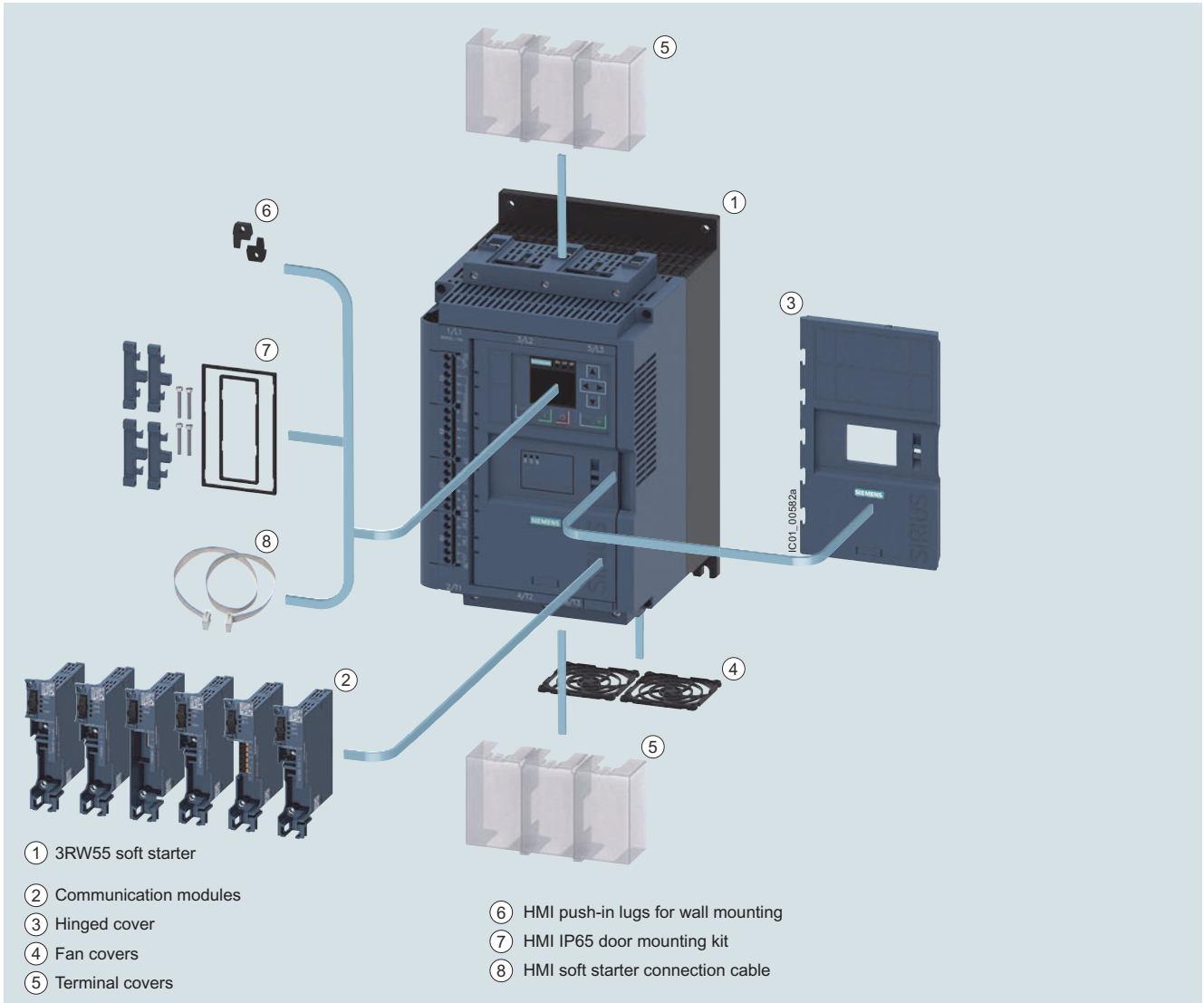
More information

Homepage, see www.usa.siemens.com/soft-starter
Industry Mall, see www.siemens.com/product?3RW
TIA Selection Tool Cloud (TST Cloud), see https://www.siemens.com/tstcloud/?node=Sirius3rwFolder

Industry Online Support (SIOS) topic page, see https://support.industry.siemens.com/cs/ww/en/view/109747404
Simulation Tool for Soft Starters (STS), see page 17-199 or https://support.industry.siemens.com/cs/ww/en/view/101494917
SIRIUS Soft Starter ES (TIA Portal), see page 14/2

Equipped with the utmost functionality, the SIRIUS 3RW55 High Performance soft starters confidently handle even difficult starting and stopping operations. Thanks to innovative torque control, the device can be used for drives with an output of between 7.5 to 1000HP @ 480V.

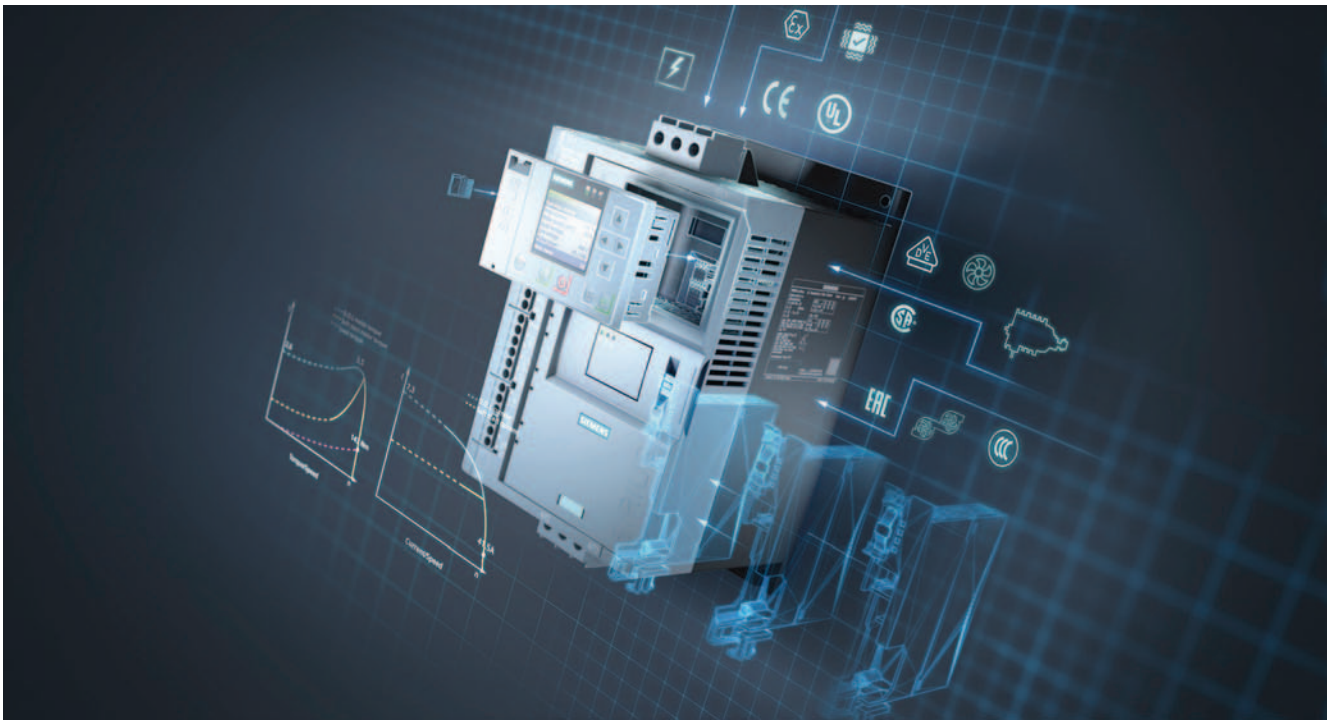
The functions have been specially designed to offer maximum user friendliness. The HMI (with color display, local interface and a slot for micro SD memory card) and plug-in communication modules (PROFINET, PROFIBUS, EtherNet/IP and Modbus) ensure maximum flexibility. With their modern hybrid switching technology, the SIRIUS 3RW55 soft starters offer efficient switching for long-term, energy-saving use.



1 3RW55 soft starter
2 Communication modules
3 Hinged cover
4 Fan covers
5 Terminal covers
6 HMI push-in lugs for wall mounting
7 HMI IP65 door mounting kit
8 HMI soft starter connection cable

3RW55 High Performance soft starters with accessories, see page 17-227.

Benefits



Product characteristics / function	Performance features / benefits
Automatic parameterization	Extremely easy commissioning and reliability even under changing load conditions
Hybrid switching devices and three-phase motor control	Minimum power loss and optimum/symmetrical motor control
Integration into TIA Portal – communication modules optional	Efficient configuration and maximum flexibility in automation engineering
Removable HMI with color display, local interface, slot for micro SD memory card	Maximum flexibility with regard to user interface and intuitive menu guidance
Pump stop and torque control	Reduced mechanical loading and optimum pump stop control
Certified according to ATEX/IECEx directive	Suitable for the starting of explosion-proof motors

Technical specifications

More information	
Technical specifications, see https://support.industry.siemens.com/cs/ww/en/ps/25099/td Equipment Manual "SIRIUS 3RW55 Soft Starter", see https://support.industry.siemens.com/cs/ww/en/view/109753752	FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/25099/faq Simulation Tool for Soft Starters (STS), see page 17-199 or https://support.industry.siemens.com/cs/ww/en/view/101494917

Type		3RW551.-.HA.4 3RW551.-.HA.5	3RW552.-.HA.6 3RW553.-.HA.6	3RW552.-.HA.4 3RW553.-.HA.4	3RW554.-.HA.4	3RW554.-.HA.6	3RW555.-.HA.4	3RW555.-.HA.6
Installation/fixing/ dimensions								
Width x height x depth	mm	170 × 275 × 152	185 × 306 × 203		210 × 393 × 203		478 x 764 x 241	
Type of mounting		Screw fixing						
Mounting position		Vertical (can be rotated +/- 90° and tilted +/- 22.5° forward or backward)						
Distance to be maintained with side-by-side mounting								
• Above	mm	100						
• At the side	mm	5						
• Below	mm	75						
Maximum installation altitude above sea level[1]	m	5 000	2 000	5 000		2 000	5 000	2 000
Degree of protection		IP00						
Ambient conditions								
Ambient temperature								
• During operation[2]	°C	-25 ... +60						
• During storage and transport	°C	-40 ... +80						
Environmental category according to IEC 60721								
• During operation		3K6 (no ice formation, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6						
• During storage		1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not enter the devices), 1M4						
• During transport		2K2, 2C1, 2S1, 2M2 (max. height of fall 0.3 m)						

1) Derating from 1 000 m, see characteristic curve on page17-199.

2) Note derating above 40 °C.

Type		3RW55..-.HA0.	3RW55..-.HA1.
Control circuit/control			
Control supply voltage			
• At AC/DC, rated value	V	24/24	--/--
• At AC	V	--	110 ... 250
• Relative negative tolerance/relative positive tolerance with AC	%	-20/20	-15/10
• Relative negative tolerance/relative positive tolerance with DC	%	-20/20	--/--
Frequency of the control supply voltage	Hz	50 ... 60	
• Relative negative tolerance/relative positive tolerance	%	-10/10	
Type of overvoltage protection		Varistors	
Type of short-circuit protection for control circuit[1]		Fuse 4 A gG (I_{cu} = 1 kA), fuse 6 A quick-response (I_{cu} = 1 kA), MCB C1 (I_{cu} = 600 A), MCB C6 (I_{cu} = 300 A)	

1) Not included in scope of supply

Type		3RW55..-.HA.4	3RW55..-.HA.5	3RW55..-.HA.6
Power electronics				
Operational voltage, rated value	V	200 ... 480	200 ... 600	200 ... 690
• Relative negative tolerance/relative positive tolerance	%	-15/10		
Operational voltage for inside-delta circuit, rated value	V	200 ... 480	200 ... 600	
• Relative negative tolerance/relative positive tolerance	%	-15/10		
Operating frequency, rated value	Hz	50 ... 60		
• Relative negative tolerance/relative positive tolerance	%	-10/10		
Minimum load [% of I_M][1]	%	10		
Maximum cable length between soft starter and motor	m	800		

1) Relative to set I_e.

Type		3RW5513	3RW5514	3RW5515	3RW5516	3RW5517
Rated operational current I_e	A	13	18	25	32	38
Power electronics						
Load rating with rated operational current I_e						
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	32/28.4/26	38/33.5/30.5
Permissible rated motor current and starts/h						
Normal starting (CLASS 10A)						
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	32/28.4/26	38/33.5/30.5
• 300% I_M						
- Start-up time 5 s	1/h	43	43	43	43	43
- Start-up time 10 s	1/h	18	18	18	18	18
• 350% I_M						
- Start-up time 5 s	1/h	28	28	28	28	28
- Start-up time 10 s	1/h	10	10	10	10	10
Normal starting (CLASS 10E)						
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	32/28.4/26	38/33.5/30.5
• 300% I_M						
- Start-up time 5 s	1/h	21	21	21	21	21
- Start-up time 10 s	1/h	8	8	8	8	8
• 350% I_M						
- Start-up time 5 s	1/h	13	13	13	13	13
- Start-up time 10 s	1/h	4	4	4	4	4
Heavy starting (CLASS 20E)						
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	29.6/27.2/23.6	33.5/30.5/27.5
• 300% I_M						
- Start-up time 20 s	1/h	10	10	10	10	10
- Start-up time 40 s	1/h	4	4	4	4	4
• 350% I_M						
- Start-up time 20 s	1/h	7	7	7	7	7
- Start-up time 40 s	1/h	2.5	2.5	2.5	2.5	2.5
Heavy starting (CLASS 30E)						
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	26/23.6/21.2	29/26/23
• 300% I_M						
- Start-up time 20 s	1/h	7	7	7	7	7
- Start-up time 40 s	1/h	3	3	3	3	3
• 350% I_M						
- Start-up time 20 s	1/h	4	4	4	4	4
- Start-up time 40 s	1/h	1.8	1.8	1.8	1.8	1.8
Adjustable rated motor current I_M						
• Minimum/maximum	A	2.5/13	3.5/18	5/25	6.5/32	7.5/38
• Minimum/maximum in inside-delta circuits	A	4.3/22.5	6.1/31.1	8.7/43.3	11.3/55.4	13/65.8

Type		3RW5521	3RW5524	3RW5525	3RW5526	3RW5527
Rated operational current I_e	A	25	47	63	77	93
Power electronics						
Load rating with rated operational current I_e						
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	25/22.3/19.6	47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
Permissible rated motor current and starts/h						
Normal starting (CLASS 10A)						
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	25/22.3/19.6	47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
• 300% I_M						
- Start-up time 5 s	1/h	43	43	43	43	43
- Start-up time 10 s	1/h	18	18	18	18	18
• 350% I_M						
- Start-up time 5 s	1/h	28	28	28	28	28
- Start-up time 10 s	1/h	10	10	10	10	10
Normal starting (CLASS 10E)						
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	25/22.3/19.6	47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
• 300% I_M						
- Start-up time 5 s	1/h	21	21	21	21	21
- Start-up time 10 s	1/h	8	8	8	8	8
• 350% I_M						
- Start-up time 5 s	1/h	13	13	13	13	13
- Start-up time 10 s	1/h	4	4	4	4	4
Heavy starting (CLASS 20E)						
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	25/22.3/19.6	47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
• 300% I_M						
- Start-up time 20 s	1/h	10	10	10	10	10
- Start-up time 40 s	1/h	4	4	4	4	4
• 350% I_M						
- Start-up time 20 s	1/h	7	7	7	7	7
- Start-up time 40 s	1/h	2.5	2.5	2.5	2.5	2.5
Heavy starting (CLASS 30E)						
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	25/22.3/19.6	43.4/38/34.4	53/48/43	68/62/56	82.5/75.5/65
• 300% I_M						
- Start-up time 20 s	1/h	7	7	7	7	7
- Start-up time 40 s	1/h	3	3	3	3	3
• 350% I_M						
- Start-up time 20 s	1/h	4	4	4	4	4
- Start-up time 40 s	1/h	1.8	1.8	1.8	1.8	1.8
Adjustable rated motor current I_M						
• Minimum/maximum	A	5/25	10/47	13/63	16/77	19/93
• Minimum/maximum in inside-delta circuits	A	8.7/43.3	17.3/81.4	22.5/109	27.7/133	32.9/161

Type		3RW5534	3RW5535	3RW5536
Rated operational current I_e	A	113	143	171
Power electronics				
Load rating with rated operational current I_e				
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	113/101/89	143/128/118	171/153/141
Permissible rated motor current and starts/h				
Normal starting (CLASS 10A)				
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	113/101/89	143/128/118	171/153/141
• 300% I_M				
- Start-up time 5 s	1/h	43	43	43
- Start-up time 10 s	1/h	18	18	18
• 350% I_M				
- Start-up time 5 s	1/h	28	28	28
- Start-up time 10 s	1/h	10	10	10
Normal starting (CLASS 10E)				
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	113/101/89	143/128/118	171/153/141
• 300% I_M				
- Start-up time 5 s	1/h	21	21	21
- Start-up time 10 s	1/h	8	8	8
• 350% I_M				
- Start-up time 5 s	1/h	13	13	13
- Start-up time 10 s	1/h	4	4	4
Heavy starting (CLASS 20E)				
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	109/97/85	128/113/103	141/129/117
• 300% I_M				
- Start-up time 20 s	1/h	10	10	10
- Start-up time 40 s	1/h	4	4	4
• 350% I_M				
- Start-up time 20 s	1/h	7	7	7
- Start-up time 40 s	1/h	2.5	2.5	2.5
Heavy starting (CLASS 30E)				
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	89/81/74	108/98/88	117/105/93
• 300% I_M				
- Start-up time 20 s	1/h	7	7	7
- Start-up time 40 s	1/h	3	3	3
• 350% I_M				
- Start-up time 20 s	1/h	4	4	4
- Start-up time 40 s	1/h	1.8	1.8	1.8
Adjustable rated motor current I_M				
• Minimum/maximum	A	23/113	29/143	34/171
• Minimum/maximum in inside-delta circuits	A	39.8/195	50.2/247	58.9/296

Type		3RW5543	3RW5544	3RW5545	3RW5546	3RW5547	3RW5548
Rated operational current I_e	A	210	250	315	370	470	570
Power electronics							
Load rating with rated operational current I_e							
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	570/504/460
Permissible rated motor current and starts/h							
Normal starting (CLASS 10A)							
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	570/504/460
• 300% I_M							
- Start-up time 5 s	1/h	43	43	43	43	40	20
- Start-up time 10 s	1/h	18	18	18	18	17	6
• 350% I_M							
- Start-up time 5 s	1/h	28	28	28	28	26	9
- Start-up time 10 s	1/h	10	10	10	10	10	1
Normal starting (CLASS 10E)							
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	551/490/445
• 300% I_M							
- Start-up time 5 s	1/h	21	21	21	21	17	8
- Start-up time 10 s	1/h	8	8	8	8	6	1
• 350% I_M							
- Start-up time 5 s	1/h	13	13	13	13	10	2
- Start-up time 10 s	1/h	4	4	4	4	2	--
Heavy starting (CLASS 20E)							
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	162/146/130	200/180/160	231/207/183	258/230/202	272/254/236	284/262/240
• 300% I_M							
- Start-up time 20 s	1/h	10	10	10	10	10	10
- Start-up time 40 s	1/h	4	4	4	4	4	4
• 350% I_M							
- Start-up time 20 s	1/h	7	7	7	7	7	7
- Start-up time 40 s	1/h	2.5	2.5	2.5	2.5	2.5	2.5
Heavy starting (CLASS 30E)							
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	138/122/106	160/140/120	183/159/135	202/174/160	210/190/170	220/200/180
• 300% I_M							
- Start-up time 20 s	1/h	7	7	7	7	7	7
- Start-up time 40 s	1/h	3	3	3	3	3	3
• 350% I_M							
- Start-up time 20 s	1/h	4	4	4	4	4	4
- Start-up time 40 s	1/h	1.8	1.8	1.8	1.8	1.8	1.8
Adjustable rated motor current I_M							
• Minimum/maximum	A	42/210	50/250	63/315	74/370	94/470	114/570
• Minimum/maximum in inside-delta circuits	A	72.7/363	86.6/433	109.1/545	128.2/640	162.8/814	197.5/987

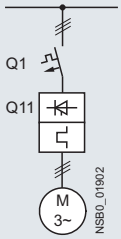
Type		3RW5552	3RW5553	3RW5554	3RW5556	3RW5558
Rated operational current I_e	A	630	720	840	1 100	1 280
Power electronics						
Load rating with rated operational current I_e						
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	630/561/510	720/641/580	840/748/670	1 100/979/890	1 280/1 139/1 030
Permissible rated motor current and starts/h						
Normal starting (CLASS 10A)						
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	630/561/510	720/641/580	840/748/670	1 100/979/890	1 280/1 139/1 030
• 300% I_M						
- Start-up time 5 s	1/h	43	43	42	43	32
- Start-up time 10 s	1/h	18	18	18	18	12
• 350% I_M						
- Start-up time 5 s	1/h	28	28	25	27	17
- Start-up time 10 s	1/h	10	10	10	9	4
Normal starting (CLASS 10E)						
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	630/561/510	720/641/580	840/748/670	1 100/979/890	1 225/1 130/1 030
• 300% I_M						
- Start-up time 5 s	1/h	21	21	19	18	15
- Start-up time 10 s	1/h	8	8	7	7	5
• 350% I_M						
- Start-up time 5 s	1/h	13	13	10	9	1
- Start-up time 10 s	1/h	4	4	2	2	1
Heavy starting (CLASS 20E)						
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	500/450/400	520/470/420	570/520/470	920/840/760	980/900/810
• 300% I_M						
- Start-up time 20 s	1/h	10	10	10	10	10
- Start-up time 40 s	1/h	4	4	4	4	4
• 350% I_M						
- Start-up time 20 s	1/h	7	7	7	7	7
- Start-up time 40 s	1/h	2.5	2.5	2.5	2.5	2.5
Heavy starting (CLASS 30E)						
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	380/340/300	400/360/320	420/380/340	740/670/600	790/720/650
• 300% I_M						
- Start-up time 20 s	1/h	7	7	7	7	7
- Start-up time 40 s	1/h	3	3	3	3	3
• 350% I_M						
- Start-up time 20 s	1/h	4	4	4	4	4
- Start-up time 40 s	1/h	1.8	1.8	1.8	1.8	1.8
Adjustable rated motor current I_M						
• Minimum/maximum	A	114/630	144/720	168/840	220/1 100	258/1 280
• Minimum/maximum in inside-delta circuits	A	197.5/987	249.4/1 247	291/1 454	381.1/1 905	446.9/2 217

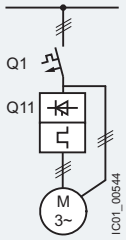
Motor feeders according to IEC with 3RV2/3VA motor starter protectors/circuit breakers (without semiconductor protection)

Type of coordination "1", CLASS 10,
short-circuit breaking capacity I_q in kA, see table

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.





Soft starters	Motor starter protectors				Motor starter protectors			
	for 400 V systems		for 500 V systems		for 400 V systems		for 500 V systems	
Q11	Q1	I_q	Q1	I_q	Q1	I_q	Q1	I_q
Type	Type	kA	Type	kA	Type	kA	Type	kA
Type of coordination "1" ToC 1	**Inline circuit**				**Inside-delta circuit**			
3RW5513	3RV2032-4TA10	65	3RV2032-4TA10	18	3RV2032-4DA10	65	3RV2032-4DA10	18
3RW5514	3RV2032-4DA10	65	3RV2032-4DA10	15	3RV2032-4EA10	65	3RV2032-4EA10	15
3RW5515	3RV2032-4EA10	65	3RV2032-4EA10	15	3RV2032-4VA10	65	3RV2032-4VA10	15
3RW5516	3RV2032-4VA10	65	3RV2032-4VA10	10	3RV2032-4JA10	65	3RV2032-4JA10	10
3RW5517	3RV2032-4WA10	65	3RV2032-4WA10	10	3RV2032-4RA10	65	3RV2032-4RA10	10
3RW5521	--	--	--	--	--	--	--	--
3RW5524	3RV2032-4JA10	65	3RV2032-4JA10	10	3RV2032-4RA10	65	3RV2032-4RA10	10
3RW5525	3VA2163-7MN32-0AA0	65	3VA2163-7MN32-0AA0	20	3VA2110-7MN32-0AA0	65	3VA2110-7MN32-0AA0	20
3RW5526	3VA2110-7MN32-0AA0	65	3VA2110-7MN32-0AA0	20	3VA2216-7MN32-0AA0	65	3VA2216-7MN32-0AA0	20
3RW5527	3VA2216-7MN32-0AA0	15	3VA2216-7MN32-0AA0	10	3VA2220-7MN32-0AA0	15	3VA2220-7MN32-0AA0	10
3RW5534	3VA2216-7MN32-0AA0	65	--	--	3VA2220-7MN32-0AA0	65	--	--
3RW5535	3VA2220-7MN32-0AA0	65	--	--	3VA2325-7MN32-0AA0	65	--	--
3RW5536	3VA2325-7MN32-0AA0	30	3VA2325-7MN32-0AA0	10	3VA2440-7MN32-0AA0	30	3VA2440-7MN32-0AA0	10
3RW5543	3VA2325-7MN32-0AA0	65	3VA2325-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65
3RW5544	3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2450-7MN32-0AA0	65	3VA2450-7MN32-0AA0	65
3RW5545	3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65
3RW5546	3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65
3RW5547	3VA2450-7MN32-0AA0	65	3VA2450-7MN32-0AA0	65	3VA2510-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65
3RW5548	3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65
3RW5552	3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65	3VA2716-7AB05-0AA0	65	3VA2716-7AB05-0AA0	65
3RW5553	3VA2510-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65	3VA2716-7AB05-0AA0	65	3VA2716-7AB05-0AA0	65
3RW5554	3VA2510-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65	3VA2716-7AB05-0AA0	65	3VA2716-7AB05-0AA0	65
3RW5556	3VA2716-7AB05-0AA0	65	3VA2716-7AB05-0AA0	65	--	--	--	--
3RW5558	3VA2716-7AB05-0AA0	65	3VA2716-7AB05-0AA0	65	--	--	--	--

Note:

The service factor or measurement inaccuracies have been taken into account, for example, for the selection of the specified motor starter protectors/circuit breakers; the specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller motor starter protectors/circuit breakers than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

In 690 V systems, in motor feeder tests with soft starters demonstrable short-circuit breaking capacities can only be achieved with the use of fuses (I_q > 5 to 10 kA).

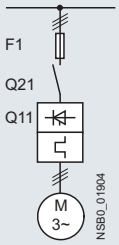
Motor feeders according to IEC with 3NA3 fuses

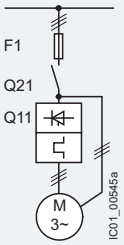
gG class full-range fuses for cable and line protection according to IEC 60269-2, without semiconductor protection

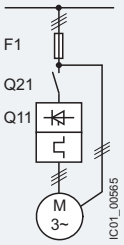
Type of coordination "1",
short-circuit breaking capacity I_q = 65 kA

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.







Soft starters	gG class fuse	Line contactor (optional)		gG class fuse	Line contactor (optional)			
	for systems up to 690 V	for systems up to 480 V	for systems up to 690 V	for systems up to 600 V	for systems up to 480 V in the supply cable	for systems up to 600 V in the supply cable	for systems up to 480 V in the delta	for systems up to 600 V in the delta
Q11	F1	Q21	Q21	F1	Q21	Q21	Q21	Q21
Type	Type	Type	Type	Type	Type	Type	Type	Type
Type of coordination "1" ToC 1	**Inline circuit**			**Inside-delta circuit**				
3RW5513	3NA3820-6	3RT2025	3RT2025	3NA3820-6	3RT2027	3RT2035	3RT2025	3RT2025
3RW5514	3NA3820-6	3RT2026	3RT2027	3NA3820-6	3RT2027	3RT2037	3RT2026	3RT2027
3RW5515	3NA3822-6	3RT2027	3RT2037	3NA3822-6	3RT2036	3RT2037	3RT2027	3RT2037
3RW5516	3NA3824-6	3RT2035	3RT2037	3NA3824-6	3RT2037	3RT2038	3RT2035	3RT2037
3RW5517	3NA3824-6	3RT2035	3RT2037	3NA3824-6	3RT2038	3RT2046	3RT2035	3RT2037
3RW5521	3NA3824-6	3RT2027	3RT2037	3NA3824-6	3RT2036	3RT2037	3RT2027	3RT2037
3RW5524	3NA3824-6	3RT2036	3RT2037	3NA3824-6	3RT2046	3RT2047	3RT2036	3RT2037
3RW5525	3NA3830-6	3RT2037	3RT2046	3NA3830-6	3RT2047	3RT1054	3RT2037	3RT2046
3RW5526	3NA3132-6	3RT2038	3RT2046	3NA3132-6	3RT1055	3RT1055	3RT2038	3RT2046
3RW5527	3NA3136-6	3RT2046	3RT2047	3NA3136-6	3RT1056	3RT1056	3RT2046	3RT2047
3RW5534	3NA3244-6	3RT1054	3RT1054	3NA3244-6	3RT1064	3RT1064	3RT1054	3RT1054
3RW5535	3NA3244-6	3RT1055	3RT1055	3NA3244-6	3RT1065	3RT1065	3RT1055	3RT1055
3RW5536	3NA3365-6	3RT1056	3RT1064	3NA3365-6	3RT1066	3RT1075	3RT1056	3RT1064
3RW5543	2 x 3NA3354-6	3RT1064	3RT1064	2 x 3NA3354-6	3RT1075	3RT1075	3RT1064	3RT1064
3RW5544	2 x 3NA3354-6	3RT1065	3RT1065	2 x 3NA3354-6	3RT1076	3RT1076	3RT1065	3RT1065
3RW5545	2 x 3NA3365-6	3RT1075	3RT1075	2 x 3NA3365-6	3TF68	3TF68	3RT1075	3RT1075
3RW5546	2 x 3NA3365-6	3RT1075	3RT1075	2 x 3NA3365-6	3TF69	3TF69	3RT1075	3RT1075
3RW5547	2 x 3NA3365-6	3RT1076	3RT1276	2 x 3NA3365-6	3TF69	3TF69	3RT1076	3RT1276
3RW5548	2 x 3NA3365-6	3TF68	3TF68	2 x 3NA3365-6	--	--	3TF68	3TF68
3RW5552	2 x 3NA3365-6	3TF68	3TF69	--	--	--	3TF68	3TF69
3RW5553	2 x 3NA3365-6	3TF69	3TF69	--	--	--	3TF69	3TF69
3RW5554	2 x 3NA3365-6	--	--	--	--	--	--	--
3RW5556	3 x 3NA3365-6	--	--	--	--	--	--	--
3RW5558	3 x 3NA3365-6	--	--	--	--	--	--	--

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

In inside-delta circuits, motor feeders with soft starters can only be operated in systems with up to 600 V.

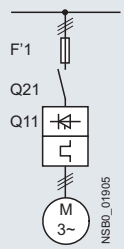
Motor feeders according to IEC with 3NE1/3NB3 SITOR fuses

gR class full-range fuses for semiconductor protection, cable and line protection

Type of coordination "2",
short-circuit breaking capacity I_q = 65 kA

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.



Soft starters	gG class fuse	Line contactor (optional)	
	for systems up to 690 V	for systems up to 480 V	for systems up to 690 V
Q11	F'1	Q21	Q21
Type	Type	Type	Type
Type of coordination "2" ToC 2	**Inline circuit**		
3RW5513	3NE1815-0	3RT2025	3RT2025
3RW5514	3NE1802-0	3RT2026	3RT2027
3RW5515	3NE1817-0	3RT2027	3RT2037
3RW5516	3NE1818-0	3RT2035	3RT2037
3RW5517	3NE1820-0	3RT2035	3RT2037
3RW5521	3NE1817-0	3RT2027	3RT2037
3RW5524	3NE1021-2	3RT2036	3RT2037
3RW5525	3NE1022-0	3RT2037	3RT2046
3RW5526	3NE1224-0	3RT2038	3RT2046
3RW5527	3NE1224-0	3RT2046	3RT2047
3RW5534	3NE1225-0	3RT1054	3RT1054
3RW5535	3NE1227-0	3RT1055	3RT1055
3RW5536	3NE1230-0	3RT1056	3RT1064
3RW5543	3NE1230-2[1)]	3RT1064	3RT1064
3RW5544	3NE1331-0	3RT1065	3RT1065
3RW5545	3NE1334-2	3RT1075	3RT1075
3RW5546	3NE1334-2	3RT1075	3RT1075
3RW5547	3NE1436-2	3RT1076	3RT1276
3RW5548	3NE1437-2	3TF68	3TF68
3RW5552	3NB3350-1KK26	3TF68	3TF69
3RW5553	3NB3351-1KK26	3TF69	3TF69
3RW5554	3NB3351-1KK26	--	--
3RW5556	3NB3354-1KK26	--	--
3RW5558	3NB3357-1KK26	--	--

[1)] For systems up to 500 V.

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

In inside-delta circuits, a gR class full-range fuse could not provide the semiconductor protection of the delta-connected soft starter with a short-circuit breaking capacity that is adequate for practical use. In this case, we recommend using aR class partial-range fuses for semiconductor protection for type of coordination “2” (see page 17-216).

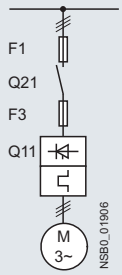
Motor feeders according to IEC with 3NE8 / 3NE3 / 3NC3 fuses

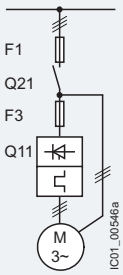
aR class partial-range fuses for semiconductor protection

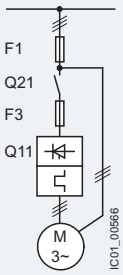
Type of coordination "2",
short-circuit breaking capacity I_q = 65 kA

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.







Soft starters	gG class fuse	aR class fuse	Line contactor (optional)		gG class fuse	aR class fuse	Line contactor (optional)			
	for systems up to 690 V	for systems up to 690 V	for systems up to 480 V	for systems up to 690 V	for systems up to 600 V	for systems up to 600 V	for systems up to 480 V in the supply cable	for systems up to 600 V in the supply cable	for systems up to 480 V in the delta	for systems up to 600 V in the delta
Q11	F1	F3	Q21	Q21	F1	F3	Q21	Q21	Q21	Q21
Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type
Type of coordination "2" ToC 2	**Inline circuit**				**Inside-delta circuit**					
3RW5513	3NA3820-6	3NE8017-1	3RT2025	3RT2025	3NA3820-6	3NE8017-1	3RT2027	3RT2035	3RT2025	3RT2025
3RW5514	3NA3820-6	3NE8020-1	3RT2026	3RT2027	3NA3820-6	3NE8020-1	3RT2027	3RT2037	3RT2026	3RT2027
3RW5515	3NA3822-6	3NE8021-1	3RT2027	3RT2037	3NA3822-6	3NE8021-1	3RT2036	3RT2037	3RT2027	3RT2037
3RW5516	3NA3824-6	3NE8022-1	3RT2035	3RT2037	3NA3824-6	3NE8022-1	3RT2037	3RT2038	3RT2035	3RT2037
3RW5517	3NA3824-6	3NE8024-1	3RT2035	3RT2037	3NA3824-6	3NE8024-1	3RT2038	3RT2046	3RT2035	3RT2037
3RW5521	3NA3824-6	3NE8021-1	3RT2027	3RT2037	3NA3824-6	3NE8021-1	3RT2036	3RT2037	3RT2027	3RT2037
3RW5524	3NA3824-6	3NE8024-1	3RT2036	3RT2037	3NA3824-6	3NE8024-1	3RT2046	3RT2047	3RT2036	3RT2037
3RW5525	3NA3830-6	3NE3227	3RT2037	3RT2046	3NA3830-6	3NE3227	3RT2047	3RT1054	3RT2037	3RT2046
3RW5526	3NA3132-6	3NE3227	3RT2038	3RT2046	3NA3132-6	3NE3227	3RT1055	3RT1055	3RT2038	3RT2046
3RW5527	3NA3136-6	3NE3227	3RT2046	3RT2047	3NA3136-6	3NE3227	3RT1056	3RT1056	3RT2046	3RT2047
3RW5534	3NA3244-6	3NE3231	3RT1054	3RT1054	3NA3244-6	3NE3231	3RT1064	3RT1064	3RT1054	3RT1054
3RW5535	3NA3244-6	3NE3233	3RT1055	3RT1055	3NA3244-6	3NE3233	3RT1065	3RT1065	3RT1055	3RT1055
3RW5536	3NA3365-6	3NE3334-0B	3RT1056	3RT1064	3NA3365-6	3NE3334-0B	3RT1066	3RT1075	3RT1056	3RT1064
3RW5543	2 x 3NA3354-6	3NE3333	3RT1064	3RT1064	2 x 3NA3354-6	3NE3333	3RT1075	3RT1075	3RT1064	3RT1064
3RW5544	2 x 3NA3354-6	3NE3335	3RT1065	3RT1065	2 x 3NA3354-6	3NE3335	3RT1076	3RT1076	3RT1065	3RT1065
3RW5545	2 x 3NA3365-6	--	3RT1075	3RT1075	2 x 3NA3365-6	--	3TF68	3TF68	3RT1075	3RT1075
3RW5546	2 x 3NA3365-6	--	3RT1075	3RT1075	2 x 3NA3365-6	--	3TF69	3TF69	3RT1075	3RT1075
3RW5547	2 x 3NA3365-6	3NE3340-8	3RT1076	3RT1276	2 x 3NA3365-6	3NE3340-8	3TF69	3TF69	3RT1076	3RT1276
3RW5548	2 x 3NA3365-6	3NC3342-1U	3TF68	3TF68	2 x 3NA3365-6	3NC3342-1U	--	--	3TF68	3TF68
3RW5552	2 x 3NA3365-6	3NC3343-1U	3TF68	3TF69	--	3NC3343-1U	--	--	3TF68	3TF69
3RW5553	2 x 3NA3365-6	3NC3343-1U	3TF69	3TF69	--	3NC3343-1U	--	--	3TF69	3TF69
3RW5554	2 x 3NA3365-6	3NC3343-1U	--	--	--	3NC3343-1U	--	--	--	--
3RW5556	3 x 3NA3365-6	3 x 3NE3340-8	--	--	--	3 x 3NE3340-8	--	--	--	--
3RW5558	3 x 3NA3365-6	3 x 3NE3340-8	--	--	--	3 x 3NE3340-8	--	--	--	--

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

For CLASS 10 applications, as an alternative to the gG class full-range fuses for cable and line protection 3NA3 (F1), 3RV2/3VA motor starter protectors/circuit breakers can also be used, possibly with reduced short-circuit breaking capacity (see page 17-213). In these cases, optional line contactors can be dispensed with.

In inside-delta circuits, motor feeders with soft starters can only be operated in systems with up to 600 V.

Reversing operation with reversing contactors

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.

(For an example circuit, see 3RW55 Equipment Manual, Appendix A.3)

Soft starters	Reversing contactor assembly		For reversing contactor	
	for systems up to 480 V	for systems up to 690 V	for systems up to 480 V	for systems up to 690 V
Q11	Q21 / Q22	Q21 / Q22	Q21 / Q22	Q21 / Q22
Type	Type	Type	Type	Type
3RW5513	3RA2325	3RA2325	3RT2025	3RT2025
3RW5514	3RA2326	3RA2327	3RT2026	3RT2027
3RW5515	3RA2327	3RA2337	3RT2027	3RT2037
3RW5516	3RA2335	3RA2337	3RT2035	3RT2037
3RW5517	3RA2335	3RA2337	3RT2035	3RT2037
3RW5521	3RA2327	3RA2337	3RT2027	3RT2037
3RW5524	3RA2336	3RA2337	3RT2036	3RT2037
3RW5525	3RA2337	3RA2346	3RT2037	3RT2046
3RW5526	3RA2338	3RA2346	3RT2038	3RT2046
3RW5527	3RA2346	3RA2347	3RT2046	3RT2047
3RW5534	--	--	3RT1054	3RT1054
3RW5535	--	--	3RT1055	3RT1055
3RW5536	--	--	3RT1056	3RT1064
3RW5543	--	--	3RT1064	3RT1064
3RW5544	--	--	3RT1065	3RT1065
3RW5545	--	--	3RT1075	3RT1075
3RW5546	--	--	3RT1075	3RT1075
3RW5547	--	--	3RT1076	3RT1276
3RW5548	--	--	3TF68	3TF68
3RW5552	--	--	3TF68	3TF69
3RW5553	--	--	3TF69	3TF69
3RW5554	--	--	--	--
3RW5556	--	--	--	--
3RW5558	--	--	--	--

DC braking with braking contactors

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.

(For an example circuit, see 3RW55 Equipment Manual, Appendix A.3)

Soft starters	DC braking contactor	DC braking contactor assembly			
	for systems up to 400 V	for systems up to 480 V		for systems up to 690 V	
	with 2 NC contacts + 2 NO contacts parallel	with 3 NO contacts parallel	with 3 NO contacts parallel	with 3 NO contacts parallel	with 3 NO contacts parallel
Q11	Q93	Q91	Q92	Q91	Q92
Type	Type	Type	Type	Type	Type
3RW5513	3RT2517	3RT2015	3RT2016	3RT2015	3RT2016
3RW5514	3RT2518	3RT2015	3RT2017	3RT2015	3RT2023
3RW5515	3RT2526	3RT2015	3RT2025	3RT2015	3RT2025
3RW5516	3RT2526	3RT2015	3RT2025	3RT2015	3RT2027
3RW5517	3RT2535	3RT2015	3RT2027	3RT2015	3RT2027
3RW5521	3RT2526	3RT2015	3RT2025	3RT2015	3RT2025
3RW5524	3RT2535	3RT2016	3RT2027	3RT2016	3RT2035
3RW5525	--	3RT2024	3RT2027	3RT2024	3RT2037
3RW5526	--	3RT2025	3RT2035	3RT2025	3RT2037
3RW5527	--	3RT2027	3RT2036	3RT2027	3RT2037
3RW5534	--	3RT2035	3RT2037	3RT2035	3RT2038
3RW5535	--	3RT2036	3RT2038	3RT2036	3RT2046
3RW5536	--	3RT2037	3RT2046	3RT2037	3RT2047
3RW5543	--	3RT2045	3RT2047	3RT2045	3RT1054
3RW5544	--	3RT2045	3RT1055	3RT2045	3RT1055
3RW5545	--	3RT2446	3RT1056	3RT2446	3RT1056
3RW5546	--	3RT1055	3RT1056	3RT1055	3RT1064
3RW5547	--	3RT1456	3RT1065	3RT1456	3RT1065
3RW5548	--	3RT1456	3RT1066	3RT1456	3RT1075
3RW5552	--	3RT1065	3RT1075	3RT1065	3RT1075
3RW5553	--	3RT1065	3RT1075	3RT1065	3RT1075
3RW5554	--	3RT1466	3RT1076	3RT1466	3RT1076
3RW5556	--	3RT1476	3TF68	3RT1476	3TF68
3RW5558	--	3RT1476	3TF69	3RT1476	3TF69

Selection and ordering data

For normal starting (CLASS 10E)

3RW551.

3RW552.

At 40 °C					At 50 °C					SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors				Operational current	Rating [hp] for three-phase motors								
	At 230 V	At 400 V	At 500 V	At 690 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 480 V														
13	3	**5.5**	--	--	11.5	2	3	**7.5**	--	5	**3RW5513-☐HA☐4**		1	1 unit
18	4	**7.5**	--	--	15.9	3	5	**10**	--	5	**3RW5514-☐HA☐4**		1	1 unit
25	5.5	**11**	--	--	22.3	5	7.5	**15**	--	5	**3RW5515-☐HA☐4**		1	1 unit
32	7.5	**15**	--	--	28.4	7.5	10	**20**	--	5	**3RW5516-☐HA☐4**		1	1 unit
38	11	**18.5**	--	--	33.5	10	10	**20**	--	5	**3RW5517-☐HA☐4**		1	1 unit
47	11	**22**	--	--	41.6	10	10	**30**	--	5	**3RW5524-☐HA☐4**		1	1 unit
63	18.5	**30**	--	--	55.5	15	20	**40**	--	5	**3RW5525-☐HA☐4**		1	1 unit
77	22	**37**	--	--	68	20	25	**50**	--	5	**3RW5526-☐HA☐4**		1	1 unit
93	22	**45**	--	--	82.5	25	30	**60**	--	5	**3RW5527-☐HA☐4**		1	1 unit

Type of electrical connection for the control circuit
Screw terminals
Spring-loaded terminals

1
3

Control supply voltage
24 V AC/DC
110 ... 250 V AC

0
1

[1] 3RW55 soft starter with screw terminals for operational voltage up to 480 V: Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here, see page 17-199.

For normal starting (CLASS 10E)

3RW553.

3RW554.

3RW555.

At 40 °C					At 50 °C					SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors				Operational current	Rating [hp] for three-phase motors								
	At 230 V	At 400 V	At 500 V	At 690 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 480 V														
113	30	**55**	--	--	101	30	30	**75**	--	5	**3RW5534-□HA□4**		1	1 unit
143	37	**75**	--	--	128	40	40	**100**	--	5	**3RW5535-□HA□4**		1	1 unit
171	45	**90**	--	--	153	50	50	**100**	--	5	**3RW5536-□HA□4**		1	1 unit
210	55	**110**	--	--	186	50	60	**150**	--	5	**3RW5543-□HA□4**		1	1 unit
250	75	**132**	--	--	220	60	75	**150**	--	5	**3RW5544-□HA□4**		1	1 unit
315	90	**160**	--	--	279	75	100	**200**	--	5	**3RW5545-□HA□4**		1	1 unit
370	110	**200**	--	--	328	100	125	**250**	--	5	**3RW5546-□HA□4**		1	1 unit
470	132	**250**	--	--	416	150	150	**350**	--	5	**3RW5547-□HA□4**		1	1 unit
570	160	**315**	--	--	504	150	200	**400**	--	5	**3RW5548-□HA□4**		1	1 unit
630	200	**355**	--	--	561	200	200	**450**	--	15	**3RW5552-□HA□4**		1	1 unit
720	200	**400**	--	--	641	200	250	**500**	--	15	**3RW5553-□HA□4**		1	1 unit
840	250	**450**	--	--	748	250	300	**600**	--	15	**3RW5554-□HA□4**		1	1 unit
1 100	315	**560**	--	--	979	350	400	**850**	--	15	**3RW5556-□HA□4**		1	1 unit
1 280	400	**710**	--	--	1 139	400	450	**1 000**	--	15	**3RW5558-□HA□4**		1	1 unit

Type of electrical connection for the control circuit
Spring-loaded terminals
Screw terminals

Control supply voltage
24 V AC/DC
110 ... 250 V AC

2
6

0
1

[1] 3RW55 soft starter with screw terminals for operational voltage up to 480 V: Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here,
see page 17-199.

For normal starting (CLASS 10E)

3RW551.

3RW552.

At 40 °C					At 50 °C					SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors				Operational current	Rating [hp] for three-phase motors								
	At 230 V	At 400 V	At 500 V	At 690 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 600 V														
13	3	**5.5**	7.5	--	11.5	2	3	**7.5**	10	5	**3RW5513-☐HA☐5**		1	1 unit
18	4	**7.5**	11	--	15.9	3	5	**10**	10	5	**3RW5514-☐HA☐5**		1	1 unit
25	5.5	**11**	15	--	22.3	5	7.5	**15**	20	5	**3RW5515-☐HA☐5**		1	1 unit
32	7.5	**15**	18.5	--	28.4	7.5	10	**20**	25	5	**3RW5516-☐HA☐5**		1	1 unit
38	11	**18.5**	22	--	33.5	10	10	**20**	30	5	**3RW5517-☐HA☐5**		1	1 unit
Operational voltage 200 ... 690 V														
25	5.5	**11**	15	22	22.3	5	7.5	**15**	20	5	**3RW5521-☐HA☐6**		1	1 unit
47	11	**22**	30	45	41.6	10	10	**30**	40	5	**3RW5524-☐HA☐6**		1	1 unit
63	18.5	**30**	37	55	55.5	15	20	**40**	50	5	**3RW5525-☐HA☐6**		1	1 unit
77	22	**37**	45	75	68	20	25	**50**	60	5	**3RW5526-☐HA☐6**		1	1 unit
93	22	**45**	55	90	82.5	25	30	**60**	75	5	**3RW5527-☐HA☐6**		1	1 unit

Type of electrical connection for the control circuit
Screw terminals
Spring-loaded terminals

1
3

Control supply voltage
24 V AC/DC
110 ... 250 V AC

0
1

[1] 3RW55 soft starter with screw terminals for operational voltage up to 690 V: Standard delivery time SD = 2 days (d).

Note:

For the constraints for the motor outputs specified here,
see page 17-199.

For normal starting (CLASS 10E)

3RW553.

3RW554.

3RW555.

At 40 °C					At 50 °C					SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors				Operational current	Rating [hp] for three-phase motors								
	At 230 V	At 400 V	At 500 V	At 690 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 690 V														
113	30	**55**	75	110	101	30	30	**75**	100	5	**3RW5534-□HA□6**		1	1 unit
143	37	**75**	90	132	128	40	40	**100**	125	5	**3RW5535-□HA□6**		1	1 unit
171	45	**90**	110	160	153	50	50	**100**	150	5	**3RW5536-□HA□6**		1	1 unit
210	55	**110**	132	200	186	60	60	**150**	150	5	**3RW5543-□HA□6**		1	1 unit
250	75	**132**	160	250	220	60	75	**150**	200	5	**3RW5544-□HA□6**		1	1 unit
315	90	**160**	200	315	279	75	100	**200**	250	5	**3RW5545-□HA□6**		1	1 unit
370	110	**200**	250	355	328	100	125	**250**	300	5	**3RW5546-□HA□6**		1	1 unit
470	132	**250**	315	400	416	150	150	**350**	450	5	**3RW5547-□HA□6**		1	1 unit
570	160	**315**	355	560	504	150	200	**400**	500	5	**3RW5548-□HA□6**		1	1 unit
630	200	**355**	400	630	561	200	200	**450**	600	15	**3RW5552-□HA□6**		1	1 unit
720	200	**400**	500	710	641	200	250	**500**	700	15	**3RW5553-□HA□6**		1	1 unit
840	250	**450**	560	800	748	250	300	**600**	800	15	**3RW5554-□HA□6**		1	1 unit
1 100	215	**560**	710	1 000	979	350	400	**850**	1 100	15	**3RW5556-□HA□6**		1	1 unit
1 280	400	**710**	900	1 200	1 139	400	450	**1 000**	1 250	15	**3RW5558-□HA□6**		1	1 unit

Type of electrical connection for the control circuit
Spring-loaded terminals
Screw terminals

Control supply voltage
24 V AC/DC
110 ... 250 V AC

2 6 — **0 1**

[1] 3RW55 soft starter with screw terminals for operational voltage up to 690 V:
- Sizes 3 and 4: Standard delivery time SD = 2 days (d).
- Size 5: Standard delivery time SD = 5 days (d).

Note:

For the constraints for the motor outputs specified here,
see page 17-199.

Selection and ordering data

For normal starting (CLASS 10E)

3RW551.

3RW552.

At 40 °C for inside-delta circuit				At 50 °C for inside-delta circuit					SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors			Operational current	Rating [hp] for three-phase motors								
	At 230 V	At 400 V	At 500 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 480 V													
22.5	5.5	**11**	--	19.9	5	5	**10**	--	5	**3RW5513-☐HA☐4**		1	1 unit
31.5	7.5	**15**	--	28	7.5	7.5	**20**	--	5	**3RW5514-☐HA☐4**		1	1 unit
43.3	11	**18.5**	--	39	10	10	**25**	--	5	**3RW5515-☐HA☐4**		1	1 unit
55.4	15	**22**	--	49	15	15	**30**	--	5	**3RW5516-☐HA☐4**		1	1 unit
65.8	18.5	**30**	--	58	15	20	**40**	--	5	**3RW5517-☐HA☐4**		1	1 unit
81.4	22	**45**	--	72	20	25	**50**	--	5	**3RW5524-☐HA☐4**		1	1 unit
109	30	**55**	--	96	30	30	**75**	--	5	**3RW5525-☐HA☐4**		1	1 unit
133	37	**75**	--	118	30	40	**75**	--	5	**3RW5526-☐HA☐4**		1	1 unit
161	45	**90**	--	143	40	50	**100**	--	5	**3RW5527-☐HA☐4**		1	1 unit

Type of electrical connection for the control circuit
Screw terminals — **1**
Spring-loaded terminals — **3**

Control supply voltage
24 V AC/DC — **0**
110 ... 250 V AC — **1**

[1] 3RW55 soft starter with screw terminals for operational voltage up to 480 V: Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here, see page 17-199.

For normal starting (CLASS 10E)

3RW553.

3RW554.

3RW555.

At 40 °C for inside-delta circuit				At 50 °C for inside-delta circuit					SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors			Operational current	Rating [hp] for three-phase motors								
	At 230 V	At 400 V	At 500 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 480 V													
196	55	**110**	--	175	50	60	**125**	--	5	**3RW5534-☐HA☐4**		1	1 unit
248	75	**132**	--	222	75	75	**150**	--	5	**3RW5535-☐HA☐4**		1	1 unit
296	90	**160**	--	265	75	100	**200**	--	5	**3RW5536-☐HA☐4**		1	1 unit
364	110	**200**	--	322	100	125	**250**	--	5	**3RW5543-☐HA☐4**		1	1 unit
433	132	**250**	--	381	125	150	**300**	--	5	**3RW5544-☐HA☐4**		1	1 unit
546	160	**315**	--	483	150	200	**400**	--	5	**3RW5545-☐HA☐4**		1	1 unit
641	200	**355**	--	568	200	200	**450**	--	5	**3RW5546-☐HA☐4**		1	1 unit
814	250	**400**	--	721	250	250	**600**	--	5	**3RW5547-☐HA☐4**		1	1 unit
987	315	**560**	--	873	300	350	**750**	--	5	**3RW5548-☐HA☐4**		1	1 unit
1 091	355	**630**	--	972	350	400	**850**	--	15	**3RW5552-☐HA☐4**		1	1 unit
1 247	400	**710**	--	1 110	400	450	**950**	--	15	**3RW5553-☐HA☐4**		1	1 unit
1 454	450	**800**	--	1 295	450	550	**1 150**	--	15	**3RW5554-☐HA☐4**		1	1 unit
1 905	560	**1 000**	--	1 695	600	700	**1 500**	--	15	**3RW5556-☐HA☐4**		1	1 unit
2 217	710	**1 200**	--	1 973	700	850	**1 700**	--	15	**3RW5558-☐HA☐4**		1	1 unit

Type of electrical connection for the control circuit
Spring-loaded terminals — **2 6**
Screw terminals

Control supply voltage
24 V AC/DC — **0 1**
110 ... 250 V AC

[1] 3RW55 soft starter with screw terminals for operational voltage up to 480 V: Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here,
see page 17-199.

For normal starting (CLASS 10E)

3RW551.

3RW552.

At 40 °C for inside-delta circuit				At 50 °C for inside-delta circuit					SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors			Operational current	Rating [hp] for three-phase motors								
	At 230 V	At 400 V	At 500 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 600 V													
22.5	5.5	**11**	15	19.9	5	5	**10**	15	5	**3RW5513-□HA□5**		1	1 unit
31.5	7.5	**15**	18.5	28	7.5	7.5	**20**	25	5	**3RW5514-□HA□5**		1	1 unit
43.3	11	**18.5**	22	39	10	10	**25**	30	5	**3RW5515-□HA□5**		1	1 unit
55.4	15	**22**	30	49	15	15	**30**	40	5	**3RW5516-□HA□5**		1	1 unit
65.8	18.5	**30**	37	58	15	20	**40**	50	5	**3RW5517-□HA□5**		1	1 unit
43.3	11	**18.5**	22	39	10	10	**25**	30	5	**3RW5521-□HA□6**		1	1 unit
81.4	22	**45**	45	72	20	25	**50**	60	5	**3RW5524-□HA□6**		1	1 unit
109	30	**55**	55	96	30	30	**75**	75	5	**3RW5525-□HA□6**		1	1 unit
133	37	**75**	90	118	30	40	**75**	100	5	**3RW5526-□HA□6**		1	1 unit
161	45	**90**	110	143	40	50	**100**	125	5	**3RW5527-□HA□6**		1	1 unit

Type of electrical connection for the control circuit
Screw terminals
Spring-loaded terminals

1
3

Control supply voltage
24 V AC/DC
110 ... 250 V AC

0
1

[1] 3RW55 soft starter with screw terminals for operational voltage up to 600 V: Standard delivery time SD = 2 days (d).

Note:

For the constraints for the motor outputs specified here,
see page 17-199.

For normal starting (CLASS 10E)

3RW553.

3RW554.

3RW555.

At 40 °C for inside-delta circuit				At 50 °C for inside-delta circuit					SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors			Operational current	Rating [hp] for three-phase motors								
	At 230 V	At 400 V	At 500 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 600 V													
196	55	**110**	132	175	50	60	**125**	150	5	**3RW5534-☐HA☐6**		1	1 unit
248	75	**132**	160	222	75	75	**150**	200	5	**3RW5535-☐HA☐6**		1	1 unit
296	90	**160**	200	265	75	100	**200**	250	5	**3RW5536-☐HA☐6**		1	1 unit
364	110	**200**	250	322	100	125	**250**	300	5	**3RW5543-☐HA☐6**		1	1 unit
433	132	**250**	315	381	125	150	**300**	350	5	**3RW5544-☐HA☐6**		1	1 unit
546	160	**315**	355	483	150	200	**400**	500	5	**3RW5545-☐HA☐6**		1	1 unit
641	200	**355**	450	568	200	200	**450**	600	5	**3RW5546-☐HA☐6**		1	1 unit
814	250	**400**	500	721	250	250	**600**	800	5	**3RW5547-☐HA☐6**		1	1 unit
987	315	**560**	630	873	300	350	**750**	950	5	**3RW5548-☐HA☐6**		1	1 unit
1 091	355	**630**	710	972	350	400	**850**	1 050	15	**3RW5552-☐HA☐6**		1	1 unit
1 247	400	**710**	800	1 110	400	450	**950**	1 250	15	**3RW5553-☐HA☐6**		1	1 unit
1 454	450	**800**	900	1 295	450	550	**1 150**	1 450	15	**3RW5554-☐HA☐6**		1	1 unit
1 905	560	**1 000**	1 200	1 695	600	700	**1 500**	1 900	15	**3RW5556-☐HA☐6**		1	1 unit
2 217	710	**1 200**	1 500	1 973	700	850	**1 700**	2 200	15	**3RW5558-☐HA☐6**		1	1 unit

Type of electrical connection for the control circuit
Spring-loaded terminals
Screw terminals

2
6

Control supply voltage
24 V AC/DC
110 ... 250 V AC

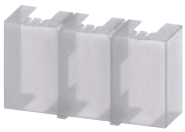
0
1

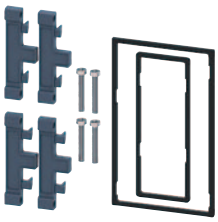
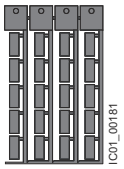
[1] 3RW55 soft starter with screw terminals for operational voltage up to 600 V:
- Sizes 3 and 4: Standard delivery time SD = 2 days (d).
- Size 5: Standard delivery time SD = 5 days (d).

Note:

For the constraints for the motor outputs specified here,
see page 17-199.

Selection and ordering data

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	Application	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
					d				
Fan covers									
3RW5983-0FC00	**Fan cover**	3RW551 (1x), 3RW552 (2x), 3RW553 (2x)	--	--	▶	**3RW5983-0FC00**		1	1 unit
		3RW554 (1x)	--	--	▶	**3RW5984-0FC00**		1	1 unit
		3RW555 (3x)	--	--	▶	**3RW5985-0FC00**		1	1 unit
Terminal covers									
 3RW5983-0TC20	**Terminal cover**	3RW552 (2x), 3RW553 (2x)	--	--	▶	**3RW5983-0TC20**		1	1 unit
3RW5984-0TC20		3RW554 (2x)	--	--	▶	**3RW5984-0TC20**		1	1 unit
Enclosure components									
3RW5950-0GL20	**Hinged cover**	3RW55	Without cutout	--	▶	**3RW5950-0GL20**		1	1 unit
Communication modules									
3RW5980-0CS00	**Communication module**	3RW55	PROFINET High Feature with integral switch	--	▶	**3RW5950-0CH00**		1	1 unit
			PROFINET Standard	--	▶	**3RW5980-0CS00**		1	1 unit
			PROFIBUS	--	▶	**3RW5980-0CP00**		1	1 unit
3RW5980-0CE00			EtherNet/IP	--	▶	**3RW5980-0CE00**		1	1 unit
3RW5980-0CR00			Modbus RTU	--	▶	**3RW5980-0CR00**		1	1 unit
			Modbus TCP	--	▶	**3RW5980-0CT00**		1	1 unit

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	Application	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
HMI modules									
 3RW5980-0HD00	**IP65 door mounting kit for HMI modules**	3RW55	IP65	For HMI modules	▶	**3RW5980-0HD00**		1	1 unit
Connecting cables									
3UF793.-0BA00-0	**HMI connection cable**	3RW55	5 m, round	For door mounting	▶	**3RW5980-0HC60**		1	1 unit
			2.5 m, round		▶	**3UF7933-0BA00-0**		1	1 unit
			1.0 m, round		▶	**3UF7937-0BA00-0**		1	1 unit
			0.5 m, round		▶	**3UF7932-0BA00-0**		1	1 unit
Further accessories									
3ZY1311-0AA00	**Push-in lugs for wall mounting**	--	Two lugs are required per device	For HMI modules and communication modules	2	**3ZY1311-0AA00**		1	10 units
Blank labels									
 3RT2900-1SB20	**Unit labeling plates**[1]		20 mm x 7 mm, titanium gray	For SIRIUS devices	20	**3RT2900-1SB20**		100	340 units
3RW55 starter kit									
3RW5951-1ES04	**SIRIUS 3RW55 starter kit**	--	Including 3RW55 soft starter 13 A, 200 ... 480 V, 24 V AC/DC Soft Starter ES V15.1, 24 V power supply unit, connecting cable and RJ45 network cable		5	**3RW5951-1ES04**		1	1 unit

[1] PC labeling systems for individual inscription of unit labeling plates are available from: murrplastik Systemtechnik GmbH (see page 16/15).

Overview

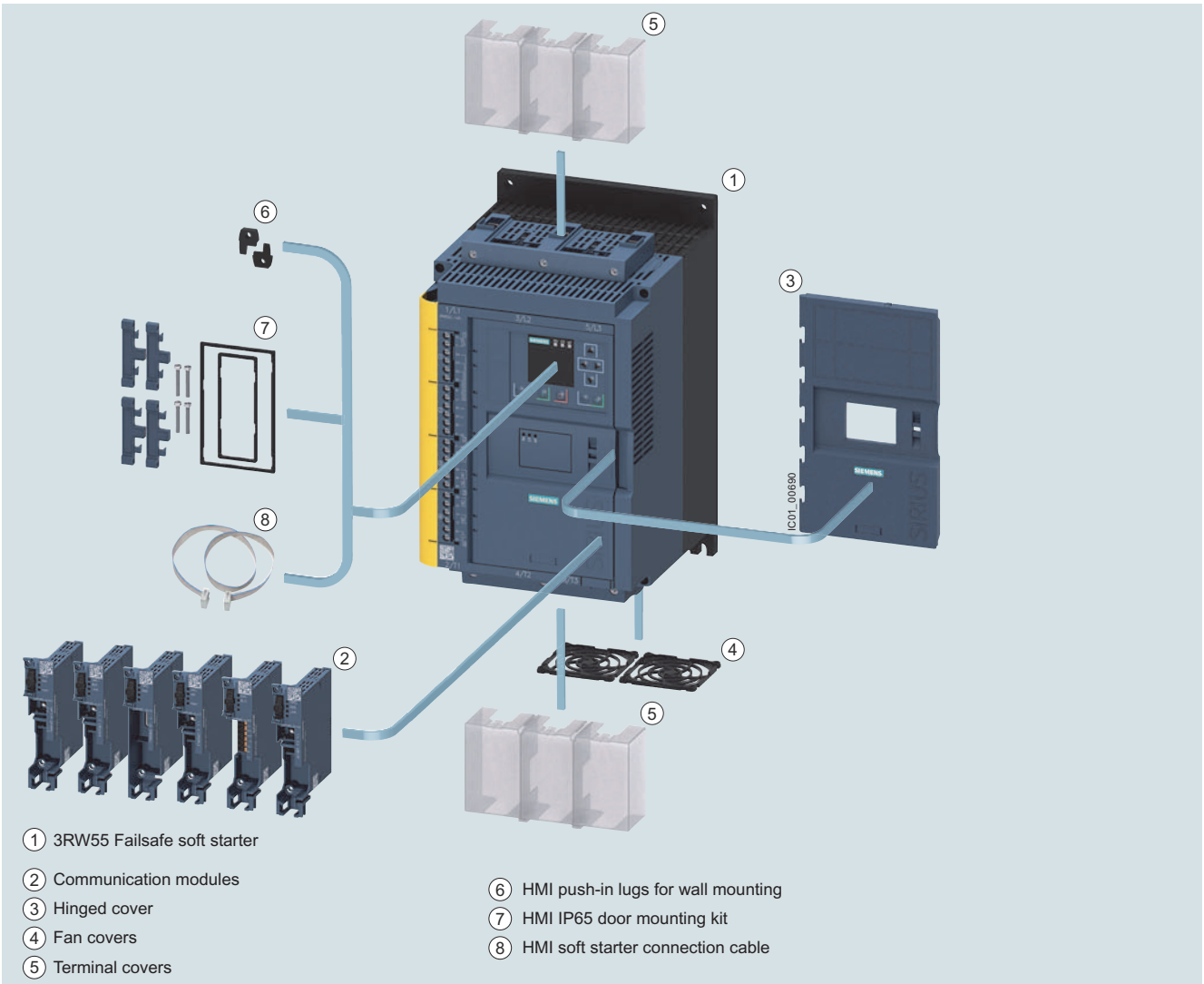
More information

Homepage, see www.usa.siemens.com/soft-starter
Industry Mall, see www.siemens.com/product?3RW
Industry Online Support (SIOS) topic page, see https://support.industry.siemens.com/cs/ww/en/view/109747404

Simulation Tool for Soft Starters (STS), see page 17-199 or https://support.industry.siemens.com/cs/ww/en/view/101494917
SIRIUS Soft Starter ES (TIA Portal), see page 14/2

Equipped with the utmost functionality, the SIRIUS 3RW55 Failsafe High Performance soft starters confidently handle even difficult starting and stopping operations. Thanks to innovative torque control, the device can be used for drives with an output of between 7.5 to 400HP @ 480V.

The innovative 3RW55 Failsafe soft starter features an integrated fail-safe digital input for directly connecting the EMERGENCY STOP, and thus covers SIL 1 STO applications. The HMI (with color display, local interface and a slot for micro SD memory card) and plug-in communication modules (PROFINET, PROFIBUS, EtherNet/IP and Modbus) ensure maximum flexibility. With their modern hybrid switching technology, the 3RW55 Failsafe soft starters offer efficient switching for long-term, energy-saving use.



1 3RW55 Failsafe soft starter
2 Communication modules
3 Hinged cover
4 Fan covers
5 Terminal covers
6 HMI push-in lugs for wall mounting
7 HMI IP65 door mounting kit
8 HMI soft starter connection cable

3RW55 Failsafe High Performance soft starters with accessories, see page 17-243.

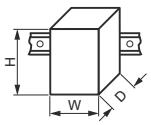
Benefits

Product characteristics / function	Performance features / benefits
Automatic parameterization	Extremely easy commissioning and reliability even under changing load conditions
Hybrid switching devices and three-phase motor control	Minimum power loss and optimum/symmetrical motor control
Integration into TIA Portal – communication modules optional	Efficient configuration and maximum flexibility in automation engineering
Removable HMI with color display, local interface, slot for micro SD memory card	Maximum flexibility with regard to user interface and intuitive menu guidance
Pump stop and torque control	Reduced mechanical loading and optimum pump stop control
Certified according to ATEX/IECEx directive	Suitable for the starting of explosion-proof motors
Fail-safe disconnection up to SIL 3 - PL e / STO	Reduced costs and space requirements thanks to direct wiring of the EMERGENCY STOP mushroom pushbutton to the soft starter for SIL 1

Technical specifications

More information	
Technical specifications, see https://support.industry.siemens.com/cs/ww/en/ps/25776/td Equipment Manual "SIRIUS 3RW55 Soft Starter", see https://support.industry.siemens.com/cs/ww/en/view/109753752	FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/25776/faq Simulation Tool for Soft Starters (STS), see page 17-199 or https://support.industry.siemens.com/cs/ww/en/view/101494917

Type		3RW551.-.HF.4	3RW552.-.HF.4 3RW553.-.HF.4	3RW554.-.HF.4
Installation/fixing/dimensions				
Width x height x depth	mm	170 × 275 × 152	185 × 306 × 203	210 × 393 × 203
Type of mounting		Screw fixing		
Mounting position		Vertical (can be rotated +/- 90° and tilted +/- 22.5° forward or backward)		
Distance to be maintained with side-by-side mounting				
• Above	mm	100		
• At the side	mm	5		
• Below	mm	75		
Maximum installation altitude above sea level[1]	m	2 000		
Degree of protection		IP00		
Ambient conditions				
Ambient temperature				
• During operation[2]	°C	-25 ... +60		
• During storage and transport	°C	-40 ... +80		
Environmental category according to IEC 60721				
• During operation		3K6 (no ice formation, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6		
• During storage		1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not enter the devices), 1M4		
• During transport		2K2, 2C1, 2S1, 2M2 (max. height of fall 0.3 m)		



1) Derating from 1 000 m, see characteristic curve on page 17-199.

2) Note derating above 40 °C.

Type		3RW55..-.HF0.	3RW55..-.HF1.
Control circuit/control			
Control supply voltage			
• At AC/DC, rated value	V	24/24	--/--
• At AC	V	--	110 ... 250
• Relative negative tolerance/relative positive tolerance with AC	%	-20/20	-15/10
• Relative negative tolerance/relative positive tolerance with DC	%	-20/20	--/--
Frequency of the control supply voltage	Hz	50 ... 60	
• Relative negative tolerance/relative positive tolerance	%	-10/10	
Type of overvoltage protection		Varistors	
Type of short-circuit protection for control circuit[1)]		Fuse 4 A gG (I_{cu} = 1 kA), fuse 6 A quick-response (I_{cu} = 1 kA), MCB C1 (I_{cu} = 600 A), MCB C6 (I_{cu} = 300 A)	

1) Not included in scope of supply

Type		3RW55..-.HF.4
Power electronics		
Operational voltage, rated value	V	200 ... 480
• Relative negative tolerance/relative positive tolerance	%	-15/10
Operational voltage for inside-delta circuit, rated value	V	200 ... 480
• Relative negative tolerance/relative positive tolerance	%	-15/10
Operating frequency, rated value	Hz	50 ... 60
• Relative negative tolerance/relative positive tolerance	%	-10/10
Minimum load [% of I_M][1)]	%	10
Maximum cable length between soft starter and motor	m	800

1) Relative to set I_e.

Type		3RW5513	3RW5514	3RW5515	3RW5516	3RW5517
Rated operational current I_e	A	13	18	25	32	38
Power electronics						
Load rating with rated operational current I_e						
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	25/22.3/19.6	38/33.5/30.5
Permissible rated motor current and starts/h						
Normal starting (CLASS 10A)						
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	32/28.4/26	38/33.5/30.5
• 300% I_M						
- Start-up time 5 s	1/h	43	43	43	43	43
- Start-up time 10 s	1/h	18	18	18	18	18
• 350% I_M						
- Start-up time 5 s	1/h	28	28	28	28	28
- Start-up time 10 s	1/h	10	10	10	10	10
Normal starting (CLASS 10E)						
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	32/28.4/26	38/33.5/30.5
• 300% I_M						
- Start-up time 5 s	1/h	21	21	21	21	21
- Start-up time 10 s	1/h	8	8	8	8	8
• 350% I_M						
- Start-up time 5 s	1/h	13	13	13	13	13
- Start-up time 10 s	1/h	4	4	4	4	4
Heavy starting (CLASS 20E)						
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	29.6/27.2/23.6	33.5/30.5/27.5
• 300% I_M						
- Start-up time 20 s	1/h	10	10	10	10	10
- Start-up time 40 s	1/h	4	4	4	4	4
• 350% I_M						
- Start-up time 20 s	1/h	7	7	7	7	7
- Start-up time 40 s	1/h	2.5	2.5	2.5	2.5	2.5
Heavy starting (CLASS 30E)						
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	26/23.6/21.2	29/26/23
• 300% I_M						
- Start-up time 20 s	1/h	7	7	7	7	7
- Start-up time 40 s	1/h	3	3	3	3	3
• 350% I_M						
- Start-up time 20 s	1/h	4	4	4	4	4
- Start-up time 40 s	1/h	1.8	1.8	1.8	1.8	1.8
Adjustable rated motor current I_M						
• Minimum/maximum	A	2.5/13	3.5/18	5/25	6.5/32	7.5/38
• Minimum/maximum in inside-delta circuits	A	4.3/22.5	6.1/31.1	8.7/43.3	11.3/55.4	13/65.8

Type		3RW5524	3RW5525	3RW5526	3RW5527
Rated operational current I_e	A	47	63	77	93
Power electronics					
Load rating with rated operational current I_e					
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
Permissible rated motor current and starts/h					
Normal starting (CLASS 10A)					
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
• 300% I_M					
- Start-up time 5 s	1/h	43	43	43	43
- Start-up time 10 s	1/h	18	18	18	18
• 350% I_M					
- Start-up time 5 s	1/h	28	28	28	28
- Start-up time 10 s	1/h	10	10	10	10
Normal starting (CLASS 10E)					
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
• 300% I_M					
- Start-up time 5 s	1/h	21	21	21	21
- Start-up time 10 s	1/h	8	8	8	8
• 350% I_M					
- Start-up time 5 s	1/h	13	13	13	13
- Start-up time 10 s	1/h	4	4	4	4
Heavy starting (CLASS 20E)					
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
• 300% I_M					
- Start-up time 20 s	1/h	10	10	10	10
- Start-up time 40 s	1/h	4	4	4	4
• 350% I_M					
- Start-up time 20 s	1/h	7	7	7	7
- Start-up time 40 s	1/h	2.5	0	0	0
Heavy starting (CLASS 30E)					
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	43.4/38/34.4	53/48/43	68/62/56	82.5/75.5/65
• 300% I_M					
- Start-up time 20 s	1/h	7	7	7	7
- Start-up time 40 s	1/h	3	3	3	3
• 350% I_M					
- Start-up time 20 s	1/h	4	4	4	4
- Start-up time 40 s	1/h	1.8	1.8	1.8	1.8
Adjustable rated motor current I_M					
• Minimum/maximum	A	10/47	13/63	16/77	19/93
• Minimum/maximum in inside-delta circuits	A	17.3/81.4	22.5/109	27.7/133	32.9/161

Type		3RW5534	3RW5535	3RW5536
Rated operational current I_e	A	113	143	171
Power electronics				
Load rating with rated operational current I_e				
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	113/101/89	143/128/118	171/153/141
Permissible rated motor current and starts/h				
Normal starting (CLASS 10A)				
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	113/101/89	143/128/118	171/153/141
• 300% I_M				
- Start-up time 5 s	1/h	43	43	35
- Start-up time 10 s	1/h	18	18	13
• 350% I_M				
- Start-up time 5 s	1/h	28	17	10
- Start-up time 10 s	1/h	10	4	0
Normal starting (CLASS 10E)				
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	113/101/89	143/128/118	171/153/141
• 300% I_M				
- Start-up time 5 s	1/h	21	21	14
- Start-up time 10 s	1/h	8	7	4
• 350% I_M				
- Start-up time 5 s	1/h	13	4	0
- Start-up time 10 s	1/h	4	0	0
Heavy starting (CLASS 20E)				
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	109/97/85	128/113/103	141/129/117
• 300% I_M				
- Start-up time 20 s	1/h	10	10	10
- Start-up time 40 s	1/h	4	4	4
• 350% I_M				
- Start-up time 20 s	1/h	7	6	6
- Start-up time 40 s	1/h	0	0	0
Heavy starting (CLASS 30E)				
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	89/81/74	108/98/88	117/105/93
• 300% I_M				
- Start-up time 20 s	1/h	7	7	7
- Start-up time 40 s	1/h	3	3	3
• 350% I_M				
- Start-up time 20 s	1/h	4	4	4
- Start-up time 40 s	1/h	1.8	1.8	1.8
Adjustable rated motor current I_M				
• Minimum/maximum	A	23/113	29/143	34/171
• Minimum/maximum in inside-delta circuits	A	39.8/195	50.2/247	58.9/296

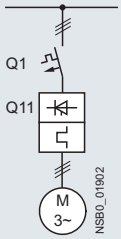
Type		3RW5543	3RW5544	3RW5545	3RW5546	3RW5547	3RW5548
Rated operational current I_e	A	210	250	315	370	470	570
Power electronics							
Load rating with rated operational current I_e							
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	570/504/460
Permissible rated motor current and starts/h							
Normal starting (CLASS 10A)							
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	570/504/460
• 300% I_M							
- Start-up time 5 s	1/h	43	43	38	43	32	13
- Start-up time 10 s	1/h	13	18	14	18	13	3
• 350% I_M							
- Start-up time 5 s	1/h	14	28	19	28	19	4
- Start-up time 10 s	1/h	0	10	5	10	6	0.4
Normal starting (CLASS 10E)							
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	551/490/445
• 300% I_M							
- Start-up time 5 s	1/h	13	21	14	20	13	5
- Start-up time 10 s	1/h	2	8	4	8	3	--
• 350% I_M							
- Start-up time 5 s	1/h	0	13	5	12	6	1
- Start-up time 10 s	1/h	0	4	0	3	0.4	--
Heavy starting (CLASS 20E)							
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	162/146/130	200/180/160	231/207/183	258/230/202	272/254/236	284/262/240
• 300% I_M							
- Start-up time 20 s	1/h	10	10	10	10	10	10
- Start-up time 40 s	1/h	4	4	4	4	4	4
• 350% I_M							
- Start-up time 20 s	1/h	7	7	7	7	7	7
- Start-up time 40 s	1/h	2	2.5	2.5	2.5	2.5	2.5
Heavy starting (CLASS 30E)							
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	138/122/106	160/140/120	183/159/135	202/174/160	210/190/170	220/200/180
• 300% I_M							
- Start-up time 20 s	1/h	7	7	7	7	7	7
- Start-up time 40 s	1/h	3	3	3	3	3	3
• 350% I_M							
- Start-up time 20 s	1/h	4	4	4	4	4	4
- Start-up time 40 s	1/h	1.8	1.8	1.8	1.8	1.8	1.8
Adjustable rated motor current I_M							
• Minimum/maximum	A	42/210	50/250	63/315	74/370	94/470	114/570
• Minimum/maximum in inside-delta circuits	A	72.7/363	86.6/433	109.1/545	128.2/640	162.8/814	197.5/987

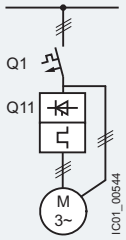
Motor feeders according to IEC with 3RV2/3VA motor starter protectors/circuit breakers (without semiconductor protection)

Type of coordination "1", CLASS 10,
short-circuit breaking capacity I_q in kA, see table

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.





Soft starters	Motor starter protectors				Motor starter protectors			
	for 400 V systems		for 480 V systems		for 400 V systems		for 480 V systems	
Q11	Q1	I_q	Q1	I_q	Q1	I_q	Q1	I_q
Type	Type	kA	Type	kA	Type	kA	Type	kA
Type of coordination "1" ToC 1	**Inline circuit**				**Inside-delta circuit**			
3RW5513	3RV2032-4TA10	65	3RV2032-4TA10	18	3RV2032-4DA10	65	3RV2032-4DA10	18
3RW5514	3RV2032-4DA10	65	3RV2032-4DA10	15	3RV2032-4EA10	65	3RV2032-4EA10	15
3RW5515	3RV2032-4EA10	65	3RV2032-4EA10	15	3RV2032-4VA10	65	3RV2032-4VA10	15
3RW5516	3RV2032-4VA10	65	3RV2032-4VA10	10	3RV2032-4JA10	65	3RV2032-4JA10	10
3RW5517	3RV2032-4WA10	65	3RV2032-4WA10	10	3RV2032-4RA10	65	3RV2032-4RA10	10
3RW5524	3RV2032-4JA10	65	3RV2032-4JA10	10	3RV2032-4RA10	65	3RV2032-4RA10	10
3RW5525	3VA2163-7MN32-0AA0	65	3VA2163-7MN32-0AA0	20	3VA2110-7MN32-0AA0	65	3VA2110-7MN32-0AA0	20
3RW5526	3VA2110-7MN32-0AA0	65	3VA2110-7MN32-0AA0	20	3VA2216-7MN32-0AA0	65	3VA2216-7MN32-0AA0	20
3RW5527	3VA2216-7MN32-0AA0	15	3VA2216-7MN32-0AA0	10	3VA2220-7MN32-0AA0	15	3VA2220-7MN32-0AA0	10
3RW5534	3VA2216-7MN32-0AA0	65	--	--	3VA2220-7MN32-0AA0	65	--	--
3RW5535	3VA2220-7MN32-0AA0	65	--	--	3VA2325-7MN32-0AA0	65	--	--
3RW5536	3VA2325-7MN32-0AA0	30	3VA2325-7MN32-0AA0	10	3VA2440-7MN32-0AA0	30	3VA2440-7MN32-0AA0	10
3RW5543	3VA2325-7MN32-0AA0	65	3VA2325-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65
3RW5544	3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2450-7MN32-0AA0	65	3VA2450-7MN32-0AA0	65
3RW5545	3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65
3RW5546	3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65
3RW5547	3VA2450-7MN32-0AA0	65	3VA2450-7MN32-0AA0	65	3VA2510-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65
3RW5548	3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65

Note:

The service factor or measurement inaccuracies have been taken into account, for example, for the selection of the specified motor starter protectors/circuit breakers; the specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller motor starter protectors/circuit breakers than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

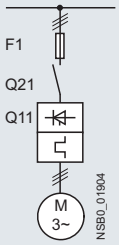
Motor feeders according to IEC with 3NA3 fuses

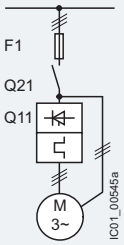
gG class full-range fuses for cable and line protection according to IEC 60269-2, without semiconductor protection

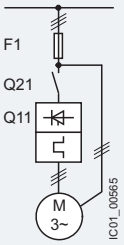
Type of coordination "1",
short-circuit breaking capacity I_q = 65 kA

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.







Soft starters	gG class fuse	Line contactor (optional)	gG class fuse	Line contactor (optional)	
	for systems up to 480 V	for systems up to 480 V	for systems up to 480 V	for systems up to 480 V in the supply cable	for systems up to 480 V in the delta
Q11	F1	Q21	F1	Q21	Q21
Type	Type	Type	Type	Type	Type
Type of coordination "1" ToC 1	**Inline circuit**		**Inside-delta circuit**		
3RW5513	3NA3820-6	3RT2025	3NA3820-6	3RT2027	3RT2025
3RW5514	3NA3820-6	3RT2026	3NA3820-6	3RT2027	3RT2026
3RW5515	3NA3822-6	3RT2027	3NA3822-6	3RT2036	3RT2027
3RW5516	3NA3824-6	3RT2035	3NA3824-6	3RT2037	3RT2035
3RW5517	3NA3824-6	3RT2035	3NA3824-6	3RT2038	3RT2035
3RW5524	3NA3824-6	3RT2036	3NA3824-6	3RT2046	3RT2036
3RW5525	3NA3830-6	3RT2037	3NA3830-6	3RT2047	3RT2037
3RW5526	3NA3132-6	3RT2038	3NA3132-6	3RT1055	3RT2038
3RW5527	3NA3136-6	3RT2046	3NA3136-6	3RT1056	3RT2046
3RW5534	3NA3244-6	3RT1054	3NA3244-6	3RT1064	3RT1054
3RW5535	3NA3244-6	3RT1055	3NA3244-6	3RT1065	3RT1055
3RW5536	3NA3365-6	3RT1056	3NA3365-6	3RT1066	3RT1056
3RW5543	2 x 3NA3354-6	3RT1064	2 x 3NA3354-6	3RT1075	3RT1064
3RW5544	2 x 3NA3354-6	3RT1065	2 x 3NA3354-6	3RT1076	3RT1065
3RW5545	2 x 3NA3365-6	3RT1075	2 x 3NA3365-6	3TF68	3RT1075
3RW5546	2 x 3NA3365-6	3RT1075	2 x 3NA3365-6	3TF69	3RT1075
3RW5547	2 x 3NA3365-6	3RT1076	2 x 3NA3365-6	3TF69	3RT1076
3RW5548	2 x 3NA3365-6	3TF68	2 x 3NA3365-6	--	3TF68

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

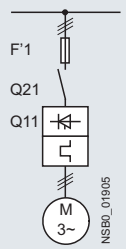
Motor feeders according to IEC with 3NE1 SITOR fuses

gR class full-range fuses for semiconductor protection, cable and line protection

Type of coordination "2",
short-circuit breaking capacity I_q = 65 kA

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.



Soft starters	gG class fuse	Line contactor (optional)
	for systems up to 480 V	for systems up to 480 V
Q11	F'1	Q21
Type	Type	Type
Type of coordination "2" ToC 2	**Inline circuit**	
3RW5513	3NE1815-0	3RT2025
3RW5514	3NE1802-0	3RT2026
3RW5515	3NE1817-0	3RT2027
3RW5516	3NE1818-0	3RT2035
3RW5517	3NE1820-0	3RT2035
3RW5524	3NE1021-2	3RT2036
3RW5525	3NE1022-0	3RT2037
3RW5526	3NE1224-0	3RT2038
3RW5527	3NE1224-0	3RT2046
3RW5534	3NE1225-0	3RT1054
3RW5535	3NE1227-0	3RT1055
3RW5536	3NE1230-0	3RT1056
3RW5543	3NE1230-2	3RT1064
3RW5544	3NE1331-0	3RT1065
3RW5545	3NE1334-2	3RT1075
3RW5546	3NE1334-2	3RT1075
3RW5547	3NE1436-2	3RT1076
3RW5548	3NE1437-2	3TF68

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

In inside-delta circuits, a gR class full-range fuse could not provide the semiconductor protection of the delta-connected soft starter with a short-circuit breaking capacity that is adequate for practical use. In this case, we recommend using aR class partial-range fuses for semiconductor protection for type of coordination “2” (see page 17-239).

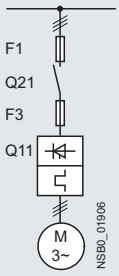
Motor feeders according to IEC with 3NE8 / 3NE3 / 3NC3 fuses

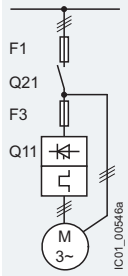
aR class partial-range fuses for semiconductor protection

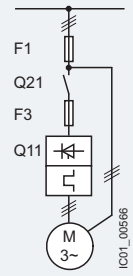
Type of coordination "2",
short-circuit breaking capacity I_q = 65 kA

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.







Soft starters	gG class fuse	aR class fuse	Line contactor (optional)	gG class fuse	aR class fuse	Line contactor (optional)	
	for systems up to 480 V	for systems up to 480 V	for systems up to 480 V	for systems up to 480 V	for systems up to 480 V	for systems up to 480 V in the supply cable	for systems up to 480 V in the delta
Q11	F1	F3	Q21	F1	F3	Q21	Q21
Type	Type	Type	Type	Type	Type	Type	Type
Type of coordination "2" ToC 2	**Inline circuit**			**Inside-delta circuit**			
3RW5513	3NA3820-6	3NE8017-1	3RT2025	3NA3820-6	3NE8017-1	3RT2027	3RT2025
3RW5514	3NA3820-6	3NE8020-1	3RT2026	3NA3820-6	3NE8020-1	3RT2027	3RT2026
3RW5515	3NA3822-6	3NE8021-1	3RT2027	3NA3822-6	3NE8021-1	3RT2036	3RT2027
3RW5516	3NA3824-6	3NE8022-1	3RT2035	3NA3824-6	3NE8022-1	3RT2037	3RT2035
3RW5517	3NA3824-6	3NE8024-1	3RT2035	3NA3824-6	3NE8024-1	3RT2038	3RT2035
3RW5524	3NA3824-6	3NE8024-1	3RT2036	3NA3824-6	3NE8024-1	3RT2046	3RT2036
3RW5525	3NA3830-6	3NE3227	3RT2037	3NA3830-6	3NE3227	3RT2047	3RT2037
3RW5526	3NA3132-6	3NE3227	3RT2038	3NA3132-6	3NE3227	3RT1055	3RT2038
3RW5527	3NA3136-6	3NE3227	3RT2046	3NA3136-6	3NE3227	3RT1056	3RT2046
3RW5534	3NA3244-6	3NE3231	3RT1054	3NA3244-6	3NE3231	3RT1064	3RT1054
3RW5535	3NA3244-6	3NE3233	3RT1055	3NA3244-6	3NE3233	3RT1065	3RT1055
3RW5536	3NA3365-6	3NE3334-0B	3RT1056	3NA3365-6	3NE3334-0B	3RT1066	3RT1056
3RW5543	2 x 3NA3354-6	3NE3333	3RT1064	2 x 3NA3354-6	3NE3333	3RT1075	3RT1064
3RW5544	2 x 3NA3354-6	3NE3335	3RT1065	2 x 3NA3354-6	3NE3335	3RT1076	3RT1065
3RW5545	2 x 3NA3365-6	--	3RT1075	2 x 3NA3365-6	--	3TF68	3RT1075
3RW5546	2 x 3NA3365-6	--	3RT1075	2 x 3NA3365-6	--	3TF69	3RT1075
3RW5547	2 x 3NA3365-6	3NE3340-8	3RT1076	2 x 3NA3365-6	3NE3340-8	3TF69	3RT1076
3RW5548	2 x 3NA3365-6	3NC3342-1U	3TF68	2 x 3NA3365-6	3NC3342-1U	--	3TF68

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

For CLASS 10 applications, as an alternative to the gG class full-range fuses for cable and line protection 3NA3 (F1), 3RV2/3VA motor starter protectors/circuit breakers can also be used, possibly with reduced short-circuit breaking capacity (see page 17-236). In these cases, optional line contactors can be dispensed with.

Reversing operation with reversing contactors

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.

(For an example circuit, see 3RW55 Equipment Manual, Appendix A.3)

Soft starters	Reversing contactor assembly	For reversing contactor
	for systems up to 480 V	for systems up to 480 V
Q11	Q21 / Q22	Q21 / Q22
Type	Type	Type
3RW5513	3RA2325	3RT2025
3RW5514	3RA2326	3RT2026
3RW5515	3RA2327	3RT2027
3RW5516	3RA2335	3RT2035
3RW5517	3RA2335	3RT2035
3RW5524	3RA2336	3RT2036
3RW5525	3RA2337	3RT2037
3RW5526	3RA2338	3RT2038
3RW5527	3RA2346	3RT2046
3RW5534	--	3RT1054
3RW5535	--	3RT1055
3RW5536	--	3RT1056
3RW5543	--	3RT1064
3RW5544	--	3RT1065
3RW5545	--	3RT1075
3RW5546	--	3RT1075
3RW5547	--	3RT1076
3RW5548	--	3TF68

Selection and ordering data

For normal starting (CLASS 10E)

3RW551.

3RW552.

3RW553.

3RW554.

At 40 °C			At 50 °C				SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors At 230 V	At 400 V	Operational current	Rating [hp] for three-phase motors At 200/208 V	At 220/230 V	At 460/480 V					
A	kW	kW	A	hp	hp	hp	d				
Operational voltage 200 ... 480 V											
13	3	**5.5**	11.5	2	3	**7.5**	5	**3RW5513-□HF□4**		1	1 unit
18	4	**7.5**	15.9	3	5	**10**	5	**3RW5514-□HF□4**		1	1 unit
25	5.5	**11**	22.3	5	7.5	**15**	5	**3RW5515-□HF□4**		1	1 unit
32	7.5	**15**	28.4	7.5	10	**20**	5	**3RW5516-□HF□4**		1	1 unit
38	11	**18.5**	33.5	10	10	**20**	5	**3RW5517-□HF□4**		1	1 unit
47	11	**22**	41.6	10	10	**30**	5	**3RW5524-□HF□4**		1	1 unit
63	18.5	**30**	55.5	15	20	**40**	5	**3RW5525-□HF□4**		1	1 unit
77	22	**37**	68	20	25	**50**	5	**3RW5526-□HF□4**		1	1 unit
93	22	**45**	82.5	25	30	**60**	5	**3RW5527-□HF□4**		1	1 unit

Type of electrical connection for the control circuit
Screw terminals **1**
Spring-loaded terminals **3**

Control supply voltage
24 V AC/DC **0**
110 ... 250 V AC **1**

[1] 3RW55 soft starter with screw terminals for operational voltage up to 480 V: Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here, see page 17-199.

At 40 °C			At 50 °C				SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors At 230 V	At 400 V	Operational current	Rating [hp] for three-phase motors At 200/208 V	At 220/230 V	At 460/480 V					
A	kW	kW	A	hp	hp	hp	d				
Operational voltage 200 ... 480 V											
113	30	**55**	101	30	30	**75**	5	**3RW5534-□HF□4**		1	1 unit
143	37	**75**	128	40	40	**100**	5	**3RW5535-□HF□4**		1	1 unit
171	45	**90**	153	50	50	**100**	5	**3RW5536-□HF□4**		1	1 unit
210	55	**110**	186	50	60	**150**	5	**3RW5543-□HF□4**		1	1 unit
250	75	**132**	220	60	75	**150**	5	**3RW5544-□HF□4**		1	1 unit
315	90	**160**	279	75	100	**200**	5	**3RW5545-□HF□4**		1	1 unit
370	110	**200**	328	100	125	**250**	5	**3RW5546-□HF□4**		1	1 unit
470	132	**250**	416	150	150	**350**	5	**3RW5547-□HF□4**		1	1 unit
570	160	**315**	504	150	200	**400**	5	**3RW5548-□HF□4**		1	1 unit

Type of electrical connection for the control circuit
Spring-loaded terminals **2**
Screw terminals **6**

Control supply voltage
24 V AC/DC **0**
110 ... 250 V AC **1**

[1] 3RW55 soft starter with screw terminals for operational voltage up to 480 V: Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here, see page 17-199.

Selection and ordering data

For normal starting (CLASS 10E)

3RW551.

3RW552.

3RW553.

3RW554.

At 40 °C for inside-delta circuit			At 50 °C for inside-delta circuit				SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors At 230 V	At 400 V	Operational current	Rating [hp] for three-phase motors At 200/208 V	At 220/230 V	At 460/480 V					
A	kW	kW	A	hp	hp	hp	d				
Operational voltage 200 ... 480 V											
22.5	5.5	**11**	19.9	5	5	**10**	5	**3RW5513-☐HF☐4**		1	1 unit
31.5	7.5	**15**	28	7.5	7.5	**20**	5	**3RW5514-☐HF☐4**		1	1 unit
43.3	11	**18.5**	39	10	10	**25**	5	**3RW5515-☐HF☐4**		1	1 unit
55.4	15	**22**	49	15	15	**30**	5	**3RW5516-☐HF☐4**		1	1 unit
65.8	18.5	**30**	58	15	20	**40**	5	**3RW5517-☐HF☐4**		1	1 unit
81.4	22	**45**	72	20	25	**50**	5	**3RW5524-☐HF☐4**		1	1 unit
109	30	**55**	96	30	30	**75**	5	**3RW5525-☐HF☐4**		1	1 unit
133	37	**75**	118	30	40	**75**	5	**3RW5526-☐HF☐4**		1	1 unit
161	45	**90**	143	40	50	**100**	5	**3RW5527-☐HF☐4**		1	1 unit

Type of electrical connection for the control circuit
Screw terminals
Spring-loaded terminals

Control supply voltage
24 V AC/DC
110 ... 250 V AC

1 3

0 1

[1] 3RW55 soft starter with screw terminals for operational voltage up to 480 V: Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here, see page 17-199.

At 40 °C for inside-delta circuit			At 50 °C for inside-delta circuit				SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors At 230 V	At 400 V	Operational current	Rating [hp] for three-phase motors At 200/208 V	At 220/230 V	At 460/480 V					
A	kW	kW	A	hp	hp	hp	d				
Operational voltage 200 ... 480 V											
196	55	**110**	175	50	60	**125**	5	**3RW5534-☐HF☐4**		1	1 unit
248	75	**132**	222	75	75	**150**	5	**3RW5535-☐HF☐4**		1	1 unit
296	90	**160**	265	75	100	**200**	5	**3RW5536-☐HF☐4**		1	1 unit
364	110	**200**	322	100	125	**250**	5	**3RW5543-☐HF☐4**		1	1 unit
433	132	**250**	381	125	150	**300**	5	**3RW5544-☐HF☐4**		1	1 unit
546	160	**315**	483	150	200	**400**	5	**3RW5545-☐HF☐4**		1	1 unit
641	200	**355**	568	200	200	**450**	5	**3RW5546-☐HF☐4**		1	1 unit
814	250	**400**	721	250	250	**600**	5	**3RW5547-☐HF☐4**		1	1 unit
987	315	**560**	873	300	350	**750**	5	**3RW5548-☐HF☐4**		1	1 unit

Type of electrical connection for the control circuit
Spring-loaded terminals
Screw terminals

Control supply voltage
24 V AC/DC
110 ... 250 V AC

2 6

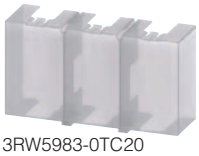
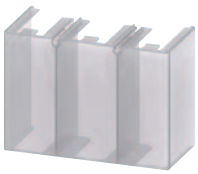
0 1

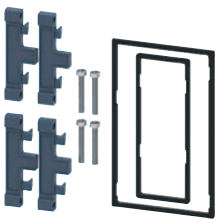
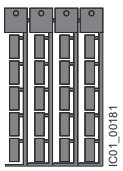
[1] 3RW55 soft starter with screw terminals for operational voltage up to 480 V: Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here, see page 17-199.

Selection and ordering data

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	Application	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Fan covers									
3RW5983-0FC00	**Fan cover**	3RW551 (1x), 3RW552 (2x), 3RW553 (2x)	--	--	▶	**3RW5983-0FC00**		1	1 unit
		3RW554 (1x)	--	--	▶	**3RW5984-0FC00**		1	1 unit
Terminal covers									
 3RW5983-0TC20	**Terminal cover**	3RW552 (2x), 3RW553 (2x)	--	--	▶	**3RW5983-0TC20**		1	1 unit
 3RW5984-0TC20		3RW554 (2x)	--	--	▶	**3RW5984-0TC20**		1	1 unit
Enclosure components									
3RW5950-0GL20	**Hinged cover**	3RW55	Without cutout	--	▶	**3RW5950-0GL20**		1	1 unit
Communication modules									
3RW5980-0CS00	**Communication module**	3RW55	PROFINET High Feature with integral switch	--	▶	**3RW5950-0CH00**		1	1 unit
			PROFINET Standard	--	▶	**3RW5980-0CS00**		1	1 unit
			PROFIBUS	--	▶	**3RW5980-0CP00**		1	1 unit
3RW5980-0CE00			EtherNet/IP	--	▶	**3RW5980-0CE00**		1	1 unit
			Modbus RTU	--	▶	**3RW5980-0CR00**		1	1 unit
3RW5980-0CR00			Modbus TCP	--	▶	**3RW5980-0CT00**		1	1 unit

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	Application	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
					d				
HMI modules									
 3RW5980-0HD00	**IP65 door mounting kit for HMI modules**	3RW55	IP65	For HMI modules	▶	**3RW5980-0HD00**		1	1 unit
Connecting cables									
3UF793.-0BA00-0	**HMI connection cable**	3RW55	5 m, round	For door mounting	▶	**3RW5980-0HC60**		1	1 unit
			2.5 m, round		▶	**3UF7933-0BA00-0**		1	1 unit
			1.0 m, round		▶	**3UF7937-0BA00-0**		1	1 unit
			0.5 m, round		▶	**3UF7932-0BA00-0**		1	1 unit
Further accessories									
3ZY1311-0AA00	**Push-in lugs for wall mounting**	--	Two lugs are required per device	For HMI modules and communication modules	2	**3ZY1311-0AA00**		1	10 units
Blank labels									
 3RT2900-1SB20	**Unit labeling plates**[1]	--	20 mm x 7 mm, titanium gray	For SIRIUS devices	20	**3RT2900-1SB20**		100	340 units

[1] PC labeling systems for individual inscription of unit labeling plates are available from: murrplastik Systemtechnik GmbH (see page 16/15).

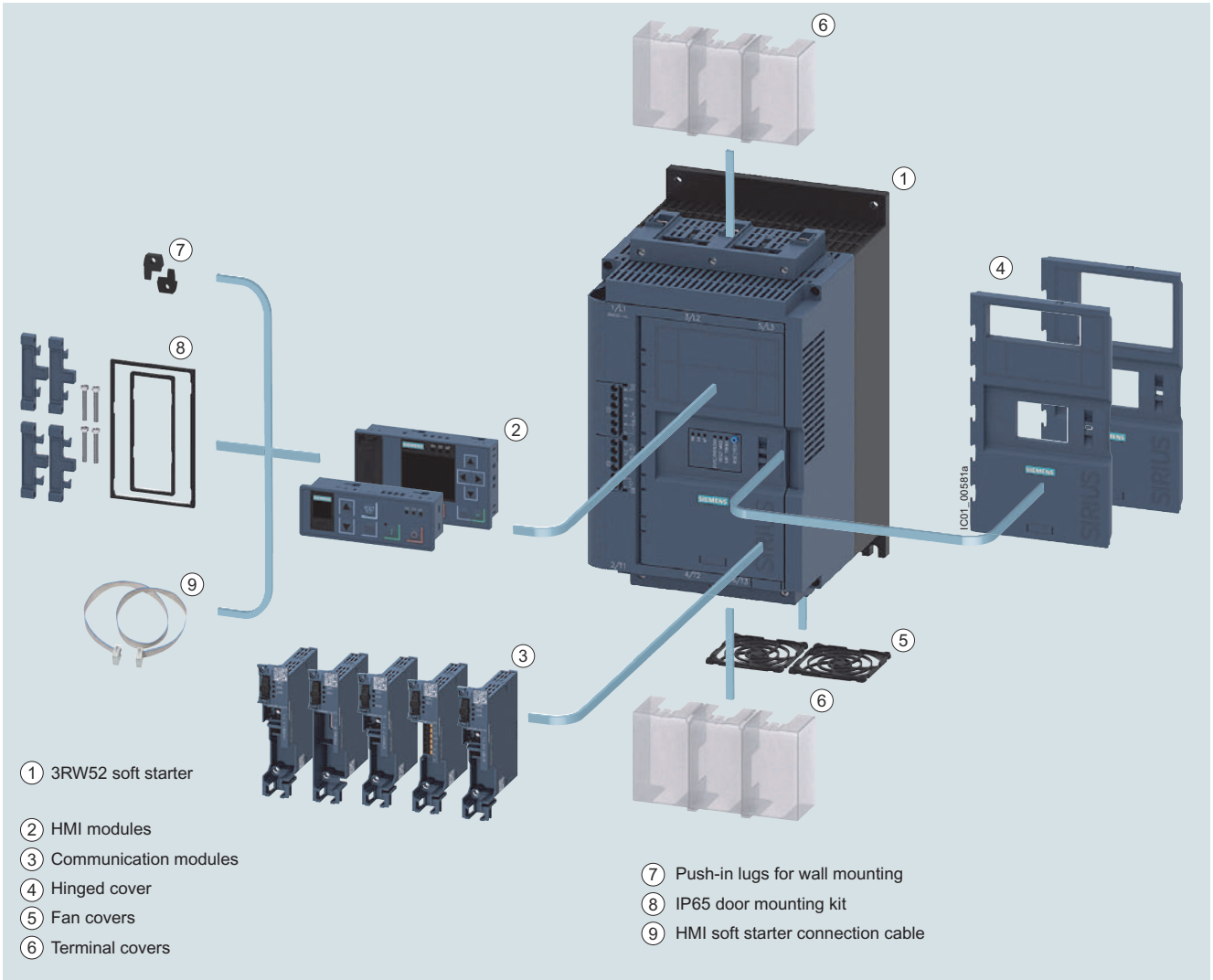
Overview

More information

Homepage, see www.usa.siemens.com/soft-starter
Industry Mall, see www.siemens.com/product?3RW52
TIA Selection Tool Cloud (TST Cloud), see https://www.siemens.com/tstcloud/?node=3rw52
Industry Online Support (SIOS) topic page, see https://support.industry.siemens.com/cs/ww/en/view/109747404
Simulation Tool for Soft Starters (STS), see page 17-199 or https://support.industry.siemens.com/cs/ww/en/view/101494917
SIRIUS Soft Starter ES (TIA Portal), see page 14/5

SIRIUS 3RW52 General Performance soft starters are the ideal solution for standard applications. With ideal three-phase motor control, they cover the performance range from 7.5 to 400HP @ 480V.

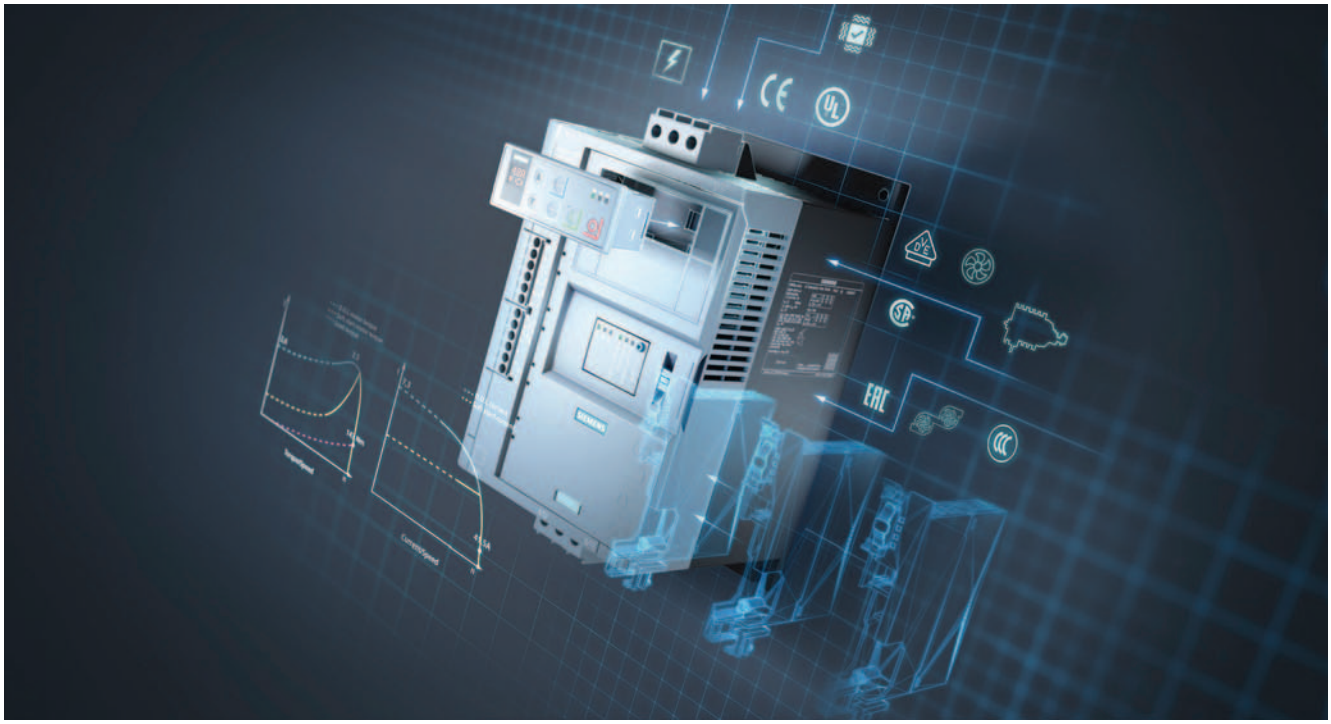
Optional HMI modules, plug-in communication modules (PROFINET, PROFIBUS, EtherNet/IP and Modbus) and either an analog output or thermistor motor protection ensure maximum flexibility. With their modern hybrid switching technology, the SIRIUS 3RW52 soft starters offer efficient switching for long-term, energy-saving use.



1 3RW52 soft starter
2 HMI modules
3 Communication modules
4 Hinged cover
5 Fan covers
6 Terminal covers
7 Push-in lugs for wall mounting
8 IP65 door mounting kit
9 HMI soft starter connection cable

3RW52 General Performance soft starters with accessories (see page 17-261), for expansion with HMI module or communication module

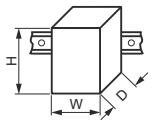
Benefits



Product characteristics / function	Performance features / benefits
Hybrid switching devices and three-phase motor control	Minimum power loss and optimum/symmetrical motor control
TIA-Integration – communication modules and HMI modules optional	Efficient configuration and maximum flexibility in automation engineering
Soft Torque	Reduced mechanical loading and optimum pump stop
Parameterization using potentiometers	Simple and fast commissioning
Wide range for control supply and main voltage	Low variance, high system availability even with weak supply networks

Technical specifications

More information	
Technical specifications, see https://support.industry.siemens.com/cs/ww/en/ps/25100/td Equipment Manual "SIRIUS 3RW52 Soft Starter", see https://support.industry.siemens.com/cs/ww/en/view/109753751	FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/25100/faq Simulation Tool for Soft Starters (STS), see page 17-199 or https://support.industry.siemens.com/cs/ww/en/view/101494917

Type			3RW5213 3RW5214 3RW5215	3RW5216 3RW5217	3RW5224 3RW5225	3RW5226 3RW5227 3RW5234 3RW5235 3RW5236	3RW5243 3RW5244 3RW5245 3RW5246 3RW5247 3RW5248
Installation/fixing/dimensions							
Width x height x depth		mm	170 × 275 × 152		185 × 306 × 203		210 × 393 × 203
Type of mounting			Screw fixing				
Mounting position			For vertical mounting surface can be rotated +/- 10° and tilted forward or backward	For vertical mounting surface can be rotated +/- 90°, for vertical mounting surface can be tilted +/- 22.5° forward or backward	For vertical mounting surface can be rotated +/- 10° and tilted forward or backward	For vertical mounting surface can be rotated +/- 90°, for vertical mounting surface can be tilted +/- 22.5° forward or backward	
Distance to be maintained with side-by-side mounting							
• Above		mm	100				
• At the side		mm	5				
• Below		mm	75				
Maximum installation altitude above sea level[1]		m	5 000				
Degree of protection			IP00				
Ambient conditions							
Ambient temperature							
• During operation[2]		°C	-25 ... +60				
• During storage and transport		°C	-40 ... +80				
Environmental category according to IEC 60721							
• During operation			3K6 (no ice formation, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6				
• During storage			1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not enter the devices), 1M4				
• During transport			2K2, 2C1, 2S1, 2M2 (max. height of fall 0.3 m)				

1) Derating from 1 000 m, see characteristic curve on page 17-199.

2) Note derating above 40 °C.

Type		3RW52..-..C0.	3RW52..-..C1.
Control circuit/control			
Control supply voltage			
• At AC/DC, rated value	V	24/24	--/--
• At AC	V	--	110 ... 250
• Relative negative tolerance/relative positive tolerance with AC	%	-20/20	-15/10
• Relative negative tolerance/relative positive tolerance with DC	%	-20/20	--/--
Frequency of the control supply voltage	Hz	50 ... 60	
• Relative negative tolerance/relative positive tolerance	%	-10/10	
Type of overvoltage protection		Varistors	
Type of short-circuit protection for control circuit[1]		Fuse 4 A gG (I_{cu} = 1 kA), fuse 6 A quick-response (I_{cu} = 1 kA), MCB C1 (I_{cu} = 600 A), MCB C6 (I_{cu} = 300 A)	

1) Not included in scope of supply

Type		3RW52..-..C.4	3RW52..-..C.5
Power electronics			
Operational voltage, rated value	V	200 ... 480	200 ... 600
• Relative negative tolerance/relative positive tolerance	%	-15/10	
Operational voltage for inside-delta circuit, rated value	V	200 ... 480	200 ... 600
• Relative negative tolerance/relative positive tolerance	%	-15/10	
Operating frequency, rated value	Hz	50 ... 60	
• Relative negative tolerance/relative positive tolerance	%	-10/10	
Minimum load [% of I_M][1]	%	15	
Maximum cable length between soft starter and motor	m	800	

1) Relative to the smallest adjustable I_e.

Type		3RW5213	3RW5214	3RW5215	3RW5216	3RW5217
Rated operational current I_e	A	13	18	25	32	38
Power electronics						
Load rating with rated operational current I_e						
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	32/28.4/26	38/33.5/30.5
Permissible rated motor current and starts/h						
Normal starting (CLASS 10A)						
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	32/28.4/26	38/33.5/30.5
• 300% I_M						
- Start-up time 5 s	1/h	43	43	43	43	43
- Start-up time 10 s	1/h	18	18	18	18	18
• 350% I_M						
- Start-up time 5 s	1/h	28	28	28	28	28
- Start-up time 10 s	1/h	10	10	10	10	10
Normal starting (CLASS 10E)						
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	32/28.4/26	38/33.5/30.5
• 300% I_M						
- Start-up time 20 s	1/h	21	21	21	21	21
- Start-up time 40 s	1/h	8	8	8	8	8
• 350% I_M						
- Start-up time 20 s	1/h	13	13	13	13	13
- Start-up time 40 s	1/h	4	4	4	4	4
Heavy starting (CLASS 20E)						
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	29.6/27.2/23.6	33.5/30.5/27.5
• 300% I_M						
- Start-up time 20 s	1/h	10	10	10	10	10
- Start-up time 40 s	1/h	4	4	4	4	4
• 350% I_M						
- Start-up time 20 s	1/h	7	7	7	7	7
- Start-up time 40 s	1/h	2.5	2.5	2.5	2.5	2.5
Adjustable rated motor current I_M						
• Minimum/maximum	A	5.5/13	7.5/18	11.5/25	14/32	15.5/38
• Minimum/maximum in inside-delta circuits	A	9.5/22.5	13/31.2	19.9/43.3	24.2/55.4	26.8/65.8

Type		3RW5224	3RW5225	3RW5226	3RW5227
Rated operational current I_e	A	47	63	77	93
Power electronics					
Load rating with rated operational current I_e					
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
Permissible rated motor current and starts/h					
Normal starting (CLASS 10A)					
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
• 300% I_M					
- Start-up time 5 s	1/h	43	43	43	43
- Start-up time 10 s	1/h	18	18	18	18
• 350% I_M					
- Start-up time 5 s	1/h	28	28	28	28
- Start-up time 10 s	1/h	10	10	10	10
Normal starting (CLASS 10E)					
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
• 300% I_M					
- Start-up time 20 s	1/h	21	21	21	21
- Start-up time 40 s	1/h	8	8	8	8
• 350% I_M					
- Start-up time 20 s	1/h	13	13	13	13
- Start-up time 40 s	1/h	4	4	4	4
Heavy starting (CLASS 20E)					
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	47/41.6/36.2	63/55.5/50.5	65/59/53	93/82.5/75.5
• 300% I_M					
- Start-up time 20 s	1/h	10	10	10	10
- Start-up time 40 s	1/h	4	3	4	4
• 350% I_M					
- Start-up time 20 s	1/h	7	4	7	7
- Start-up time 40 s	1/h	2	0	2.5	2.5
Adjustable rated motor current I_M					
• Minimum/maximum	A	20/47	25.5/63	32/77	40.5/93
• Minimum/maximum in inside-delta circuits	A	34.6/81.4	44.2/109	55.4/133	70.1/161

Type		3RW5234	3RW5235	3RW5236
Rated operational current I_e	A	113	143	171
Power electronics				
Load rating with rated operational current I_e				
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	113/101/89	143/128/118	171/153/141
Permissible rated motor current and starts/h				
Normal starting (CLASS 10A)				
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	113/101/89	143/128/118	171/153/141
• 300% I_M				
- Start-up time 5 s	1/h	43	43	43
- Start-up time 10 s	1/h	18	18	18
• 350% I_M				
- Start-up time 5 s	1/h	28	27	20
- Start-up time 10 s	1/h	10	8	4
Normal starting (CLASS 10E)				
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	113/101/89	139/127/116	158/146/129
• 300% I_M				
- Start-up time 20 s	1/h	21	21	21
- Start-up time 40 s	1/h	8	8	8
• 350% I_M				
- Start-up time 20 s	1/h	13	12	12
- Start-up time 40 s	1/h	4	1	1
Heavy starting (CLASS 20E)				
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	109/97/85	113/103/93	129/117/105
• 300% I_M				
- Start-up time 20 s	1/h	10	10	10
- Start-up time 40 s	1/h	4	4	4
• 350% I_M				
- Start-up time 20 s	1/h	7	7	7
- Start-up time 40 s	1/h	2.5	2.5	2.5
Adjustable rated motor current I_M				
• Minimum/maximum	A	53/113	68/143	81/171
• Minimum/maximum in inside-delta circuits	A	91.8/196	118/248	140/296

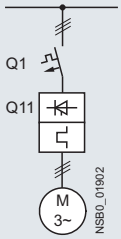
Type		3RW5243	3RW5244	3RW5245	3RW5246	3RW5247	3RW5248
Rated operational current I_e	A	210	250	315	370	470	570
Power electronics							
Load rating with rated operational current I_e							
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	570/504/460
Permissible rated motor current and starts/h							
Normal starting (CLASS 10A)							
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	570/504/460
• 300% I_M							
- Start-up time 5 s	1/h	43	43	43	43	30	20
- Start-up time 10 s	1/h	18	18	14	18	11	6
• 350% I_M							
- Start-up time 5 s	1/h	28	28	16	28	17	9
- Start-up time 10 s	1/h	5	10	4	10	5	1
Normal starting (CLASS 10E)							
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	197/184/170	250/220/200	279/255/231	370/328/300	398/362/326	460/416/372
• 300% I_M							
- Start-up time 20 s	1/h	21	21	21	21	21	18
- Start-up time 40 s	1/h	8	8	8	8	8	7
• 350% I_M							
- Start-up time 20 s	1/h	12	13	12	13	13	11
- Start-up time 40 s	1/h	1	4	3	4	4	2
Heavy starting (CLASS 20E)							
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	162/146/130	200/180/160	195/171/147	258/230/202	272/236/218	284/262/240
• 300% I_M							
- Start-up time 20 s	1/h	10	10	10	10	10	10
- Start-up time 40 s	1/h	4	4	4	4	4	4
• 350% I_M							
- Start-up time 20 s	1/h	7	7	7	7	7	7
- Start-up time 40 s	1/h	2.5	2.5	2.5	2.5	2.5	2.5
Adjustable rated motor current I_M							
• Minimum/maximum	A	90/210	100/250	135/315	160/370	200/470	240/570
• Minimum/maximum in inside-delta circuits	A	156/364	173/433	234/546	277/641	346/814	416/987

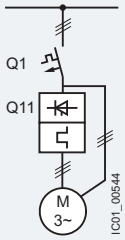
Motor feeders according to IEC with 3RV2/3VA motor starter protectors/circuit breakers (without semiconductor protection)

Type of coordination "1", CLASS 10,
short-circuit breaking capacity I_q in kA, see table

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.





Soft starters	Motor starter protectors				Motor starter protectors			
	for 400 V systems		for 500 V systems		for 400 V systems		for 500 V systems	
Q11	Q1	I_q	Q1	I_q	Q1	I_q	Q1	I_q
Type	Type	kA	Type	kA	Type	kA	Type	kA
Type of coordination "1" ToC 1	**Inline circuit**				**Inside-delta circuit**			
3RW5213	3RV2032-4TA10	65	3RV2032-4TA10	18	3RV2032-4DA10	65	3RV2032-4DA10	18
3RW5214	3RV2032-4DA10	65	3RV2032-4DA10	15	3RV2032-4EA10	65	3RV2032-4EA10	15
3RW5215	3RV2032-4EA10	65	3RV2032-4EA10	15	3RV2032-4VA10	65	3RV2032-4VA10	15
3RW5216	3RV2032-4VA10	65	3RV2032-4VA10	10	3RV2032-4JA10	65	3RV2032-4JA10	10
3RW5217	3RV2032-4WA10	65	3RV2032-4WA10	10	3RV2032-4RA10	65	3RV2032-4RA10	10
3RW5224	3RV2032-4JA10	65	3RV2032-4JA10	10	3RV2032-4RA10	65	3RV2032-4RA10	10
3RW5225	3VA2163-7MN32-0AA0	65	3VA2163-7MN32-0AA0	20	3VA2110-7MN32-0AA0	65	3VA2110-7MN32-0AA0	20
3RW5226	3VA2110-7MN32-0AA0	65	3VA2110-7MN32-0AA0	20	3VA2216-7MN32-0AA0	65	3VA2216-7MN32-0AA0	20
3RW5227	3VA2216-7MN32-0AA0	15	3VA2216-7MN32-0AA0	10	3VA2220-7MN32-0AA0	15	3VA2220-7MN32-0AA0	10
3RW5234	3VA2216-7MN32-0AA0	65	--	--	3VA2220-7MN32-0AA0	65	--	--
3RW5235	3VA2220-7MN32-0AA0	65	--	--	3VA2325-7MN32-0AA0	65	--	--
3RW5236	3VA2325-7MN32-0AA0	30	3VA2325-7MN32-0AA0	10	3VA2440-7MN32-0AA0	30	3VA2440-7MN32-0AA0	10
3RW5243	3VA2325-7MN32-0AA0	65	3VA2325-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65
3RW5244	3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2450-7MN32-0AA0	65	3VA2450-7MN32-0AA0	65
3RW5245	3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65
3RW5246	3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65
3RW5247	3VA2450-7MN32-0AA0	65	3VA2450-7MN32-0AA0	65	3VA2510-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65
3RW5248	3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65

Note:

The service factor or measurement inaccuracies have been taken into account, for example, for the selection of the specified motor starter protectors/circuit breakers; the specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller motor starter protectors/circuit breakers than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

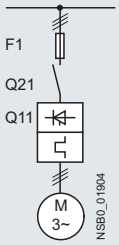
Motor feeders according to IEC with 3NA3 fuses

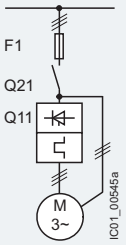
gG class full-range fuses for cable and line protection according to IEC 60269-2, without semiconductor protection

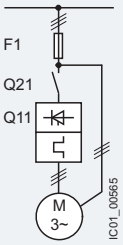
Type of coordination "1",
short-circuit breaking capacity I_q = 65 kA

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.







Soft starters	gG class fuse	Line contactor (optional)		gG class fuse	Line contactor (optional)			
	for systems up to 600 V	for systems up to 480 V	for systems up to 600 V	for systems up to 600 V	for systems up to 480 V in the supply cable	for systems up to 600 V in the supply cable	for systems up to 480 V in the delta	for systems up to 600 V in the delta
Q11	F1	Q21	Q21	F1	Q21	Q21	Q21	Q21
Type	Type	Type	Type	Type	Type	Type	Type	Type
Type of coordination "1" ToC 1	**Inline circuit**			**Inside-delta circuit**				
3RW5213	3NA3820-6	3RT2025	3RT2025	3NA3820-6	3RT2027	3RT2035	3RT2025	3RT2025
3RW5214	3NA3820-6	3RT2026	3RT2027	3NA3820-6	3RT2027	3RT2037	3RT2026	3RT2027
3RW5215	3NA3822-6	3RT2027	3RT2037	3NA3822-6	3RT2036	3RT2037	3RT2027	3RT2037
3RW5216	3NA3824-6	3RT2035	3RT2037	3NA3824-6	3RT2037	3RT2038	3RT2035	3RT2037
3RW5217	3NA3824-6	3RT2035	3RT2037	3NA3824-6	3RT2038	3RT2046	3RT2035	3RT2037
3RW5224	3NA3824-6	3RT2036	3RT2037	3NA3824-6	3RT2046	3RT2047	3RT2036	3RT2037
3RW5225	3NA3830-6	3RT2037	3RT2046	3NA3830-6	3RT2047	3RT1054	3RT2037	3RT2046
3RW5226	3NA3132-6	3RT2038	3RT2046	3NA3132-6	3RT1055	3RT1055	3RT2038	3RT2046
3RW5227	3NA3136-6	3RT2046	3RT2047	3NA3136-6	3RT1056	3RT1056	3RT2046	3RT2047
3RW5234	3NA3244-6	3RT1054	3RT1054	3NA3244-6	3RT1064	3RT1064	3RT1054	3RT1054
3RW5235	3NA3244-6	3RT1055	3RT1055	3NA3244-6	3RT1065	3RT1065	3RT1055	3RT1055
3RW5236	3NA3365-6	3RT1056	3RT1064	3NA3365-6	3RT1066	3RT1075	3RT1056	3RT1064
3RW5243	2 x 3NA3354-6	3RT1064	3RT1064	2 x 3NA3354-6	3RT1075	3RT1075	3RT1064	3RT1064
3RW5244	2 x 3NA3354-6	3RT1065	3RT1065	2 x 3NA3354-6	3RT1076	3RT1076	3RT1065	3RT1065
3RW5245	2 x 3NA3365-6	3RT1075	3RT1075	2 x 3NA3365-6	3TF68	3TF68	3RT1075	3RT1075
3RW5246	2 x 3NA3365-6	3RT1075	3RT1075	2 x 3NA3365-6	3TF69	3TF69	3RT1075	3RT1075
3RW5247	2 x 3NA3365-6	3RT1076	3RT1276	2 x 3NA3365-6	3TF69	3TF69	3RT1076	3RT1276
3RW5248	2 x 3NA3365-6	3TF68	3TF68	2 x 3NA3365-6	--	--	3TF68	3TF68

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

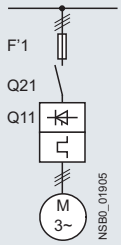
Motor feeders according to IEC with 3NE1 SITOR fuses

gR class full-range fuses for semiconductor protection, cable and line protection

Type of coordination "2",
short-circuit breaking capacity I_q = 65 kA

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.



Soft starters	gG class fuse	Line contactor (optional)	
	for systems up to 600 V	for systems up to 480 V	for systems up to 600 V
Q11	F'1	Q21	Q21
Type	Type	Type	Type
Type of coordination "2" ToC 2	**Inline circuit**		
3RW5213	3NE1815-0	3RT2025	3RT2025
3RW5214	3NE1802-0	3RT2026	3RT2027
3RW5215	3NE1817-0	3RT2027	3RT2037
3RW5216	3NE1818-0	3RT2035	3RT2037
3RW5217	3NE1820-0	3RT2035	3RT2037
3RW5224	3NE1021-2	3RT2036	3RT2037
3RW5225	3NE1022-0	3RT2037	3RT2046
3RW5226	3NE1224-0	3RT2038	3RT2046
3RW5227	3NE1224-0	3RT2046	3RT2047
3RW5234	3NE1225-0	3RT1054	3RT1054
3RW5235	3NE1227-0	3RT1055	3RT1055
3RW5236	3NE1230-0	3RT1056	3RT1064
3RW5243	3NE1230-2[1)]	3RT1064	3RT1064
3RW5244	3NE1331-0	3RT1065	3RT1065
3RW5245	3NE1334-2	3RT1075	3RT1075
3RW5246	3NE1334-2	3RT1075	3RT1075
3RW5247	3NE1436-2	3RT1076	3RT1276
3RW5248	3NE1437-2	3TF68	3TF68

[1)] For systems up to 500 V.

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

In inside-delta circuits, a gR class full-range fuse could not provide the semiconductor protection of the delta-connected soft starter with a short-circuit breaking capacity that is adequate for practical use. In this case, we recommend using aR class partial-range fuses for semiconductor protection for type of coordination “2” (see page 17-256).

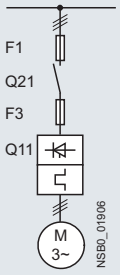
Motor feeders according to IEC with fuses 3NE8 / 3NE4 / 3NE3

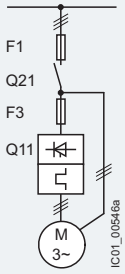
aR class partial-range fuses for semiconductor protection

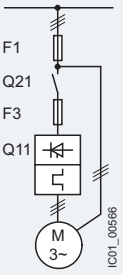
Type of coordination "2",
short-circuit breaking capacity I_q = 65 kA

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.







Soft starters	gG class fuse	aR class fuse	Line contactor (optional)		gG class fuse	aR class fuse	Line contactor (optional)			
	for systems up to 600 V	for systems up to 500 V	for systems up to 480 V	for systems up to 600 V	for systems up to 600 V	for systems up to 600 V	for systems up to 480 V in the supply cable	for systems up to 600 V in the supply cable	for systems up to 480 V in the delta	for systems up to 600 V in the delta
Q11	F1	F3	Q21	Q21	F1	F3	Q21	Q21	Q21	Q21
Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type
Type of coordination "2" ToC 2	**Inline circuit**				**Inside-delta circuit**					
3RW5213	3NA3820-6	3NE8017-1	3RT2025	3RT2025	3NA3820-6	3NE8017-1	3RT2027	3RT2035	3RT2025	3RT2025
3RW5214	3NA3820-6	3NE8020-1	3RT2026	3RT2027	3NA3820-6	3NE8020-1	3RT2027	3RT2037	3RT2026	3RT2027
3RW5215	3NA3822-6	3NE8021-1	3RT2027	3RT2037	3NA3822-6	3NE8021-1	3RT2036	3RT2037	3RT2027	3RT2037
3RW5216	3NA3824-6	3NE8022-1	3RT2035	3RT2037	3NA3824-6	3NE8022-1	3RT2037	3RT2038	3RT2035	3RT2037
3RW5217	3NA3824-6	3NE8024-1	3RT2035	3RT2037	3NA3824-6	3NE8024-1	3RT2038	3RT2046	3RT2035	3RT2037
3RW5224	3NA3824-6	3NE8024-1	3RT2036	3RT2037	3NA3824-6	3NE8024-1	3RT2046	3RT2047	3RT2036	3RT2037
3RW5225	3NA3830-6	3NE8024-1	3RT2037	3RT2046	3NA3830-6	3NE8024-1	3RT2047	3RT1054	3RT2037	3RT2046
3RW5226	3NA3132-6	3NE8024-1	3RT2038	3RT2046	3NA3132-6	3NE8024-1	3RT1055	3RT1055	3RT2038	3RT2046
3RW5227	3NA3136-6	3NE4124	3RT2046	3RT2047	3NA3136-6	3NE4124	3RT1056	3RT1056	3RT2046	3RT2047
3RW5234	3NA3244-6	3NE3332-0B	3RT1054	3RT1054	3NA3244-6	3NE3332-0B	3RT1064	3RT1064	3RT1054	3RT1054
3RW5235	3NA3244-6	3NE3334-0B	3RT1055	3RT1055	3NA3244-6	3NE3334-0B	3RT1065	3RT1065	3RT1055	3RT1055
3RW5236	3NA3365-6	3NE3335	3RT1056	3RT1064	3NA3365-6	3NE3335	3RT1066	3RT1075	3RT1056	3RT1064
3RW5243	2 x 3NA3354-6	3NE3333	3RT1064	3RT1064	2 x 3NA3354-6	3NE3333	3RT1075	3RT1075	3RT1064	3RT1064
3RW5244	2 x 3NA3354-6	3NE3336	3RT1065	3RT1065	2 x 3NA3354-6	3NE3336	3RT1076	3RT1076	3RT1065	3RT1065
3RW5245	2 x 3NA3365-6	3NE3336	3RT1075	3RT1075	2 x 3NA3365-6	3NE3336	3TF68	3TF68	3RT1075	3RT1075
3RW5246	2 x 3NA3365-6	3NE3336	3RT1075	3RT1075	2 x 3NA3365-6	3NE3336	3TF69	3TF69	3RT1075	3RT1075
3RW5247	2 x 3NA3365-6	3NE3340-8	3RT1076	3RT1276	2 x 3NA3365-6	3NE3340-8	3TF69	3TF69	3RT1076	3RT1276
3RW5248	2 x 3NA3365-6	3NE3340-8	3TF68	3TF68	2 x 3NA3365-6	3NE3340-8	--	--	3TF68	3TF68

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

For CLASS 10 applications, as an alternative to the gG class full-range fuses for cable and line protection 3NA3 (F1), 3RV2/3VA motor starter protectors/circuit breakers can also be used, possibly with reduced short-circuit breaking capacity (see page 17-253). In these cases, optional line contactors can be dispensed with.

Selection and ordering data

For normal starting (CLASS 10A)

3RW521.

3RW522.

3RW523.

3RW524.

At 40 °C				At 50 °C					SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors At 230 V	At 400 V	At 500 V	Operational current	Rating [hp] for three-phase motors At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 480 V													
13	3	**5.5**	--	11.5	2	3	**7.5**	--	5	**3RW5213-□□C□4**		1	1 unit
18	4	**7.5**	--	15.9	3	5	**10**	--	5	**3RW5214-□□C□4**		1	1 unit
25	5.5	**11**	--	22.3	5	7.5	**15**	--	5	**3RW5215-□□C□4**		1	1 unit
32	7.5	**15**	--	28.4	7.5	10	**20**	--	5	**3RW5216-□□C□4**		1	1 unit
38	11	**18.5**	--	33.5	10	10	**20**	--	5	**3RW5217-□□C□4**		1	1 unit
47	11	**22**	--	41.6	10	10	**30**	--	5	**3RW5224-□□C□4**		1	1 unit
63	18.5	**30**	--	55.5	15	20	**40**	--	5	**3RW5225-□□C□4**		1	1 unit
77	22	**37**	--	68	20	25	**50**	--	5	**3RW5226-□□C□4**		1	1 unit
93	22	**45**	--	82.5	25	30	**60**	--	5	**3RW5227-□□C□4**		1	1 unit

Type of electrical connection for the control circuit
Screw terminals
Spring-loaded terminals

Product function
Analog output
Thermistor motor protection

Control supply voltage
24 V AC/DC
110 ... 250 V AC

1 3 A T 0 1

[1] 3RW52 soft starter with screw terminals for operational voltage up to 480 V: Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here, see page 17-199.

At 40 °C				At 50 °C					SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors At 230 V	At 400 V	At 500 V	Operational current	Rating [hp] for three-phase motors At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 480 V													
113	30	**55**	--	101	30	30	**75**	--	5	**3RW5234-□□C□4**		1	1 unit
143	37	**75**	--	128	40	40	**100**	--	5	**3RW5235-□□C□4**		1	1 unit
171	45	**90**	--	153	50	50	**100**	--	5	**3RW5236-□□C□4**		1	1 unit
210	55	**110**	--	186	60	60	**150**	--	5	**3RW5243-□□C□4**		1	1 unit
250	75	**132**	--	220	60	75	**150**	--	5	**3RW5244-□□C□4**		1	1 unit
315	90	**160**	--	279	75	100	**200**	--	5	**3RW5245-□□C□4**		1	1 unit
370	110	**200**	--	328	100	125	**250**	--	5	**3RW5246-□□C□4**		1	1 unit
470	132	**250**	--	416	150	150	**350**	--	5	**3RW5247-□□C□4**		1	1 unit
570	160	**315**	--	504	150	200	**400**	--	5	**3RW5248-□□C□4**		1	1 unit

Type of electrical connection for the control circuit
Spring-loaded terminals
Screw terminals

Product function
Analog output
Thermistor motor protection

Control supply voltage
24 V AC/DC
110 ... 250 V AC

2 6 A T 0 1

[1] 3RW52 soft starter with screw terminals for operational voltage up to 480 V: Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here, see page 17-199.

For normal starting (CLASS 10A)

3RW521.

3RW522.

3RW523.

3RW524.

At 40 °C				At 50 °C					SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors At 230 V	At 400 V	At 500 V	Operational current	Rating [hp] for three-phase motors At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 600 V													
13	3	**5.5**	7.5	11.5	2	3	**7.5**	10	5	**3RW5213-□□C□5**		1	1 unit
18	4	**7.5**	11	15.9	3	5	**10**	10	5	**3RW5214-□□C□5**		1	1 unit
25	5.5	**11**	15	22.3	5	7.5	**15**	20	5	**3RW5215-□□C□5**		1	1 unit
32	7.5	**15**	18.5	28.4	7.5	10	**20**	25	5	**3RW5216-□□C□5**		1	1 unit
38	11	**18.5**	22	33.5	10	10	**20**	30	5	**3RW5217-□□C□5**		1	1 unit
47	11	**22**	30	41.6	10	10	**30**	40	5	**3RW5224-□□C□5**		1	1 unit
63	18.5	**30**	37	55.5	15	20	**40**	50	5	**3RW5225-□□C□5**		1	1 unit
77	22	**37**	45	68	20	25	**50**	60	5	**3RW5226-□□C□5**		1	1 unit
93	22	**45**	55	82.5	25	30	**60**	75	5	**3RW5227-□□C□5**		1	1 unit

Type of electrical connection for the control circuit
Screw terminals — **1 3**
Spring-loaded terminals — **A T**

Product function
Analog output
Thermistor motor protection

Control supply voltage
24 V AC/DC — **0 1**
110 ... 250 V AC

[1] 3RW52 soft starter with screw terminals for operational voltage up to 600 V: Standard delivery time SD = 2 days (d).

Note:

For the constraints for the motor outputs specified here, see page 17-199.

At 40 °C				At 50 °C					SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors At 230 V	At 400 V	At 500 V	Operational current	Rating [hp] for three-phase motors At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 600 V													
113	30	**55**	75	101	30	30	**75**	100	5	**3RW5234-□□C□5**		1	1 unit
143	37	**75**	90	128	40	40	**100**	125	5	**3RW5235-□□C□5**		1	1 unit
171	45	**90**	110	153	50	50	**100**	150	5	**3RW5236-□□C□5**		1	1 unit
210	55	**110**	132	186	60	60	**150**	150	5	**3RW5243-□□C□5**		1	1 unit
250	75	**132**	160	220	60	75	**150**	200	5	**3RW5244-□□C□5**		1	1 unit
315	90	**160**	200	279	75	100	**200**	250	5	**3RW5245-□□C□5**		1	1 unit
370	110	**200**	250	328	100	125	**250**	300	5	**3RW5246-□□C□5**		1	1 unit
470	132	**250**	315	416	150	150	**350**	450	5	**3RW5247-□□C□5**		1	1 unit
570	160	**315**	355	504	150	200	**400**	500	5	**3RW5248-□□C□5**		1	1 unit

Type of electrical connection for the control circuit
Spring-loaded terminals — **2 6**
Screw terminals — **A T**

Product function
Analog output
Thermistor motor protection

Control supply voltage
24 V AC/DC — **0 1**
110 ... 250 V AC

[1] 3RW52 soft starter with screw terminals for operational voltage up to 600 V: Standard delivery time SD = 2 days (d).

Note:

For the constraints for the motor outputs specified here, see page 17-199.

Selection and ordering data

For normal starting (CLASS 10A)

3RW521.

3RW522.

3RW523.

3RW524.

At 40 °C for inside-delta circuit				At 50 °C for inside-delta circuit					SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors At 230 V	At 400 V	At 500 V	Operational current	Rating [hp] for three-phase motors At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 480 V													
22.5	5.5	**11**	--	19.9	5	5	**10**	--	5	**3RW5213-□□C□4**		1	1 unit
31.5	7.5	**15**	--	28	7.5	7.5	**20**	--	5	**3RW5214-□□C□4**		1	1 unit
43.3	11	**18.5**	--	39	10	10	**25**	--	5	**3RW5215-□□C□4**		1	1 unit
55.4	15	**22**	--	49	15	15	**30**	--	5	**3RW5216-□□C□4**		1	1 unit
65.8	18.5	**30**	--	58	15	20	**40**	--	5	**3RW5217-□□C□4**		1	1 unit
81.4	22	**45**	--	72	20	25	**50**	--	5	**3RW5224-□□C□4**		1	1 unit
109	30	**55**	--	96	30	30	**75**	--	5	**3RW5225-□□C□4**		1	1 unit
133	37	**75**	--	118	30	40	**75**	--	5	**3RW5226-□□C□4**		1	1 unit
161	45	**90**	--	143	40	50	**100**	--	5	**3RW5227-□□C□4**		1	1 unit

Type of electrical connection for the control circuit
Screw terminals
Spring-loaded terminals

Product function
Analog output
Thermistor motor protection

Control supply voltage
24 V AC/DC
110 ... 250 V AC

[1] 3RW52 soft starter with screw terminals for operational voltage up to 480 V: Standard delivery time SD = 1 day (d).

1 3 A T 0 1

Note:

For the constraints for the motor outputs specified here, see page 17-199.

At 40 °C for inside-delta circuit				At 50 °C for inside-delta circuit					SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors At 230 V	At 400 V	At 500 V	Operational current	Rating [hp] for three-phase motors At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 480 V													
196	55	**110**	--	175	50	60	**125**	--	5	**3RW5234-□□C□4**		1	1 unit
248	75	**132**	--	222	75	75	**150**	--	5	**3RW5235-□□C□4**		1	1 unit
296	90	**160**	--	265	75	100	**200**	--	5	**3RW5236-□□C□4**		1	1 unit
364	110	**200**	--	322	100	125	**250**	--	5	**3RW5243-□□C□4**		1	1 unit
433	132	**250**	--	381	125	150	**300**	--	5	**3RW5244-□□C□4**		1	1 unit
546	160	**315**	--	483	150	200	**400**	--	5	**3RW5245-□□C□4**		1	1 unit
641	200	**355**	--	568	200	200	**450**	--	5	**3RW5246-□□C□4**		1	1 unit
814	250	**400**	--	721	250	250	**600**	--	5	**3RW5247-□□C□4**		1	1 unit
987	315	**560**	--	873	300	350	**750**	--	5	**3RW5248-□□C□4**		1	1 unit

Type of electrical connection for the control circuit
Spring-loaded terminals
Screw terminals

Product function
Analog output
Thermistor motor protection

Control supply voltage
24 V AC/DC
110 ... 250 V AC

[1] 3RW52 soft starter with screw terminals for operational voltage up to 480 V: Standard delivery time SD = 1 day (d).

2 6 A T 0 1

Note:

For the constraints for the motor outputs specified here, see page 17-199.

For normal starting (CLASS 10A)

3RW521.

3RW522.

3RW523.

3RW524.

At 40 °C for inside-delta circuit				At 50 °C for inside-delta circuit					SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors At 230 V	At 400 V	At 500 V	Operational current	Rating [hp] for three-phase motors At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 600 V													
22.5	5.5	**11**	15	19.9	5	5	**10**	15	5	**3RW5213-□□C□5**		1	1 unit
31.5	7.5	**15**	18.5	28	7.5	7.5	**20**	25	5	**3RW5214-□□C□5**		1	1 unit
43.3	11	**18.5**	22	39	10	10	**25**	30	5	**3RW5215-□□C□5**		1	1 unit
55.4	15	**22**	30	49	15	15	**30**	40	5	**3RW5216-□□C□5**		1	1 unit
65.8	18.5	**30**	37	58	15	20	**40**	50	5	**3RW5217-□□C□5**		1	1 unit
81.4	22	**45**	45	72	20	25	**50**	60	5	**3RW5224-□□C□5**		1	1 unit
109	30	**55**	55	96	30	30	**75**	75	5	**3RW5225-□□C□5**		1	1 unit
133	37	**75**	90	118	30	40	**75**	100	5	**3RW5226-□□C□5**		1	1 unit
161	45	**90**	110	143	40	50	**100**	125	5	**3RW5227-□□C□5**		1	1 unit

Type of electrical connection for the control circuit
Screw terminals
Spring-loaded terminals

Product function
Analog output
Thermistor motor protection

Control supply voltage
24 V AC/DC
110 ... 250 V AC

Article No. 3RW5227-**1 3 A T 0 1**

[1] 3RW52 soft starter with screw terminals for operational voltage up to 600 V: Standard delivery time SD = 2 days (d).

Note:

For the constraints for the motor outputs specified here, see page 17-199.

At 40 °C for inside-delta circuit				At 50 °C for inside-delta circuit					SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors At 230 V	At 400 V	At 500 V	Operational current	Rating [hp] for three-phase motors At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 600 V													
196	55	**110**	132	175	50	60	**125**	150	5	**3RW5234-□□C□5**		1	1 unit
248	75	**132**	160	222	75	75	**150**	200	5	**3RW5235-□□C□5**		1	1 unit
296	90	**160**	200	265	75	100	**200**	250	5	**3RW5236-□□C□5**		1	1 unit
364	110	**200**	250	322	100	125	**250**	300	5	**3RW5243-□□C□5**		1	1 unit
433	132	**250**	315	381	125	150	**300**	350	5	**3RW5244-□□C□5**		1	1 unit
546	160	**315**	355	483	150	200	**400**	500	5	**3RW5245-□□C□5**		1	1 unit
641	200	**355**	450	568	200	200	**450**	600	5	**3RW5246-□□C□5**		1	1 unit
814	250	**400**	500	721	250	250	**600**	800	5	**3RW5247-□□C□5**		1	1 unit
987	315	**560**	630	873	300	350	**750**	950	5	**3RW5248-□□C□5**		1	1 unit

Type of electrical connection for the control circuit
Spring-loaded terminals
Screw terminals

Product function
Analog output
Thermistor motor protection

Control supply voltage
24 V AC/DC
110 ... 250 V AC

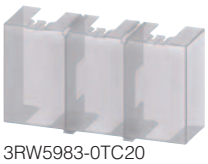
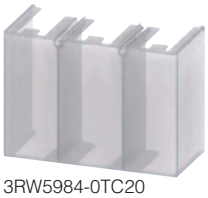
Article No. 3RW5248-**2 6 A T 0 1**

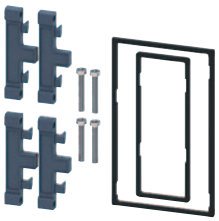
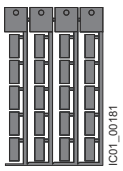
[1] 3RW52 soft starter with screw terminals for operational voltage up to 600 V: Standard delivery time SD = 2 days (d).

Note:

For the constraints for the motor outputs specified here, see page 17-199.

Selection and ordering data

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	Application	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
					d				
Fan covers									
3RW5983-0FC00	**Fan cover**	3RW5216/17 (1x), 3RW5226/27 (2x), 3RW523 (2x)	--	--	►	**3RW5983-0FC00**		1	1 unit
		3RW524 (1x)	--	--	►	**3RW5984-0FC00**		1	1 unit
Terminal covers									
 3RW5983-0TC20	**Terminal cover**	3RW522 (2x), 3RW523 (2x)	--	--	►	**3RW5983-0TC20**		1	1 unit
 3RW5984-0TC20		3RW524 (2x)	--	--	►	**3RW5984-0TC20**		1	1 unit
Enclosure components									
3RW5950-0GL30	**Hinged cover**	3RW52	With cutout for High Feature HMI module	--	►	**3RW5950-0GL30**		1	1 unit
3RW5950-0GL40			With cutout for Standard HMI module	--	►	**3RW5950-0GL40**		1	1 unit
Communication modules									
3RW5980-0CS00	**Communication module**	3RW52	PROFINET Standard	--	►	**3RW5980-0CS00**		1	1 unit
			PROFIBUS	--	►	**3RW5980-0CP00**		1	1 unit
			EtherNet/IP	--	►	**3RW5980-0CE00**		1	1 unit
3RW5980-0CR00			Modbus RTU	--	►	**3RW5980-0CR00**		1	1 unit
			Modbus TCP	--	►	**3RW5980-0CT00**		1	1 unit

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	Application	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
					d				
HMI modules									
3RW5980-0HF00	**HMI module**	3RW52	High Feature	--	▶	**3RW5980-0HF00**		1	1 unit
3RW5980-0HS00			Standard	--	▶	**3RW5980-0HS00**		1	1 unit
 3RW5980-0HD00	**IP65 door mounting kit for HMI modules**	3RW52	IP65	For HMI modules	▶	**3RW5980-0HD00**		1	1 unit
Connecting cables									
3UF793.-0BA00-0	**HMI connection cable**	3RW52	5 m, round	For door mounting	▶	**3RW5980-0HC60**		1	1 unit
			2.5 m, round		▶	**3UF7933-0BA00-0**		1	1 unit
			1.0 m, round		▶	**3UF7937-0BA00-0**		1	1 unit
			0.5 m, round		▶	**3UF7932-0BA00-0**		1	1 unit
3UF7931-0AA00-0			0.1 m, flat	for mounting in the device	▶	**3UF7931-0AA00-0**		1	1 unit
Further accessories									
3ZY1311-0AA00	**Push-in lugs for wall mounting**	--	Two lugs are required per device	For HMI modules and communication modules	2	**3ZY1311-0AA00**		1	10 units
Blank labels									
 3RT2900-1SB20	**Unit labeling plates**[1]	--	20 mm x 7 mm, titanium gray	For SIRIUS devices	20	**3RT2900-1SB20**		100	340 units

[1] PC labeling systems for individual inscription of unit labeling plates are available from: murrplastik Systemtechnik GmbH (see page 16/15).

Overview

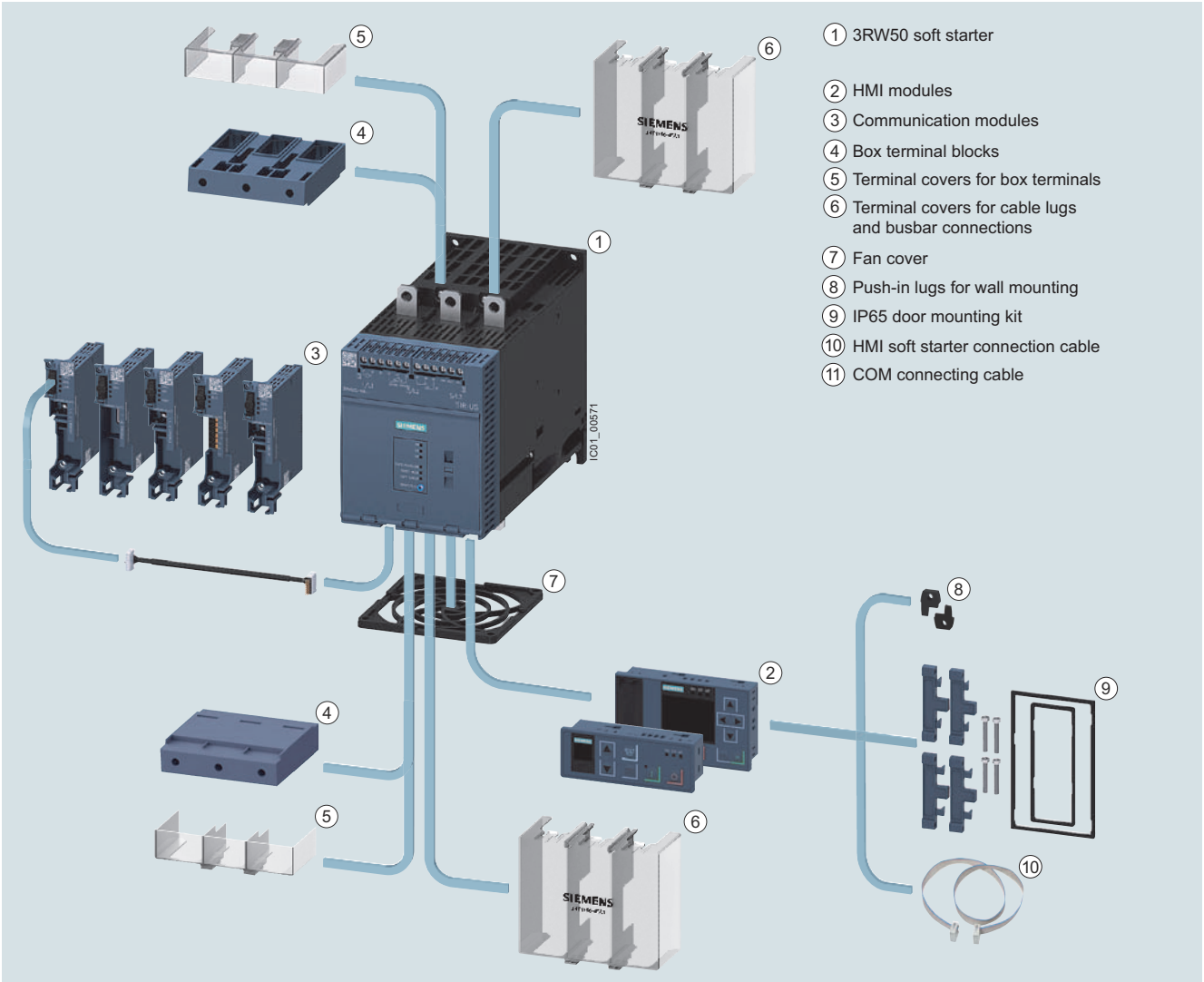
More information

Homepage, see www.usa.siemens.com/soft-starter
Industry Mall, see www.siemens.com/product?3RW50
TIA Selection Tool Cloud (TST Cloud), see https://support.industry.siemens.com/cs/ww/en/view/109747404

Simulation Tool for Soft Starters (STS), see page 17-199 or https://support.industry.siemens.com/cs/ww/en/view/101494917
SIRIUS Soft Starter ES (TIA Portal), see page 14/5

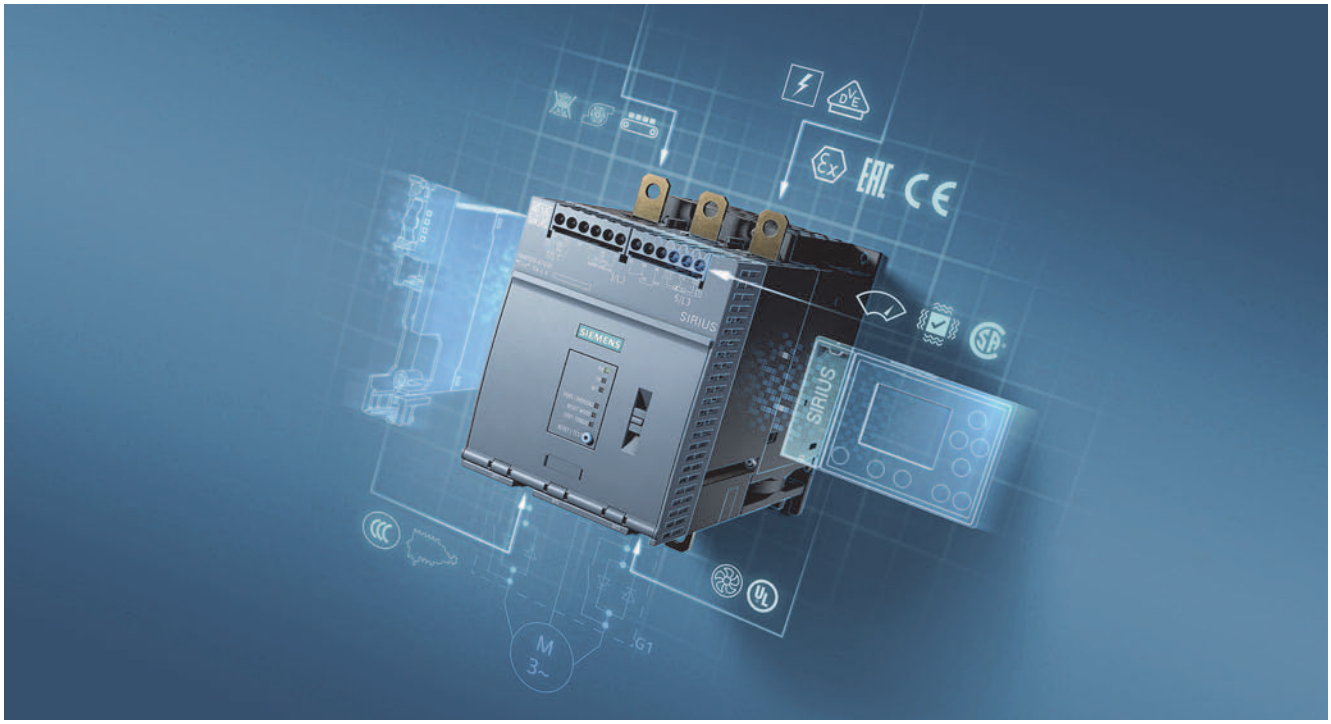
SIRIUS 3RW50 Basic Performance soft starters are the compact solution for standard applications. With two-phase motor control, they cover the performance range from 75 to 300HP @ 480V.

Optional HMI modules for installation in the control cabinet door, laterally mountable communication modules (PROFINET, PROFIBUS, EtherNet/IP and Modbus) and either an analog output or thermistor motor protection ensure maximum flexibility. With their modern hybrid switching technology, the SIRIUS 3RW50 soft starters offer efficient switching for long-term, energy-saving use.



3RW50 Basic Performance soft starters with accessories (see page 17-273), for expansion with HMI module or communication module

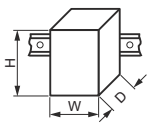
Benefits



Product characteristics / function	Performance features / benefits
Hybrid switching devices and two-phase motor control	Minimum power loss and optimized motor control by avoiding DC components
Small and compact design	Space-saving, clearly arranged control panel layout
TIA-Integration – communication modules and HMI modules optional	Efficient configuration and maximum flexibility in automation engineering
Motor overload and intrinsic device protection without additional wiring	Adjustable trip classes, integrated diagnostics functions
Soft Torque	Reduced mechanical loading and optimum pump stop
Parameterization using potentiometers	Simple and fast commissioning
Wide range for control supply and main voltage	Low variance, high system availability even with weak supply networks
Certified according to ATEX/IECEx directive	Suitable for the starting of explosion-proof motors with "increased safety" type of protection

Technical specifications

More information	
Technical specifications, see https://support.industry.siemens.com/cs/ww/en/ps/25252/td Equipment Manual "SIRIUS 3RW50 Soft Starter", see https://support.industry.siemens.com/cs/ww/en/view/109753750	FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/25252/faq Simulation Tool for Soft Starters (STS), see page 17-199 or https://support.industry.siemens.com/cs/ww/en/view/101494917

Type			3RW5055 3RW5056	3RW5072 3RW5073 3RW5074 3RW5075 3RW5076 3RW5077
Installation/fixing/dimensions				
Width x height x depth		mm	120 × 198 × 249	160 × 230 × 282
Type of mounting			Screw fixing	
Mounting position			For vertical mounting surface can be rotated +/- 90°, for vertical mounting surface can be tilted +/- 22.5° forward or backward	
Distance to be maintained with side-by-side mounting				
• Above		mm	100	
• At the side		mm	5	
• Below		mm	75	
Maximum installation altitude above sea level[1]		m	5 000	
Degree of protection			IP00	
Ambient conditions				
Ambient temperature				
• During operation[2]		°C	-25 ... +60	
• During storage and transport		°C	-40 ... +80	
Environmental category according to IEC 60721				
• During operation			3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6	
• During storage			1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not enter the devices), 1M4	
• During transport			2K2, 2C1, 2S1, 2M2 (max. height of fall 0.3 m)	

1) Derating from 1 000 m, see characteristic curve on page 17-199.

2) Note derating above 40 °C.

Type		3RW50..-..B0.	3RW50..-..B1.
Control circuit/control			
Control supply voltage			
• At AC/DC, rated value	V	24/24	--/--
• At AC	V	--	110 ... 250
• Relative negative tolerance/relative positive tolerance with AC	%	-20/20	-15/10
• Relative negative tolerance/relative positive tolerance with DC	%	-20/20	--/--
Frequency of the control supply voltage	Hz	50 ... 60	
• Relative negative tolerance/relative positive tolerance	%	-10/10	
Type of overvoltage protection		Varistors	
Type of short-circuit protection for control circuit[1]		Fuse 4 A gG (I_{cu} = 1 kA), fuse 6 A quick-response (I_{cu} = 1 kA), MCB C1 (I_{cu} = 600 A), MCB C6 (I_{cu} = 300 A)	

[1] Not included in scope of supply

Type		3RW50..-..B.4	3RW50..-..B.5
Power electronics			
Operational voltage, rated value	V	200 ... 480	200 ... 600
• Relative negative tolerance/relative positive tolerance	%	-15/10	
Operating frequency, rated value	Hz	50 ... 60	
• Relative negative tolerance/relative positive tolerance	%	-10/10	
Minimum load [% of I_M][1]	%	15	
Maximum cable length between soft starter and motor	m	800	

[1] Relative to the smallest adjustable I_e.

Type		3RW5055	3RW5056
Rated operational current I_e	A	143	171
Power electronics			
Load rating with rated operational current I_e			
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	143/128/118	171/153/141
Permissible rated motor current and starts/h			
Normal starting (CLASS 10A)			
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	143/128/118	171/153/141
• 300% I_M - Start-up time 5 s	1/h	43	43
- Start-up time 10 s	1/h	18	18
• 350% I_M - Start-up time 5 s	1/h	28	28
- Start-up time 10 s	1/h	10	9
Normal starting (CLASS 10E)			
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	143/128/118	171/153/141
• 300% I_M - Start-up time 20 s	1/h	21	21
- Start-up time 40 s	1/h	8	8
• 350% I_M - Start-up time 20 s	1/h	12	9
- Start-up time 40 s	1/h	4	--
Heavy starting (CLASS 20E)			
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	108/98/88	135/123/111
• 300% I_M - Start-up time 20 s	1/h	10	10
- Start-up time 40 s	1/h	4	4
• 350% I_M - Start-up time 20 s	1/h	7	7
- Start-up time 40 s	1/h	2.5	2.5
Adjustable rated motor current I_M			
• Minimum/maximum	A	68/143	81/117

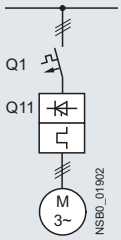
Type		3RW5072	3RW5073	3RW5074	3RW5075	3RW5076	3RW5077
Rated operational current I_e	A	210	250	315	370	470	570
Power electronics							
Load rating with rated operational current I_e							
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	570/504/460
Permissible rated motor current and starts/h							
Normal starting (CLASS 10A)							
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	570/504/460
• 300% I_M							
- Start-up time 5 s	1/h	43	43	43	43	43	28
- Start-up time 10 s	1/h	18	18	18	18	18	11
• 350% I_M							
- Start-up time 5 s	1/h	28	28	28	28	28	16
- Start-up time 10 s	1/h	8	10	10	10	10	4
Normal starting (CLASS 10E)							
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	570/504/460
• 300% I_M							
- Start-up time 20 s	1/h	21	21	21	21	20	21
- Start-up time 40 s	1/h	8	8	8	8	7	8
• 350% I_M							
- Start-up time 20 s	1/h	8	13	12	13	12	13
- Start-up time 40 s	1/h	--	4	4	4	2	4
Heavy starting (CLASS 20E)							
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	162/146/130	200/180/160	219/195/171	258/230/202	272/254/218	284/262/240
• 300% I_M							
- Start-up time 20 s	1/h	10	10	10	10	10	10
- Start-up time 40 s	1/h	4	4	4	4	4	4
• 350% I_M							
- Start-up time 20 s	1/h	7	7	7	7	7	7
- Start-up time 40 s	1/h	2.5	2.5	2.5	2.5	2.5	2.5
Adjustable rated motor current I_M							
• Minimum/maximum	A	90/210	100/250	135/315	160/370	200/470	240/570

Motor feeders according to IEC with 3VA motor starter protectors/circuit breakers (without semiconductor protection)

Type of coordination "1", CLASS 10,
short-circuit breaking capacity I_q in kA, see table

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.



Soft starters	Motor starter protectors			
	for 400 V systems		for 500 V systems	
Q11	Q1	I_q	Q1	I_q
Type	Type	kA	Type	kA
Type of coordination "1" ToC 1	**Inline circuit**			
3RW5055	3VA2220-7MN32-0AA0	20	3VA2220-7MN32-0AA0	20
3RW5056	3VA2220-7MN32-0AA0	20	3VA2220-7MN32-0AA0	20
3RW5072	3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65
3RW5073	3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65
3RW5074	3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65
3RW5075	3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65
3RW5076	3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65
3RW5077	3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65

Note:

The service factor or measurement inaccuracies have been taken into account, for example, for the selection of the specified motor starter protectors/circuit breakers; the specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller motor starter protectors/circuit breakers than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

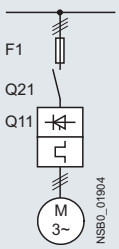
Motor feeders according to IEC with 3NA3 fuses

gG class full-range fuses for cable and line protection according to IEC 60269-2, without semiconductor protection

Type of coordination "1",
short-circuit breaking capacity I_q = 65 kA

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.



Soft starters	gG class fuse	Line contactor (optional)	
	for systems up to 600 V	for systems up to 480 V	for systems up to 600 V
Q11	F1	Q21	Q21
Type	Type	Type	Type
Type of coordination "1" ToC 1	**Inline circuit**		
3RW5055	3NA3244-6	3RT1055	3RT1055
3RW5056	3NA3244-6	3RT1056	3RT1064
3RW5072	2 x 3NA3354-6	3RT1064	3RT1064
3RW5073	2 x 3NA3354-6	3RT1065	3RT1065
3RW5074	2 x 3NA3365-6	3RT1075	3RT1075
3RW5075	2 x 3NA3365-6	3RT1075	3RT1075
3RW5076	2 x 3NA3365-6	3RT1076	3RT1076
3RW5077	2 x 3NA3365-6	3TF68	3TF68

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

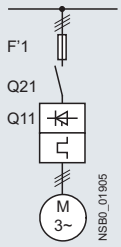
Motor feeders according to IEC with 3NE1 SITOR fuses

gR class full-range fuses for semiconductor protection, cable and line protection

Type of coordination "2",
short-circuit breaking capacity I_q = 65 kA

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.



Soft starters	gG class fuse	Line contactor (optional)	
	for systems up to 600 V	for systems up to 480 V	for systems up to 600 V
Q11	F'1	Q21	Q21
Type	Type	Type	Type
Type of coordination "2" ToC 2	**Inline circuit**		
3RW5055	3NE1227-0	3RT1055	3RT1055
3RW5056	3NE1230-0	3RT1056	3RT1064
3RW5072	3NE1230-2	3RT1064	3RT1064
3RW5073	3NE1331-0	3RT1065	3RT1065
3RW5074	3NE1333-2	3RT1075	3RT1075
3RW5075	3NE1334-2	3RT1075	3RT1075
3RW5076	3NE1436-2	3RT1076	3RT1076
3RW5077	3NE1437-2	3TF68	3TF68

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

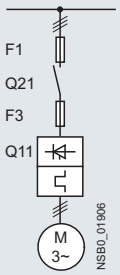
Motor feeders according to IEC with 3NE3 fuses

aR class partial-range fuses for semiconductor protection

Type of coordination "2",
short-circuit breaking capacity I_q = 65 kA

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.



Soft starters	gG class fuse	aR class fuse	Line contactor (optional)	
	for systems up to 600 V	for systems up to 600 V	for systems up to 480 V	for systems up to 600 V
Q11	F1	F3	Q21	Q21
Type	Type	Type	Type	Type
Type of coordination "2" ToC 2	**Inline circuit**			
3RW5055	3NA3244-6	3NE3334-0B	3RT1055	3RT1055
3RW5056	3NA3244-6	3NE3335	3RT1056	3RT1064
3RW5072	2 x 3NA3354-6	3NE3333	3RT1064	3RT1064
3RW5073	2 x 3NA3354-6	3NE3335	3RT1065	3RT1065
3RW5074	2 x 3NA3365-6	3NE3335	3RT1075	3RT1075
3RW5075	2 x 3NA3365-6	3NE3336	3RT1075	3RT1075
3RW5076	2 x 3NA3365-6	3NE3340-8	3RT1076	3RT1076
3RW5077	2 x 3NA3365-6	3NE3340-8	3TF68	3TF68

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

For CLASS 10 applications, as an alternative to the gG class full-range fuses for cable and line protection 3NA3 (F1), 3VA circuit breakers can also be used, possibly with reduced short-circuit breaking capacity (see page 17-268). In these cases optional line contactors can be dispensed with.

Selection and ordering data

For normal starting (CLASS 10E)

3RW5055

3RW5075

At 40 °C				At 50 °C					Size	SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors At 230 V	At 400 V	At 500 V	Operational current	Rating [hp] for three-phase motors At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V						
A	kW	kW	kW	A	hp	hp	hp	hp		d				
Operational voltage 200 ... 480 V														
143	37	**75**	90	128	30	30	**100**	--	S6	5	**3RW5055-□□B□4**		1	1 unit
171	45	**90**	110	153	30	40	**100**	--	S6	5	**3RW5056-□□B□4**		1	1 unit
210	55	**110**	132	186	40	50	**150**	--	S12	5	**3RW5072-□□B□4**		1	1 unit
250	75	**132**	160	220	50	60	**150**	--	S12	5	**3RW5073-□□B□4**		1	1 unit
315	90	**160**	200	279	60	75	**200**	--	S12	5	**3RW5074-□□B□4**		1	1 unit
370	110	**200**	250	328	75	100	**250**	--	S12	5	**3RW5075-□□B□4**		1	1 unit
470	132	**250**	315	416	100	125	**350**	--	S12	5	**3RW5076-□□B□4**		1	1 unit
570	160	**315**	355	504	125	150	**400**	--	S12	5	**3RW5077-□□B□4**		1	1 unit

Type of electrical connection for the control circuit
Spring-loaded terminals
Screw terminals

Product function
Analog output
Thermistor motor protection

Control supply voltage
24 V AC/DC
110 ... 250 V AC

2 6 A T 0 1

[1] 3RW50 soft starter with screw terminals for operational voltage up to 480 V: Standard delivery time SD = 1 day (d).

Note: For the constraints for the motor outputs specified here, see page 17-199.

At 40 °C				At 50 °C					Size	SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors At 230 V	At 400 V	At 500 V	Operational current	Rating [hp] for three-phase motors At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V						
A	kW	kW	kW	A	hp	hp	hp	hp		d				
Operational voltage 200 ... 600 V														
143	37	**75**	90	128	30	30	**100**	75	S6	5	**3RW5055-□□B□5**		1	1 unit
171	45	**90**	110	153	30	40	**100**	100	S6	5	**3RW5056-□□B□5**		1	1 unit
210	55	**110**	132	186	40	50	**150**	125	S12	5	**3RW5072-□□B□5**		1	1 unit
250	75	**132**	160	220	50	60	**150**	150	S12	5	**3RW5073-□□B□5**		1	1 unit
315	90	**160**	200	279	60	75	**200**	200	S12	5	**3RW5074-□□B□5**		1	1 unit
370	110	**200**	250	328	75	100	**250**	250	S12	5	**3RW5075-□□B□5**		1	1 unit
470	132	**250**	315	416	100	125	**350**	300	S12	5	**3RW5076-□□B□5**		1	1 unit
570	160	**315**	355	504	125	150	**400**	400	S12	5	**3RW5077-□□B□5**		1	1 unit

Type of electrical connection for the control circuit
Spring-loaded terminals
Screw terminals

Product function
Analog output
Thermistor motor protection

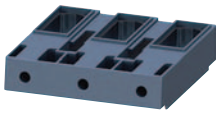
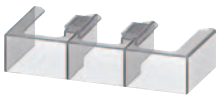
Control supply voltage
24 V AC/DC
110 ... 250 V AC

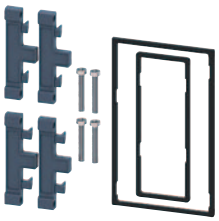
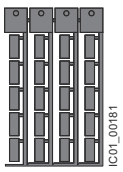
2 6 A T 0 1

[1] 3RW50 soft starter with screw terminals for operational voltage up to 600 V: Standard delivery time SD = 2 days (d).

Note: For the constraints for the motor outputs specified here, see page 17-199.

Selection and ordering data

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	Application	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
					d					
Fan covers										
3RW5985-0FC00	**Fan cover**	3RW50 (1x)	--	--	▶	**3RW5985-0FC00**		1	1 unit	42S
Box terminal block										
 3RT1956-4G	**Box terminal block for round and ribbon cables**	3RW505 (2x)	Up to 70 mm²	--	▶	**3RT1955-4G**		1	1 unit	41B
			Up to 120 mm²		▶	**3RT1956-4G**		1	1 unit	41B
		3RW507 (2x)	Up to 240 mm² (with auxiliary conductor connection)		▶	**3RT1966-4G**		1	1 unit	41B
Terminal covers										
 3RT1956-4EA2	**Covers for box terminals**	3RW505 (2x)	--	--	▶	**3RT1956-4EA2**		1	1 unit	41B
		3RW507 (2x)	--	--	2	**3RT1966-4EA2**		1	1 unit	41B
3RT1956-4EA1	**Covers for cable lugs and busbar connections**	3RW505 (2x)	--	--	▶	**3RT1956-4EA1**		1	1 unit	41B
		3RW507 (2x)	--	--	2	**3RT1966-4EA1**		1	1 unit	41B
Communication modules										
3RW5980-0CS00	**Communication module**	3RW50	PROFINET Standard	--	▶	**3RW5980-0CS00**		1	1 unit	42S
			PROFIBUS		▶	**3RW5980-0CP00**		1	1 unit	42S
			EtherNet/IP		▶	**3RW5980-0CE00**		1	1 unit	42S
			Modbus RTU		▶	**3RW5980-0CR00**		1	1 unit	42S
			Modbus TCP		▶	**3RW5980-0CT00**		1	1 unit	42S
3RW5900-0CC00	**COM connection cable** For mounting laterally on the device	3RW50	0.3 m	--	▶	**3RW5900-0CC00**		1	1 unit	42S

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	Application	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
HMI modules										
3RW5980-0HF00	**HMI module**	3RW50	High Feature	--	▶	**3RW5980-0HF00**		1	1 unit	42S
3RW5980-0HS00			Standard	--	▶	**3RW5980-0HS00**		1	1 unit	42S
 3RW5980-0HD00	**IP65 door mounting kit for HMI modules**	3RW50	IP65	For HMI modules	▶	**3RW5980-0HD00**		1	1 unit	42S
Connecting cables										
3UF793.-0BA00-0	**HMI connection cable**	3RW50	5 m, round	For door mounting	▶	**3RW5980-0HC60**		1	1 unit	42S
			2.5 m, round		▶	**3UF7933-0BA00-0**		1	1 unit	42J
			1.0 m, round		▶	**3UF7937-0BA00-0**		1	1 unit	42J
			0.5 m, round		▶	**3UF7932-0BA00-0**		1	1 unit	42J
Further accessories										
3ZY1311-0AA00	**Push-in lugs for wall mounting**	--	Two lugs are required per device	For HMI modules and communication modules	2	**3ZY1311-0AA00**		1	10 units	41L
Blank labels										
 3RT2900-1SB20	**Unit labeling plates**[1]	--	20 mm x 7 mm, titanium gray	For SIRIUS devices	20	**3RT2900-1SB20**		100	340 units	41B

[1] PC labeling systems for individual inscription of unit labeling plates are available from: murrplastik Systemtechnik GmbH (see page 16/15).

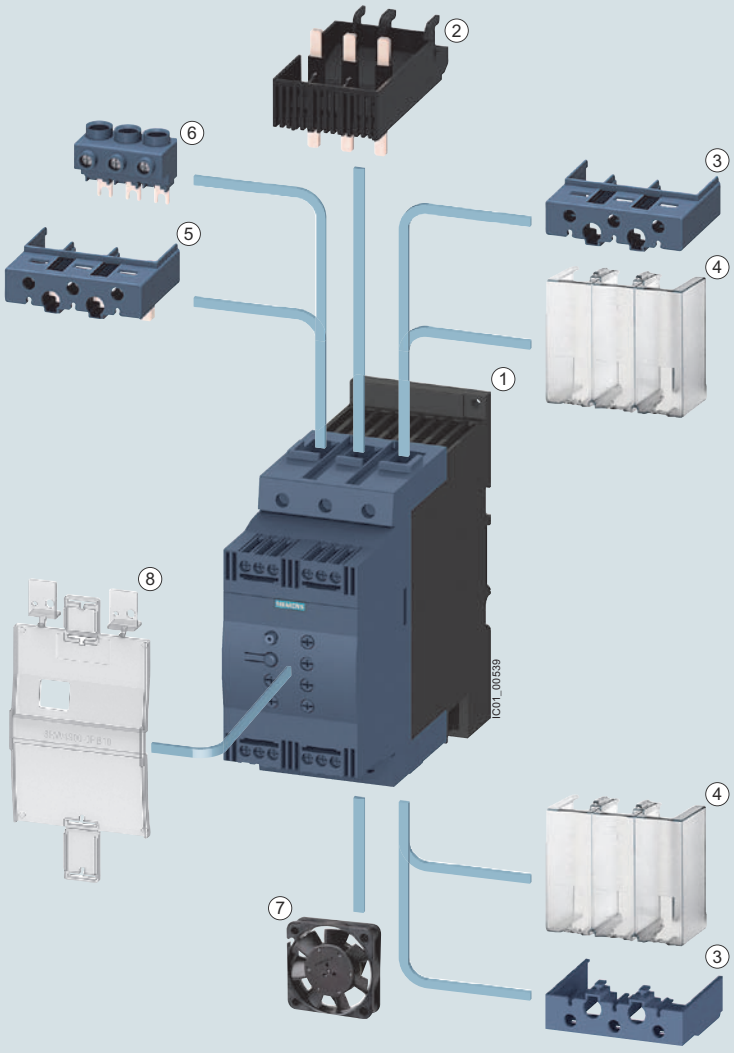
Overview

More information	
Homepage, see www.usa.siemens.com/soft-starter Industry Mall, see www.siemens.com/product?3RW40	TIA Selection Tool Cloud (TST Cloud), see https://www.siemens.com/tstcloud/?node=3rw40 Simulation Tool for Soft Starters (STS), see page 17-199 or https://support.industry.siemens.com/cs/ww/en/view/101494917

The SIRIUS 3RW40 Basic Performance soft starters are suitable for soft starting and stopping of three-phase asynchronous motors.

Thanks to two-phase control, not only is the current kept at minimum values in all three phases throughout the entire starting time, but disturbing direct current components are also eliminated. This not only enables the two-phase starting of motors from 7.5 to 75HP @ 480V but also avoids the current and torque peaks which occur e.g. with wye-delta starters.

The SIRIUS 3RW40 soft starters are suitable for the starting of explosion-proof motors with "increased safety" type of protection EEx e according to ATEX Directive 94/9/EC.



1. 3RW40 soft starter
2. Link module to motor starter protector
3. Terminal cover for box terminals (S2, S3)
4. Terminal cover for cable lug and busbar connections (S3)
5. Auxiliary terminal (S3)
6. Infeed terminal (S0)
7. Fan
8. Sealing cover

3RW40 Basic Performance soft starters with accessories (see page 17-284)

Benefits

3RW402.

3RW403.

3RW404.

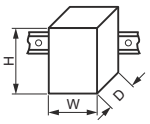
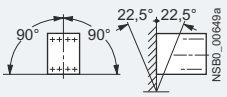
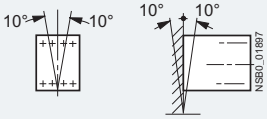
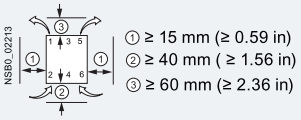
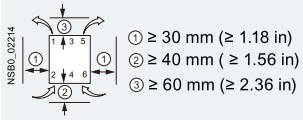
Product characteristics / function	Performance features / benefits
Small and compact design	Space-saving, clearly arranged control panel layout
Motor overload and intrinsic device protection without additional wiring	Adjustable trip classes, integrated diagnostics functions
Integrated in the SIRIUS modular system	Link modules to motor starter protectors
Hybrid switching devices and two-phase motor control	Minimum power loss and optimized motor control by avoiding DC components
Certified according to ATEX Directive 94/9/EC	Suitable for the starting of explosion-proof motors with "increased safety" type of protection EEx e.
Optional thermistor motor protection	Full motor protection

Technical specifications

More information

Technical specifications, see https://support.industry.siemens.com/cs/ww/en/ps/25252/td
Equipment Manual "SIRIUS 3RW30/3RW40 Soft Starter", see https://support.industry.siemens.com/cs/ww/en/view/38752095

FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/25251/faq
Simulation Tool for Soft Starters (STS), see page 17-199 or https://support.industry.siemens.com/cs/ww/en/view/101494917

Type			3RW402.	3RW403.	3RW404.
Mechanics and environment					
Mounting dimensions (W x H x D)					
• Screw terminals		mm	45 x 125 x 154	55 x 144 x 170	70 x 160 x 188
• Spring-loaded terminals		mm	45 x 150 x 154	55 x 144 x 170	70 x 160 x 188
Permissible ambient temperature					
During operation		°C	-25 ... +60; (derating from +40)		
During storage		°C	-40 ... +80		
Weight		kg	0.77	1.35	1.9
Permissible mounting position[1]					
• With auxiliary fan (for 3RW402. ... 3RW404.)					
• Without auxiliary fan (for 3RW402. ... 3RW404.)					
Installation type[1]	Stand-alone installation		 ① ≥ 15 mm (≥ 0.59 in) ② ≥ 40 mm (≥ 1.56 in) ③ ≥ 60 mm (≥ 2.36 in)	 ① ≥ 30 mm (≥ 1.18 in) ② ≥ 40 mm (≥ 1.56 in) ③ ≥ 60 mm (≥ 2.36 in)	
Permissible installation altitude		m	5 000 (Derating from 1 000, see characteristic curve on page 17-199)		
Degree of protection			IP00		

1) In the case of deviations, please observe derating, see Equipment Manual in the chapter "Configuring".

Type	Terminal		3RW402., 3RW403., 3RW404.	
Control electronics				
Rated values				
Rated control supply voltage	A1/A2	V	24 AC/DC	110 ... 230 AC/DC
• Tolerance		%	± 20	-15/+10
Rated frequency		Hz	50/60	
• Tolerance		%	± 10	

Type		3RW402.-..B.4, 3RW403.-..B.4, 3RW404.-..B.4	3RW402.-..B.5, 3RW403.-..B.5, 3RW404.-..B.5
Power electronics			
Rated operational voltage	V AC	200 ... 480	400 ... 600
Tolerance	%	-15/+10	
Maximum blocking voltage (thyristor)	V AC	1 600	
Rated frequency	Hz	50/60	
Tolerance	%	± 10	
Uninterrupted duty at 40 °C (% of I_e)	%	115	
Minimum load (% of smallest adjustable rated motor current I_M)	%	20 (at least 2 A)	
Maximum cable length between soft starter and motor	m	300	

Type		3RW4024	3RW4026	3RW4027	3RW4028
Power electronics					
Load rating with rated operational current I_e					
• According to IEC and UL/CSA[1], individual mounting at 40/50/60 °C, AC-53a	A	12.5/11/10	25.3/23/21	32.2/29/26	38/34/31
Smallest adjustable rated motor current I_M					
For the motor overload protection	A	5	10	17	23
Power loss					
• In operation after completed starting with uninterrupted rated operational current (40 °C) approx.	W	2	8	13	19
• During starting with current limiting set to 300% I_M (40 °C)	W	68	188	220	256
Permissible rated motor current and starts per hour					
• For normal starting (CLASS 10) at 40/50 °C					
- Rated motor current I_M[2], start-up time 3 s	A	12.5/11	25/23	32/29	38/34
- Starts per hour[3]	1/h	50/50	23/23	23/23	19/19
- Rated motor current I_M[2], start-up time 4 s	A	12.5/11	25/23	32/29	38/34
- Starts per hour[3]	1/h	36/36	15/15	16/16	12/12
• For heavy starting (CLASS 20) at 40/50 °C					
- Rated motor current I_M[2], start-up time 6 s	A	10/9	21/19	27/24	31/28
- Starts per hour[3]	1/h	47/47	21/21	20/20	18/18
- Rated motor current I_M[2], start-up time 8 s	A	10/9	21/19	27/24	31/28
- Starts per hour[3]	1/h	34/34	15/15	14/14	13/13

1) Measurement at 60 °C according to UL/CSA not required.

2) Current limiting on soft starter set to 300% I_M, T_u = 40/50 °C. Maximum adjustable rated motor current I_M dependent on CLASS setting.

3) For intermittent duty S4 with ON period = 30%, T_u = 40/50 °C, stand-alone installation vertical. The quoted switching frequencies do not apply for automatic mode. Factors for permissible switching frequency in other mounting position, direct mounting, side-by-side mounting, and implementation of optional auxiliary fan, see Equipment Manual in the chapter "Configuring".

Type		3RW4036	3RW4037	3RW4038	3RW4046	3RW4047
Power electronics						
Load rating with rated operational current I_e						
• According to IEC and UL/CSA[1], individual mounting at 40/50/60 °C, AC-53a	A	45/42/39	63/58/53	72/62.1/60	80/73/66	106/98/90
Smallest adjustable rated motor current I_M						
For the motor overload protection	A	23	26	35	43	46
Power loss						
• In operation after completed starting with uninterrupted rated operational current (40 °C) approx.	W	6	12	15	12	21
• During starting with current limiting set to 300% I_M (40 °C)	W	316	444	500	576	768
Permissible rated motor current and starts per hour						
• For normal starting (CLASS 10) at 40/50 °C						
- Rated motor current I_M[2], start-up time 3 s	A	45/42	63/58	72/62	80/73	106/98
- Starts per hour[3]	1/h	38/38	23/23	22/22	22/22	15/15
- Rated motor current I_M[2], start-up time 4 s	A	45/42	63/58	72/62	80/73	106/98
- Starts per hour[3]	1/h	26/26	15/15	15/15	15/15	10/10
• For heavy starting (CLASS 20) at 40/50 °C						
- Rated motor current I_M[2], start-up time 6 s	A	38/34	46/42	50/46	64/58	77/70
- Starts per hour[3]	1/h	30/30	31/31	34/34	23/23	23/23
- Rated motor current I_M[2], start-up time 8 s	A	38/34	46/42	50/46	64/58	77/70
- Starts per hour[3]	1/h	21/21	22/22	24/24	16/16	16/16

1) Measurement at 60 °C according to UL/CSA not required.

2) Current limiting on soft starter set to 300% I_M, T_u = 40/50 °C. Maximum adjustable rated motor current I_M dependent on CLASS setting.

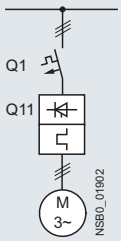
3) For intermittent duty S4 with ON period = 30%, T_u = 40/50 °C, stand-alone installation vertical. The quoted switching frequencies do not apply for automatic mode. Factors for permissible switching frequency in other mounting position, direct mounting, side-by-side mounting, and implementation of optional auxiliary fan, see Equipment Manual in the chapter "Configuring".

Motor feeders according to IEC with 3RV2 motor starter protectors (without semiconductor protection)

Type of coordination "1", CLASS 10,
short-circuit breaking capacity I_q in kA, see table

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.



Soft starters	Motor starter protectors			
	for 400 V systems		for 500 V systems	
Q11	Q1	I_q	Q1	I_q
Type	Type	kA	Type	kA
Type of coordination "1" ToC 1	**Inline circuit**			
3RW4024	3RV2021-4AA10	55	3RV2021-4AA10	10
3RW4026	3RV2021-4DA10	55	3RV2021-4DA10	10
3RW4027	3RV2021-4EA10	55	3RV2021-4EA10	10
3RW4028	3RV2021-4FA10	55	3RV2021-4FA10	10
3RW4036	3RV2031-4WA10	10	3RV2031-4WA10	10
3RW4037	3RV2031-4JA10	10	3RV2031-4JA10	5
3RW4038	3RV2031-4KA10	10	3RV2031-4KA10	5
3RW4046	3RV2041-4RA10	11	3RV2041-4YA10	5
3RW4047	3RV2041-4MA10	11	3RV2041-4MA10	5

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller motor starter protectors/circuit breakers than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

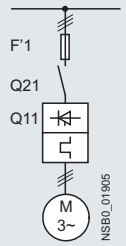
Motor feeders according to IEC with 3NE1 SITOR fuses

gR class full-range fuses for semiconductor protection, cable and line protection

Type of coordination "2",
short-circuit breaking capacity I_q = 65 kA

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.



Soft starters	**gG class fuse**	**Line contactor (optional)**		
	for systems up to 600 V	for systems up to 400 V	for systems up to 480 V	for systems up to 600 V
Q11	F'1	Q21	Q21	Q21
Type	Type	Type	Type	Type
Type of coordination "2" ToC 2	**Inline circuit**			
3RW4024	3NE1814-0	3RT2025	3RT2025/ 3RT2018 (in size S00)	3RT2025
3RW4026	3NE1803-0	3RT2026	3RT2027	3RT2037
3RW4027	3NE1020-2	3RT2027	3RT2028	3RT2037
3RW4028	3NE1020-2	3RT2028	3RT2035	3RT2037
3RW4036	3NE1020-2	3RT2036	3RT2036	3RT2038
3RW4037	3NE1820-0	3RT2037	3RT2037	3RT2046
3RW4038	3NE1820-0	3RT2038	3RT2038	3RT2046
3RW4046	3NE1021-0	3RT2045	3RT2045	3RT2047
3RW4047	3NE1022-0	3RT2047	3RT2047	3RT1054

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

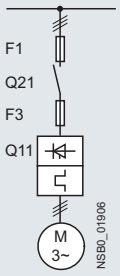
Motor feeders according to IEC with 3NE8 / 3NE4 / 3NE3 / 3NC fuses

aR class partial-range fuses for semiconductor protection

Type of coordination "2",
short-circuit breaking capacity I_q = 65 kA

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.



Soft starters	gG class fuse	aR class fuse			Cylindrical fuses	Line contactor (optional)		
	for systems up to 600 V	for systems up to 600 V	for systems up to 600 V	for systems up to 600 V	for systems up to 480 V	for systems up to 400 V	for systems up to 480 V	for systems up to 600 V
Q11	F1	F3	F3	F3	F3	Q21	Q21	Q21
Type	Type	Type	Type	Type	Type	Type	Type	Type
Type of coordination "2" ToC 2	**Inline circuit**							
3RW4024	3NA3820-6	--	3NE4101	3NE8015-1	3NC2240	3RT2025	3RT2025/ 3RT2018 (in size S00)	3RT2025
3RW4026	3NA3822-6	--	3NE4102	3NE8017-1	3NC2263	3RT2026	3RT2027	3RT2037
3RW4027	3NA3824-6	--	3NE4118	3NE8018-1	3NC2280	3RT2027	3RT2028	3RT2037
3RW4028	3NA3824-6	--	3NE4118	3NE8020-1	3NC2280	3RT2028	3RT2035	3RT2037
3RW4036	3NA3130-6	--	3NE4120	3NE8020-1	3NC2280	3RT2036	3RT2036	3RT2038
3RW4037	3NA3132-6	--	3NE4121	3NE8021-1	--	3RT2037	3RT2037	3RT2046
3RW4038	3NA3132-6	3NE3221	--	3NE8022-1	--	3RT2038	3RT2038	3RT2046
3RW4046	3NA3136-6	3NE3222	--	3NE8022-1	--	3RT2045	3RT2045	3RT2047
3RW4047	3NA3136-6	3NE3224	--	3NE8024-1	--	3RT2047	3RT2047	3RT1054

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

For CLASS 10 applications, as an alternative to the gG class full-range fuses for cable and line protection 3NA3 (F1), 3RV2 motor starter protectors can also be used, possibly with reduced short-circuit breaking capacity (see page 17-279). In these cases, optional line contactors can be dispensed with.

Selection and ordering data

For normal starting (CLASS 10)

3RW402.

3RW403.

3RW404.

3RW ambient temperature 40 °C Rated values of three-phase motors				3RW ambient temperature 50 °C Rated values of three-phase motors					Size	SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current I_e	Rating at operational voltage U_e 230 V	400 V	500 V	Operational current I_e	Rating at operational voltage U_e 200 V	230 V	460 V	575 V						
A	kW	kW	kW	A	hp	hp	hp	hp		d				
Rated operational voltage U_e 200 ... 480 V														
12.5	3	**5.5**	--	11	3	3	**7.5**	--	**S0**	2	**3RW4024-□BB□4**		1	1 unit
25	5.5	**11**	--	23	5	5	**15**	--	**S0**	2	**3RW4026-□BB□4**		1	1 unit
32	7.5	**15**	--	29	7.5	7.5	**20**	--	**S0**	2	**3RW4027-□BB□4**		1	1 unit
38	11	**18.5**	--	34	10	10	**25**	--	**S0**	2	**3RW4028-□BB□4**		1	1 unit
45	11	**22**	--	42	10	15	**30**	--	**S2**	2	**3RW4036-□BB□4**		1	1 unit
63	18.5	**30**	--	58	15	20	**40**	--	**S2**	2	**3RW4037-□BB□4**		1	1 unit
72	22	**37**	--	62	20	20	**40**	--	**S2**	2	**3RW4038-□BB□4**		1	1 unit
80	22	**45**	--	73	20	25	**50**	--	**S3**	2	**3RW4046-□BB□4**		1	1 unit
106	30	**55**	--	98	30	30	**75**	--	**S3**	2	**3RW4047-□BB□4**		1	1 unit
Rated operational voltage U_e 400 ... 600 V														
12.5	--	5.5	**7.5**	11	--	--	7.5	**10**	**S0**	5	**3RW4024-□BB□5**		1	1 unit
25	--	11	**15**	23	--	--	15	**20**	**S0**	5	**3RW4026-□BB□5**		1	1 unit
32	--	15	**18.5**	29	--	--	20	**25**	**S0**	5	**3RW4027-□BB□5**		1	1 unit
38	--	18.5	**22**	34	--	--	25	**30**	**S0**	5	**3RW4028-□BB□5**		1	1 unit
45	--	22	**30**	42	--	--	30	**40**	**S2**	5	**3RW4036-□BB□5**		1	1 unit
63	--	30	**37**	58	--	--	40	**50**	**S2**	5	**3RW4037-□BB□5**		1	1 unit
72	--	37	**45**	62	--	--	40	**60**	**S2**	5	**3RW4038-□BB□5**		1	1 unit
80	--	45	**55**	73	--	--	50	**60**	**S3**	5	**3RW4046-□BB□5**		1	1 unit
106	--	55	**75**	98	--	--	75	**75**	**S3**	5	**3RW4047-□BB□5**		1	1 unit

Article No. supplement for connection types

- Screw terminals **1**
- Spring-loaded terminals[2] **2**

Control supply voltage

- 24 V AC/DC **0**
- 110 ... 230 V AC/DC **1**

[1] Soft starter U_e 200 to 480 V with screw terminals: Standard delivery time SD = 1 day (d).

[2] Main connection from size S2: screw terminals.

Note:

For the constraints for the motor outputs specified here, see page 17-199.

For normal starting (CLASS 10)

3RW402.

3RW403.

3RW404.

3RW ambient temperature 40 °C Rated values of three-phase motors				3RW ambient temperature 50 °C Rated values of three-phase motors					Size	SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current I_e	Rating at operational voltage U_e 230 V	400 V	500 V	Operational current I_e	Rating at operational voltage U_e 200 V	230 V	460 V	575 V						
A	kW	kW	kW	A	hp	hp	hp	hp		d				
Rated operational voltage U_e 200 ... 480 V, with thermistor motor protection, rated control supply voltage U_s 24 V AC/DC														
12.5	3	**5.5**	--	11	3	3	**7.5**	--	**S0**	5	**3RW4024-□TB04**		1	1 unit
25	5.5	**11**	--	23	5	5	**15**	--	**S0**	5	**3RW4026-□TB04**		1	1 unit
32	7.5	**15**	--	29	7.5	7.5	**20**	--	**S0**	5	**3RW4027-□TB04**		1	1 unit
38	11	**18.5**	--	34	10	10	**25**	--	**S0**	5	**3RW4028-□TB04**		1	1 unit
45	11	**22**	--	42	10	15	**30**	--	**S2**	5	**3RW4036-□TB04**		1	1 unit
63	18.5	**30**	--	58	15	20	**40**	--	**S2**	5	**3RW4037-□TB04**		1	1 unit
72	22	**37**	--	62	20	20	**40**	--	**S2**	5	**3RW4038-□TB04**		1	1 unit
80	22	**45**	--	73	20	25	**50**	--	**S3**	5	**3RW4046-□TB04**		1	1 unit
106	30	**55**	--	98	30	30	**75**	--	**S3**	5	**3RW4047-□TB04**		1	1 unit
Rated operational voltage U_e 400 ... 600 V, with thermistor motor protection, rated control supply voltage U_s 24 V AC/DC														
12.5	--	5.5	**7.5**	11	--	--	7.5	**10**	**S0**	5	**3RW4024-□TB05**		1	1 unit
25	--	11	**15**	23	--	--	15	**20**	**S0**	5	**3RW4026-□TB05**		1	1 unit
32	--	15	**18.5**	29	--	--	20	**25**	**S0**	5	**3RW4027-□TB05**		1	1 unit
38	--	18.5	**22**	34	--	--	25	**30**	**S0**	5	**3RW4028-□TB05**		1	1 unit
45	--	22	**30**	42	--	--	30	**40**	**S2**	5	**3RW4036-□TB05**		1	1 unit
63	--	30	**37**	58	--	--	40	**50**	**S2**	5	**3RW4037-□TB05**		1	1 unit
72	--	37	**45**	62	--	--	40	**60**	**S2**	5	**3RW4038-□TB05**		1	1 unit
80	--	45	**55**	73	--	--	50	**60**	**S3**	5	**3RW4046-□TB05**		1	1 unit
106	--	55	**75**	98	--	--	75	**75**	**S3**	5	**3RW4047-□TB05**		1	1 unit

Article No. supplement for connection types

- Screw terminals
- Spring-loaded terminals[2)]

1 2

[1)] Soft starter U_e 200 to 480 V with screw terminals: Standard delivery time SD = 1 day (d).

[2)] Main connection from size S2: screw terminals.

Note:

For the constraints for the motor outputs specified here, see page 17-199.

Selection and ordering data

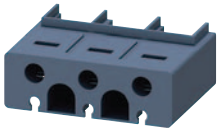
Three-phase infeed terminals

	Conductor cross-section: Solid or stranded	Conductor cross-section: Finely stranded with end sleeve	Conductor cross-section: AWG cables, solid or stranded	Tightening torque	For soft starters size	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
	mm²	mm²	AWG	Nm		d				
3RV2925-5AB	2.5 … 25	2.5 … 16	10 ... 4	3 ... 4	**S0** (3RW402.)	►	**3RV2925-5AB**		1	1 unit

Auxiliary terminals

	For soft starters: Type	For soft starters: Size	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
				d				
3RT2946-4F	**Auxiliary terminals, 3-pole**							
	3RW404.	**S3**	For connection of auxiliary and control cables (0.5 ... 2.5 mm²) to the main conductor terminals	5	**3RT2946-4F**		1	1 unit

Covers for soft starters

 3RT2936-4EA2	**Terminal covers for box terminals**							
	3RW403.	**S2**	Additional touch protection to be fitted at the box terminals (two units required per device)	►	**3RT2936-4EA2**		1	1 unit
	3RW404.	**S3**		►	**3RT2946-4EA2**		1	1 unit
3RT1946-4EA1	**Terminal covers for cable lugs and busbar connections**							
	3RW404.	**S3**	For complying with the voltage clearances and as touch protection if box terminal is removed (two units required per device)	5	**3RT1946-4EA1**		1	1 unit
3RW4900-0PB10	**Sealing covers**							
	3RW402. to 3RW404.	**S0, S2, S3**	--	5	**3RW4900-0PB10**		1	1 unit

Standard mounting rail adapters

3RA2932-1CA00

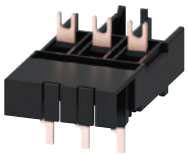
For motor starter protectors Size	For soft starters Size	Version	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
S2	**S2**	For mechanical fixing of motor starter protector and soft starter; for snapping onto standard mounting rail or for screw fixing **Single-unit packaging**	2	**3RA2932-1CA00**		1	1 unit

Fans (to increase switching frequency and for device mounting in positions different to the standard position)

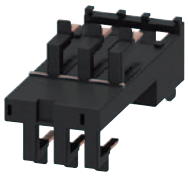
3RW49..-8VB00

For soft starters Type	Size	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
3RW402.	**S0**	▶	**3RW4928-8VB00**		1	1 unit
3RW403., 3RW404.	**S2, S3**	▶	**3RW4947-8VB00**		1	1 unit

Link modules to motor starter protectors[1)]



3RA2921-1BA00



3RA2921-2GA00

For soft starters Type	Size	Motor starter protectors Size	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
				Screw terminals			
3RW402.	**S0**	**S00/S0**	2	**3RA2921-1BA00**		1	1 unit
3RW4036	**S2**	**S2**	▶	**3RA2931-1AA00**		1	1 unit
3RW404.	**S3**	**S3**	▶	**3RA1941-1AA00**		1	1 unit
				Spring-loaded terminals			
3RW402.	**S0**	**S0**	2	**3RA2921-2GA00**		1	1 unit

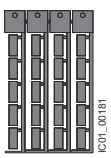
[1)] Can be used in size S0 up to 32 A.
Can be used in size S2 up to 65 A in combination with 3RA2932-1CA00 standard mounting rail adapter (specially for soft starters).
Can be used in size S3 only with mounting plate.

Tools for opening spring-loaded terminals in sizes S00 and S0

3RA2908-1A

Version	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Screwdrivers For all SIRIUS devices with spring-loaded terminals		**Spring-loaded terminals**			
Length approx. 200 mm, 3.0 mm x 0.5 mm, titanium gray/black, partially insulated	2	**3RA2908-1A**		1	1 unit

Blank labels



3RT2900-1SB20

	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Unit labeling plates[1)] For SIRIUS devices 20 mm x 7 mm, titanium gray	20	**3RT2900-1SB20**		100	340 units

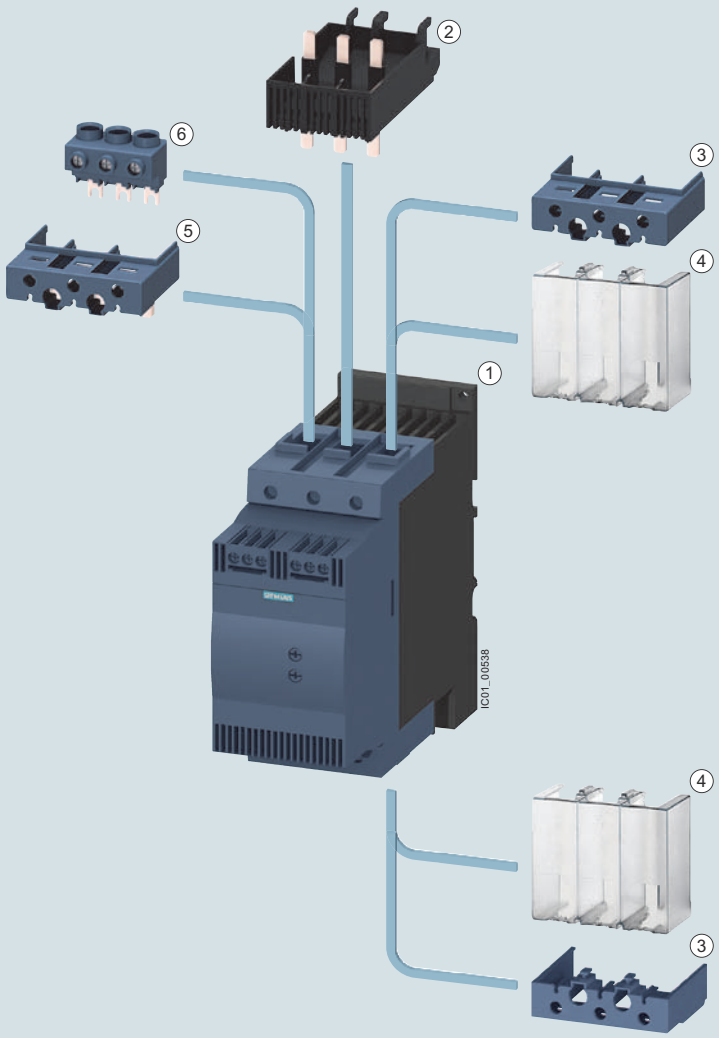
[1)] PC labeling systems for individual inscription of unit labeling plates are available from: murrplastik Systemtechnik GmbH (see page 16/14).

Overview

More information	
Homepage, see www.usa.siemens.com/soft-starter	Simulation Tool for Soft Starters (STS), see page 17-199 or https://support.industry.siemens.com/cs/ww/en/view/101494917
Industry Mall, see www.siemens.com/product?3RW	SIRIUS Soft Starter ES (TIA Portal), see page 14/5
TIA Selection Tool Cloud (TST Cloud), see https://www.siemens.com/tstcloud/?node=3rw30	

The SIRIUS 3RW30 Basic Performance soft starters are suitable for soft starting of three-phase asynchronous motors.

Thanks to two-phase control, not only is the current kept at minimum values in all three phases throughout the entire starting time, but disturbing direct current components are also eliminated. This not only enables the two-phase starting of motors from 1.5 to 75HP @ 480V but also avoids the current and torque peaks which occur e.g. with wye-delta starters.



1. 3RW30 soft starter
2. Link module to motor starter protector
3. Terminal cover for box terminals (S2, S3)
4. Terminal cover for cable lugs and busbar connections (S3)
5. Auxiliary terminal (S3)
6. Infeed terminal (S00, S0)

3RW30 Basic Performance soft starters with accessories (see page 17-295)

Benefits

3RW301.

3RW302.

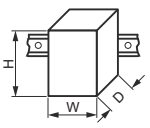
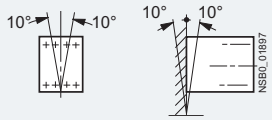
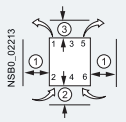
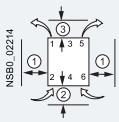
3RW303.

3RW304.

Product characteristics / function	Performance features / benefits
Small and compact design	Space-saving, clearly arranged control panel layout
Parameterization using potentiometers	Simple and fast commissioning
Integrated in the SIRIUS modular system	Link modules to motor starter protectors
Hybrid switching devices and two-phase motor control	Minimum power loss and optimized motor control by avoiding DC components

Technical specifications

More information	
Equipment Manual “SIRIUS 3RW30/3RW40 Soft Starters”, see https://support.industry.siemens.com/cs/ww/en/view/38752095 FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/16213/faq	Catalog LV 10, see www.siemens.com/lowvoltage/lv10

Type			3RW301.	3RW302.	3RW303.	3RW304.
Mechanics and environment						
Mounting dimensions (W x H x D) • Screw terminals • Spring-loaded terminals		mm mm	45 x 95 x 151 45 x 117 x 151	45 x 125 x 151 45 x 150 x 151	55 x 144 x 168 55 x 144 x 168	70 x 160 x 186 70 x 160 x 186
Permissible ambient temperature During operation During storage		°C °C	-25 ... +60; (derating from +40) -40 ... +80			
Weight		kg	0.58	0.69	1.20	1.71
Permissible mounting position[1] (auxiliary fan not possible)						
Installation type[1]	Stand-alone installation		 ① ≥ 15 mm (≥ 0.59 in) ② ≥ 40 mm (≥ 1.56 in) ③ ≥ 60 mm (≥ 2.36 in)		 ① ≥ 30 mm (≥ 1.18 in) ② ≥ 40 mm (≥ 1.56 in) ③ ≥ 60 mm (≥ 2.36 in)	
Permissible installation altitude		m	5 000 (Derating from 1 000, see characteristic curve on page 17-199)			
Degree of protection			IP00			

[1] In the case of deviations, please observe derating, see Equipment Manual in the chapter "Configuring".

Type	Terminal		3RW301., 3RW302.		3RW303., 3RW304.	
Control electronics						
Rated values						
Rated control supply voltage	A1/A2	V	24	110 ... 230	24	110 ... 230
• Tolerance		%	20	-15/+10	20	-15/+10
Rated frequency		Hz	50/60			
• Tolerance		%	± 10			

Type			3RW301.	3RW302.	3RW303.	3RW304.
Power electronics						
Rated operational voltage		V AC	200 ... 480			
Tolerance		%	-15/+10			
Rated frequency		Hz	50/60			
Tolerance		%	10			
Uninterrupted duty at 40 °C (% of I_e)		%	115			
Minimum load (% of I_e)		%	10 (at least 1 A)			
Maximum cable length between soft starter and motor		m	300			

Type			3RW3013	3RW3014	3RW3016	3RW3017	3RW3018
Power electronics							
Load rating with rated operational current I_e							
• According to IEC and UL/CSA[1], individual mounting at 40/50/60 °C, AC-53a		A	3.6/3.3/3	6.5/6/5.5	9/8/7	12.5/12/11	17.6/17/14
Power loss							
• In operation after completed starting with uninterrupted rated operational current (40 °C) approx.		W	0.25	0.5	1	2	4
• During starting with 300% I_M (40 °C)		W	24	52	80	80	116
Permissible rated motor current and starts per hour							
• For normal starting (CLASS 10) at 40/50 °C							
- Rated motor current I_M[2], start-up time 3 s		A	3.6/3.3	6.5/6.0	9/8	12.5/12.0	17.6/17.0
- Starts per hour[3]		1/h	200/150	87/60	50/50	85/70	62/46
- Rated motor current I_M[2], start-up time 4 s		A	3.6/3.3	6.5/6.0	9/8	12.5/12.0	17.6/17.0
- Starts per hour[3]		1/h	150/100	64/46	35/35	62/47	45/32

1) Measurement at 60 °C according to UL/CSA not required.

2) At 300% I_M, T_u = 40/50 °C.

3) For intermittent duty S4 with ON period = 30%, T_u = 40/50 °C, stand-alone installation vertical. The quoted switching frequencies do not apply for automatic mode.

Type			3RW3026	3RW3027	3RW3028
Power electronics					
Load rating with rated operational current I_e					
• According to IEC and UL/CSA[1], individual mounting at 40/50/60 °C, AC-53a		A	25.3/23/21	32.2/29/26	38/34/31
Power loss					
• In operation after completed starting with uninterrupted rated operational current (40 °C) approx.		W	8	13	19
• During starting with 300% I_M (40 °C)		W	188	220	256
Permissible rated motor current and starts per hour					
• For normal starting (CLASS 10) at 40/50 °C					
- Rated motor current I_M[2], start-up time 3 s		A	25/23	32/29	38/34
- Starts per hour[3]		1/h	23/23	23/23	19/19
- Rated motor current I_M[2], start-up time 4 s		A	25/23	32/29	38/34
- Starts per hour[3]		1/h	15/15	16/16	12/12

1) Measurement at 60 °C according to UL/CSA not required.

2) At 300% I_M, T_u = 40/50 °C.

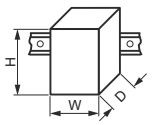
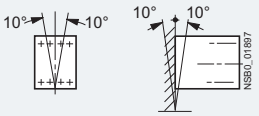
3) For intermittent duty S4 with ON period = 30%, T_u = 40/50 °C, stand-alone installation vertical. The quoted switching frequencies do not apply for automatic mode. Factors for permissible switching frequency with deviating mounting position, direct mounting, side-by-side mounting, see Equipment Manual in the chapter "Configuring".

Type			3RW3036	3RW3037	3RW3038	3RW3046	3RW3047
Power electronics							
Load rating with rated operational current I_e							
• According to IEC and UL/CSA[1], individual mounting at 40/50/60 °C, AC-53a		A	45/42/39	65/58/53	72/62.1/60	80/73/66	106/98/90
Power loss							
• In operation after completed starting with uninterrupted rated operational current (40 °C) approx.		W	6	12	15	12	21
• During starting with 300% I_M (40 °C)		W	316	444	500	576	768
Permissible rated motor current and starts per hour							
• For normal starting (CLASS 10) at 40/50 °C							
- Rated motor current I_M[2], start-up time 3 s		A	45/42	63/58	72/62	80/73	106/108
- Starts per hour[3]		1/h	38/38	23/23	22/22	22/22	15/15
- Rated motor current I_M[2], start-up time 4 s		A	45/42	63/58	72/62	80/73	106/98
- Starts per hour[3]		1/h	26/26	15/15	15/15	15/15	10/10

1) Measurement at 60 °C according to UL/CSA not required.

2) At 300% I_M, T_u = 40/50 °C.

3) For intermittent duty S4 with ON period = 30%, T_u = 40/50 °C, stand-alone installation vertical. The quoted switching frequencies do not apply for automatic mode.

Type			3RW3003-1CB54	3RW3003-2CB54
Mechanics and environment				
Mounting dimensions (W x H x D)				
• Screw terminals		mm	22.5 x 100 x 120	--
• Spring-loaded terminals		mm	--	22.5 x 101.6 x 120
Permissible ambient temperature				
During operation		°C	-25 ... +60; (derating from +40)	
During storage		°C	-40 ... +80	
Weight		kg	0.207	0.188
Permissible mounting position				
Permissible installation altitude		m	5 000 (Derating from 1 000, see characteristic curve on page 17-199)	
Degree of protection acc. to IEC 60529			IP00	
Control electronics				
Rated values				
Rated control supply voltage		V	24 ... 230 AC/DC	
• Tolerance		%	± 10	
Rated frequency at AC		Hz	50/60	
• Tolerance		%	± 10	
Power electronics				
Rated operational voltage		V AC	200 ... 400	
Tolerance		%	± 10	
Rated frequency		Hz	50/60	
Tolerance		%	± 10	
Uninterrupted duty (% of I_e)		%	100	
Minimum load[1] (% of I_e); at 40 °C		%	9	
Maximum conductor length between soft starter and motor		m	100[2]	
Load rating with rated operational current I_e				
• According to IEC and UL/CSA, individual mounting at 40/50/60 °C, AC-53a		A	3/2.6/2.2	
• According to IEC and UL/CSA, side-by-side mounting at 40/50/60 °C, AC-53a		A	2.6/2.2/1.8	
Power loss				
• In operation after completed starting with uninterrupted rated operational current (40 °C) approx.		W	6.5	
• With utilization of maximum switching frequency		W	3	
Permissible starts per hour (cannot be increased by using a fan)				
• For intermittent duty S4 T_u = 40 °C, stand-alone installation vertical		1/h	1 500	
• ON period = 70% for 300% I_e		1/s	0.2	
Dead time after uninterrupted duty with I_e before restart		s	0	

1) The rated motor current (specified on the motor's name plate) should at least amount to the specified percentage of the SIRIUS soft starter unit's rated operational current I_e.

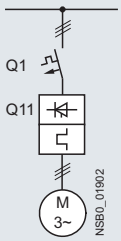
2) If this value is exceeded, problems with line capacities may arise, which can result in false firing.

Motor feeders according to IEC with 3RV2 motor starter protectors (without semiconductor protection)

Type of coordination "1", CLASS 10,
short-circuit breaking capacity I_q in kA, see table

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.



Soft starters	Motor starter protectors for 400 V systems	
Q11	Q1	I_q
Type	Type	kA
Type of coordination "1" ToC 1	**Inline circuit**	
3RW3003	3RV2011-1EA10	50
3RW3013	3RV2011-1FA10	5
3RW3014	3RV2011-1HA10	5
3RW3016	3RV2011-1JA10	5
3RW3017	3RV2011-1KA10	5
3RW3018	3RV2021-4BA10	5
3RW3026	3RV2021-4DA10	55
3RW3027	3RV2021-4EA10	55
3RW3028	3RV2021-4FA10	55
3RW3036	3RV2031-4WA10	10
3RW3037	3RV2031-4JA10	10
3RW3038	3RV2031-4KA10	10
3RW3046	3RV2041-4RA10	11
3RW3047	3RV2041-4MA10	11

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller motor starter protectors/circuit breakers than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

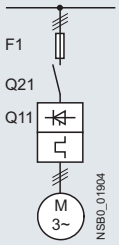
Motor feeders according to IEC with 3NA3 fuses

gG class full-range fuses for cable and line protection according to IEC 60269-2, without semiconductor protection

Type of coordination "1",
short-circuit breaking capacity I_q = 65 kA

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.



Soft starters	gG class fuse	Line contactor (optional)	
	for systems up to 480 V	for systems up to 400 V	for systems up to 480 V
Q11 Type	F1 Type	Q21 Type	Q21 Type
Type of coordination "1" ToC 1	**Inline circuit**		
3RW3003[1]	3NA3805[2]	3RT2015	3RT2015
3RW3013	3NA3803-6	3RT2015	3RT2015
3RW3014	3NA3805-6	3RT2015	3RT2016
3RW3016	3NA3807-6	3RT2016	3RT2017
3RW3017	3NA3810-6	3RT2018	3RT2025
3RW3018	3NA3814-6	3RT2026	3RT2026
3RW3026	3NA3822-6	3RT2026	3RT2027
3RW3027	3NA3824-6	3RT2027	3RT2028
3RW3028	3NA3824-6	3RT2028	3RT2035
3RW3036	3NA3130-6	3RT2036	3RT2036
3RW3037	3NA3132-6	3RT2037	3RT2037
3RW3038	3NA3132-6	3RT2038	3RT2038
3RW3046	3NA3136-6	3RT2045	3RT2045
3RW3047	3NA3136-6	3RT2047	3RT2047

1) I_q = 50 kA at 400 V.
2) 3NA3805-1 (NH00), 5SB261 (DIAZED), 5SE2201-6 (NEOZED).

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

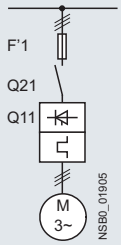
Motor feeders according to IEC with 3NE1 SITOR fuses

gR class full-range fuses for semiconductor protection, cable and line protection

Type of coordination "2",
short-circuit breaking capacity I_q = 65 kA

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.



Soft starters	gG class fuse	Line contactor (optional)	
	for systems up to 480 V	for systems up to 400 V	for systems up to 480 V
Q11	F'1	Q21	Q21
Type	Type	Type	Type
Type of coordination "2" ToC 2	**Inline circuit**		
3RW3003[1]	3NE1813-0[2]	3RT2015	3RT2015
3RW3013	3NE1813-0	3RT2015	3RT2015
3RW3014	3NE1813-0	3RT2015	3RT2016
3RW3016	3NE1813-0	3RT2016	3RT2017
3RW3017	3NE1813-0	3RT2018	3RT2025
3RW3018	3NE1814-0	3RT2026	3RT2026
3RW3026	3NE1803-0	3RT2026	3RT2027
3RW3027	3NE1020-2	3RT2027	3RT2028
3RW3028	3NE1020-2	3RT2028	3RT2035
3RW3036	3NE1020-2	3RT2036	3RT2036
3RW3037	3NE1820-0	3RT2037	3RT2037
3RW3038	3NE1820-0	3RT2038	3RT2038
3RW3046	3NE1021-0	3RT2045	3RT2045
3RW3047	3NE1022-0	3RT2047	3RT2047

1) I_q = 50 kA at 400 V.
2) No SITOR fuse required!
Alternatively: 3NA3803 (NH00), 5SB221 (DIAZED), 5SE2206 (NEOZED).

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

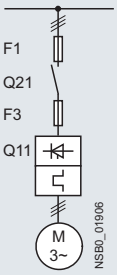
Motor feeders according to IEC with 3NE8 / 3NE4 / 3NE3 / 3NC fuses

aR class partial-range fuses for semiconductor protection

Type of coordination "2",
short-circuit breaking capacity I_q = 65 kA

Note:

For general recommendations for constructing motor feeders with soft starters, see page 17-201.



Soft starters	gG class fuse	aR class fuse			Cylindrical fuses	Line contactor (optional)	
	for systems up to 480 V	for systems up to 480 V	for systems up to 480 V	for systems up to 480 V	for systems up to 480 V	for systems up to 400 V	for systems up to 480 V
Q11	F1	F3	F3	F3	F3	Q21	Q21
Type	Type	Type	Type	Type	Type	Type	Type
Type of coordination "2" ToC 2	**Inline circuit**						
3RW3003[1]	3NA3805[2]	--	--	3NE8015-1	3NC1010	3RT2015	3RT2015
3RW3013	3NA3803-6	--	3NE4101	3NE8015-1	3NC2220	3RT2015	3RT2015
3RW3014	3NA3805-6	--	3NE4101	3NE8015-1	3NC2220	3RT2015	3RT2016
3RW3016	3NA3807-6	--	3NE4101	3NE8015-1	3NC2220	3RT2016	3RT2017
3RW3017	3NA3810-6	--	3NE4101	3NE8015-1	3NC2250	3RT2018	3RT2025
3RW3018	3NA3814-6	--	3NE4101	3NE8003-1	3NC2263	3RT2026	3RT2026
3RW3026	3NA3822-6	--	3NE4102	3NE8017-1	3NC2263	3RT2026	3RT2027
3RW3027	3NA3824-6	--	3NE4118	3NE8018-1	3NC2280	3RT2027	3RT2028
3RW3028	3NA3824-6	--	3NE4118	3NE8020-1	3NC2280	3RT2028	3RT2035
3RW3036	3NA3130-6	--	3NE4120	3NE8020-1	3NC2280	3RT2036	3RT2036
3RW3037	3NA3132-6	--	3NE4121	3NE8021-1	--	3RT2037	3RT2037
3RW3038	3NA3132-6	3NE3221	--	3NE8022-1	--	3RT2038	3RT2038
3RW3046	3NA3136-6	3NE3222	--	3NE8022-1	--	3RT2045	3RT2045
3RW3047	3NA3136-6	3NE3224	--	3NE8024-1	--	3RT2047	3RT2047

[1] I_q = 50 kA at 400 V.
[2] 3NA3805-1 (NH00), 5SB261 (DIAZED).

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

For CLASS 10 applications, as an alternative to the gG class full-range fuses for cable and line protection 3NA3 (F1), 3RV2 motor starter protectors/circuit breakers can also be used, possibly with reduced short-circuit breaking capacity (see page 17-290). In these cases, optional line contactors can be dispensed with.

Selection and ordering data

For simple starting conditions

3RW301.

3RW302.

3RW303.

3RW304.

3RW ambient temperature 40 °C Rated values of three-phase motors Operational current I_e	Rating at operational voltage U_e 230 V	 400 V	 500 V	3RW ambient temperature 50 °C Rated values of three-phase motors Operational current I_e	Rating at operational voltage U_e 200 V	 230 V	 460 V	 575 V	Size	SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
A	kW	kW	kW	A	hp	hp	hp	hp		d				
Rated operational voltage U_e 200 ... 480 V														
3.6	0.75	**1.5**	--	3	0.5	0.5	**1.5**	--	**S00**	2	**3RW3013-□BB□4**		1	1 unit
6.5	1.5	**3**	--	6	1	1	**3**	--	**S00**	2	**3RW3014-□BB□4**		1	1 unit
9	2.2	**4**	--	8	2	2	**5**	--	**S00**	2	**3RW3016-□BB□4**		1	1 unit
12.5	3	**5.5**	--	12	3	3	**7.5**	--	**S00**	2	**3RW3017-□BB□4**		1	1 unit
17.6	4	**7.5**	--	17	3	3	**10**	--	**S00**	2	**3RW3018-□BB□4**		1	1 unit
25	5.5	**11**	--	23	5	5	**15**	--	**S0**	2	**3RW3026-□BB□4**		1	1 unit
32	7.5	**15**	--	29	7.5	7.5	**20**	--	**S0**	2	**3RW3027-□BB□4**		1	1 unit
38	11	**18.5**	--	34	10	10	**25**	--	**S0**	2	**3RW3028-□BB□4**		1	1 unit
45	11	**22**	--	42	10	15	**30**	--	**S2**	2	**3RW3036-□BB□4**		1	1 unit
63	18.5	**30**	--	58	15	20	**40**	--	**S2**	2	**3RW3037-□BB□4**		1	1 unit
72	22	**37**	--	62	20	20	**40**	--	**S2**	2	**3RW3038-□BB□4**		1	1 unit
80	22	**45**	--	73	20	25	**50**	--	**S3**	2	**3RW3046-□BB□4**		1	1 unit
106	30	**55**	--	98	30	30	**75**	--	**S3**	2	**3RW3047-□BB□4**		1	1 unit

Article No. supplement for connection types

- Screw terminals — **1**
- Spring-loaded terminals[2] — **2**

Control supply voltage U_s

- 24 V AC/DC — **0**
- 110 ... 230 V AC/DC — **1**

Soft starters for easy starting conditions and high switching frequency, rated operational voltage U_e 200 ... 400 V, rated control supply voltage U_s 24 ... 230 V AC/DC														
3	0.55	**1.1**	--	A	0.5	**0.5**	--	--	22.5 mm					
• With screw terminals										►	**3RW3003-1CB54**		1	1 unit
• With spring-loaded terminals										►	**3RW3003-2CB54**		1	1 unit

[1] Soft starter U_e 200 to 480 V with screw terminals: Standard delivery time SD = 1 day (d).

[2] Main connection from size S2: screw terminals.

Note:

For the constraints for the motor outputs specified here, see page 17-199.

Selection and ordering data

More information

Equipment Manual "SIRIUS 3RW30/3RW40 Soft Starters", see https://support.industry.siemens.com/cs/ww/en/view/38752095

Three-phase infeed terminals

3RV2925-5AB

Conductor cross-section: Solid or stranded	Conductor cross-section: Finely stranded with end sleeve	Conductor cross-section: AWG cables, solid or stranded	Tightening torque	For soft starters size	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
mm²	mm²	AWG	Nm		d				
2.5 … 25	2.5 … 16	10 ... 4	3 ... 4	S00 (3RW301.), S0 (3RW302.)	▶	**3RV2925-5AB**		1	1 unit

Auxiliary terminals

3RT2946-4F

For soft starters: Type	For soft starters: Size		SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
			d				
Auxiliary terminals, 3-pole							
3RW304.	**S3**		5	**3RT2946-4F**		1	1 unit

Covers for soft starters

3RT2946-4EA2

Terminal covers for box terminals
Additional touch protection to be fitted at the box terminals (two units required per device)

3RW303.	**S2**	▶	**3RT2936-4EA2**	1	1 unit
3RW304.	**S3**	▶	**3RT2946-4EA2**	1	1 unit

3RT1946-4EA1

Terminal covers for cable lugs and busbar connections
For complying with the voltage clearances and as touch protection if box terminal is removed (two units required per device)

3RW304.	**S3**	5	**3RT1946-4EA1**	1	1 unit

Mounting rails for mounting contactors for the customer assembly of 3RA21 load feeders with busbar adapters for 60 mm systems

8US1998-7CB45

For motor starter protectors: Size	For soft starters: Size	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
			d				
		For the discrete configuration of direct-on-line starters, an additional mounting rail is needed for the contactor in addition to the existing mounting rail on the busbar adapter for the motor starter protector.					
--	**S0**	For pushing onto the device adapter, including fixing screws	2	**8US1998-7CB45**		1	10 units

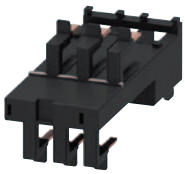
Standard mounting rail adapters

3RA2932-1CA00

		For mechanical fixing of motor starter protector and soft starter; for snapping onto standard mounting rail or for screw fixing					
S2	**S2**	**Single-unit packaging**	2	**3RA2932-1CA00**		1	1 unit

For soft starters Type	Size	Motor starter protectors Size	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Link modules to motor starter protectors[1]							
				Screw terminals			
3RW301.	**S00**	**S00**	2	**3RA2921-1BA00**		1	1 unit
3RW302.	**S0**	**S00/S0**	2	**3RA2921-1BA00**		1	1 unit
3RW3036	**S2**	**S2**	▶	**3RA2931-1AA00**		1	1 unit
3RW304.	**S3**	**S3**	▶	**3RA1941-1AA00**		1	1 unit
				Spring-loaded terminals			
3RW301.	**S00**	**S00**	2	**3RA2911-2GA00**		1	1 unit
3RW302.	**S0**	**S0**	2	**3RA2921-2GA00**		1	1 unit

3RA2921-1BA00


3RA2921-2GA00

[1] Can be used in size S0 up to 32 A.
Can be used in size S2 up to 65 A in combination with 3RA2932-1CA00 standard mounting rail adapter (specially for soft starters).
Can be used in size S3 only on mounting plate.

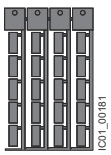
Version	Functionality Functions	Use	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Covers and push-in lugs (only for 3RW3003)							
Sealable covers	For securing against unauthorized adjustment of setting knobs	For devices with 1 or 2 CO contacts	5	**3RP1902**		1	5 units
Push-in lugs for screw fixing	--	For devices with 1 or 2 CO contacts	5	**3RP1903**		1	10 units

3RP1902

3RP1903

Version	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Tools for opening spring-loaded terminals in sizes S00 and S0					
Screwdrivers For all SIRIUS devices with spring-loaded terminals		**Spring-loaded terminals**			
Length approx. 200 mm, 3.0 mm x 0.5 mm, titanium gray/black, partially insulated	2	**3RA2908-1A**		1	1 unit
Blank labels					
Unit labeling plates[1] For SIRIUS devices					
20 mm x 7 mm, titanium gray	20	**3RT2900-1SB20**		100	340 units

3RA2908-1A

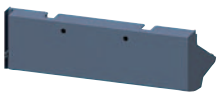


3RT2900-1SB20

[1] PC labeling systems for individual inscription of unit labeling plates are available from: murrplastik Systemtechnik GmbH (see page 16/15).

	Type of product	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
SIRIUS Soft Starter ES V16 Basic						
	Basic Function **Including Professional Trial License** Engineering software, Software download 6 languages (English, German, French, Italian, Spanish, Chinese) Online functions via system interface No cost to download: https://support.industry.siemens.com/cs/document/109771657					
SIRIUS Soft Starter ES V16 Professional						
	Floating License for one User Engineering software, Software and documentation on DVD 6 languages (English, German, French, Italian, Spanish, Chinese) Online functions via system interface or PROFIBUS/PROFINET					
	• License Key on USB flash drive, includes DVD	5	**3ZS1320-6CC12-0YA5**		1	1 unit
	• License Key download, without DVD	▶	**3ZS1320-6CE12-0YB5**		1	1 unit
3ZS1320-6CC12-0YA5	**Upgrade for Soft Starter ES 2007 Premium** Floating License for one User Engineering software, Software and documentation on DVD License Key on USB flash drive 6 languages (English, German, French, Italian, Spanish, Chinese) Online functions via system interface or PROFIBUS/PROFINET	5	**3ZS1320-6CC12-0YE5**		1	1 unit

Hints:
Licenses from Soft Starter ES Standard and Premium V14 to V15.1 can also be used for Soft Starter ES V16 Professional

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Fans								
	Fan	3RW551 (1x), 3RW552 (2x), 3RW553 (2x)	--	▶	**3RW5983-0FF00**		1	1 unit
		3RW554 (1x)	--	▶	**3RW5984-0FF00**		1	1 unit
3RW5983-0FF00		3RW555 (3x)	--	▶	**3RW5985-0FF00**		1	1 unit
Terminals and terminal covers								
	Box terminal block	3RW552 (2x)	--	▶	**3RW5982-0TB00**		1	1 unit
3RW5982-0TB00					**Screw terminals**			
	Removable control terminals	3RW551.-1H... (2x), 3RW552.-1H... (2x), 3RW553.-6H... (2x), 3RW554.-6H... (2x), 3RW555.-6H... (2x)	contains 2 blocks each with 6 terminals	▶	**3RW5980-1TR00**		1	1 unit
3RW5980-1TR00					**Spring-loaded terminals**			
		3RW551.-3H... (2x), 3RW552.-3H... (2x), 3RW553.-2H... (2x), 3RW554.-2H... (2x), 3RW555.-2H... (2x)	contains 2 blocks each with 6 terminals	▶	**3RW5980-2TR00**		1	1 unit
	**Terminal cover**	3RW555	--	▶	**3RW5955-0TC20**		1	1 unit
3RW5955-0TC20								

Product designation	Manufacturer's Article No. of the soft starter	Type of product	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Enclosure components							
3RW5950-0GD20 **Cover for control cable duct**	3RW55..-.HA..	Titanium gray	▶	**3RW5950-0GD20**		1	1 unit
3RW5950-0GD30	3RW55..-.HF..	Yellow NEW	▶	**3RW5950-0GD30**		1	1 unit
3RW5950-0GL30 **Hinged cover**	3RW55	With cutout for High Feature HMI module	▶	**3RW5950-0GL30**		1	1 unit

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
HMI modules								
3RW5980-0HF00	**HMI module**	3RW55	High Feature	▶	**3RW5980-0HF00**		1	1 unit
3RW5980-0HL00	**Interface cover**	3RW55	--	▶	**3RW5980-0HL00**		1	1 unit
Connection cable for installing the HMI module in the soft starter								
3UF7931-0AA00-0	**Connection cable**	--	0.1 m, flat	▶	**3UF7931-0AA00-0**		1	1 unit
Transport packaging								
3RW5953-0VY00	**Transport packaging**	3RW551	--	▶	**3RW5951-0VY00**		1	1 unit
		3RW552, 3RW553	--	▶	**3RW5953-0VY00**		1	1 unit
		3RW554	--	▶	**3RW5954-0VY00**		1	1 unit
		3RW555	--	▶	**3RW5955-0VY00**		1	1 unit

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Fans								
3RW5983-0FF00	**Fans**	3RW5216/17 (1x), 3RW5226/27 (2x), 3RW523 (2x)	--	▶	**3RW5983-0FF00**		1	1 unit
		3RW524 (1x)	--	▶	**3RW5984-0FF00**		1	1 unit
Terminals								
3RW5982-0TB00	**Box terminal block**	3RW522 (2x)	--	▶	**3RW5982-0TB00**		1	1 unit
					Screw terminals			
3RW5980-1TR00	**Removable control terminals**	3RW521.-1.C.., 3RW522.-1.C.., 3RW523.-6.C.., 3RW524.-6.C..	contains 2 blocks each with 6 terminals	▶	**3RW5980-1TR00**		1	1 unit
					Spring-loaded terminals			
		3RW521.-3.C.., 3RW522.-3.C.., 3RW523.-2.C.., 3RW524.-2.C..	contains 2 blocks each with 6 terminals	▶	**3RW5980-2TR00**		1	1 unit
Enclosure components								
3RW5953-0GB00	**Enclosure base**	3RW522, 3RW523	--	▶	**3RW5953-0GB00**		1	1 unit
		3RW524	--	▶	**3RW5954-0GB00**		1	1 unit
3RW5950-0GD20	**Cover for control cable duct**	3RW52	Titanium gray	▶	**3RW5950-0GD20**		1	1 unit

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Enclosure components								
3RW5950-0GL20	**Hinged cover**	3RW52	Without cutout	▶	**3RW5950-0GL20**		1	1 unit
Transport packaging								
3RW5953-0VY00	**Transport packaging**	3RW521	--	▶	**3RW5951-0VY00**		1	1 unit
		3RW522, 3RW523	--	▶	**3RW5953-0VY00**		1	1 unit
		3RW524	--	▶	**3RW5954-0VY00**		1	1 unit

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Fan								
3RW5905-0FF00	**Fan**	3RW505 (1x)	--	▶	**3RW5905-0FF00**		1	1 unit
		3RW507 (1x)	--	▶	**3RW5907-0FF00**		1	1 unit
Terminals								
					Screw terminals			
3RW5980-1TR00	**Removable control terminals**	3RW50..-6.B..	contains 2 blocks each with 6 terminals	▶	**3RW5980-1TR00**		1	1 unit
					Spring-loaded terminals			
		3RW50..-2.B..	contains 2 blocks each with 6 terminals	▶	**3RW5980-2TR00**		1	1 unit
Enclosure components								
3RW5900-0GL00	**Hinged cover**	3RW50	--	▶	**3RW5900-0GL00**		1	1 unit
Transport packaging								
3RW5905-0VY00	**Transport packaging**	3RW505	--	▶	**3RW5905-0VY00**		1	1 unit
		3RW507	--	▶	**3RW5907-0VY00**		1	1 unit

Overview

The family of 3RW40 and 3RW44 softstarters are available in stand alone enclosed control designs for smooth starting and stopping of standard NEMA design B three phase inductive motors, thus eliminating physical stresses to the system and load while minimizing starting current. These pre-engineered enclosed designs offer convenience and flexibility in and UL/CSA certified offering. Enclosed styles are available in combination and non-combination configurations through 600HP and system voltages of 200V, 230V, 480V, and 600V.

The Class 73 offers either the 3RW40 or 3RW44 in a non-combination style offering. These non-combination styles come standard with a choice of Type 1, 3R, 12, 4 NEMA rated enclosure, a control transformer, Sirius softstarter with built-in overload and bypass, line side power terminal block, and a reset pushbutton. The enclosed offering can be powerfully matched with a wide variety of factory modified options such as pushbutton control, pilot lights, metering and other control options such as isolation contactors and emergency start bypass starters. 3RW44 enclosed styles are also available with optional through the door keypad and Profibus communication.

The Class 74 offering includes all of the features of the Class 73 in a combination style design. Standard options are either a circuit breaker or fusible disconnect providing short circuit protection and soft starting in one package.

Application

The Class 73/74 product is a fully enclosed solid state reduced voltage starter designed for a wide variety of industrial applications. The enclosed softstarter offerings are ideal for new as well as existing applications where total motor controls is required.

Proper selection based on application data is made simple following these easy steps:

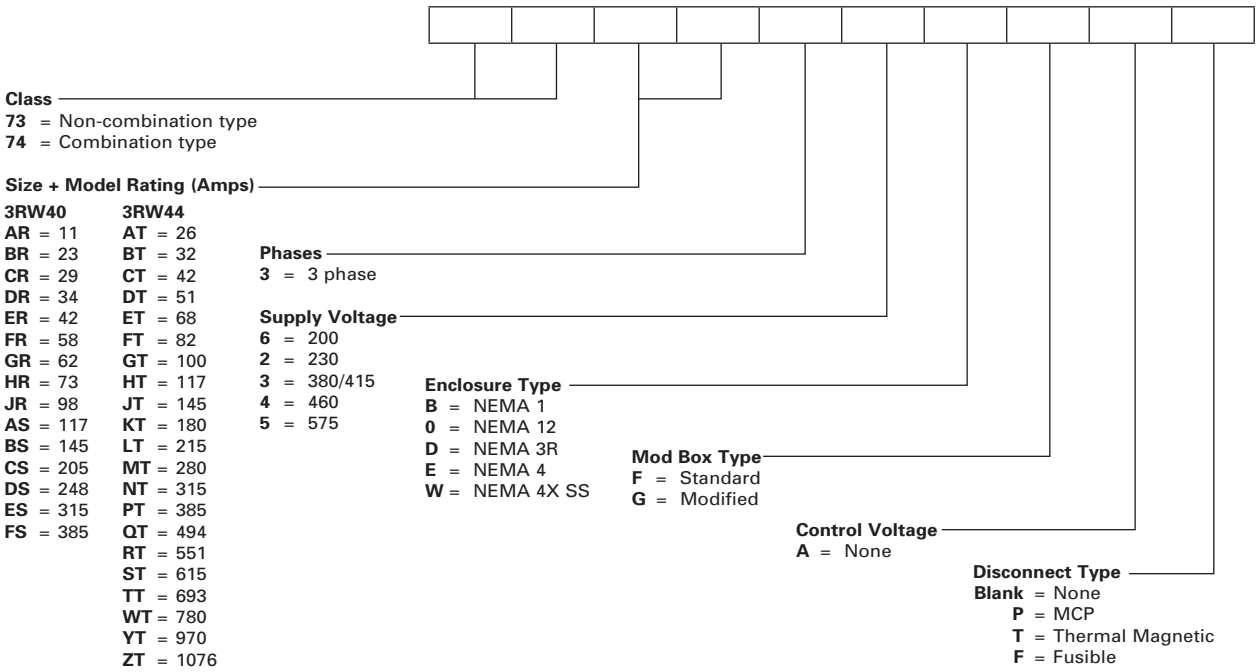
- Select proper RVSS by application
  - Select the 3RW40 versus the 3RW44 using the application info provided in the open section of the catalog
- Select the rating chart for normal starting or sever duty starting
  - Normal starting is rated at 350% of rated motor current IM for 10 seconds and based on starts per hour – representative of a class 20 application.
  - Severe starting is rated at 350% of rated motor current Im for 20 seconds and based on starts per hour – representative of a Class 20 application
- Select model using Motor nameplate data
  - Identify correct motor voltage column
  - Select rate current or HP row
  - Find ordering number under desired enclosure type column (e.g. NEMA 1)
  - Select appropriate system voltage
- Select factory modification on page 6/40 [1)]

Example:
3RW44, N12, CB disconnect, 460V, 200HP with a start/stop and red run light

Order No.
74MT34BFAP A1 FC

Product Nomenclature

Class 73 and 74 Enclosed Soft Starters



1) Some modifications will require a larger 'Modified' box than the standard box e.g. Isolation contactor, space heater, etc. See page 17-316 for instructions.

3RW40 Enclosed features:
- Available in NEMA 1,12,3R,4, and 4 stainless steel
- Compact size
- Built-in Bypass contactor
- Voltage ramp up and ramp down
- Current limit adjustment of 125 - 550%
- Internal overload class 10,15,or 20
- Internal self protection
- Fault monitoring
- Isolation Contactor

Ordering Information

- ► Enclosed devices should be ordered by the FLA of the motor.
- ► The 3RW40 is designed for normal starting applications.
- ► For factory modifications see page 17-316.
- ► For dimensional drawings see page 17-317.

Class 73 non-combination starters include:
- NEMA rated enclosure
- 3RW40 Sirius softstarter with built-in OL and bypass
- Control Circuit Transformer
- Line side power terminal block
- Reset button
- Isolation Contactor

Ideal applications for 3RW40 enclosed softstarters
- Fans
- Pumps
- Easy starting loads starting in less than 10 seconds

Class 73 starters are built to UL and CSA standards

3RW40 for Standard Applications

Enclosed Non-Combination (Starter Only)

Rated Operating Current	MAX HP①				KW	Class 10 Light Duty (350% * Ie for 10s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
11	3	3	7.5	—	6	3RW4024-1BB14	73AR3_BFA		73AR3_DFA		73AR3_0FA		73AR3_EFA		73AR3_WFA	
23	5	7.5	15	—	13	3RW4026-1BB14	73BR3_BFA		73BR3_DFA		73BR3_0FA		73BR3_EFA		73BR3_WFA	
29	7.5	10	20	—	16	3RW4027-1BB14	73CR3_BFA		73CR3_DFA		73CR3_0FA		73CR3_EFA		73CR3_WFA	
34	10	10	25	—	18	3RW4028-1BB14	73DR3_BFA		73DR3_DFA		73DR3_0FA		73DR3_EFA		73DR3_WFA	
42	10	15	30	—	23	3RW4036-1BB14	73ER3_BFA		73ER3_DFA		73ER3_0FA		73ER3_EFA		73ER3_WFA	
58	15	20	40	—	31	3RW4037-1BB14	73FR3_BFA		73FR3_DFA		73FR3_0FA		73FR3_EFA		73FR3_WFA	
62	20	20	40	—	33	3RW4038-1BB14	73GR3_BFA		73GR3_DFA		73GR3_0FA		73GR3_EFA		73GR3_WFA	
73	20	25	50	—	39	3RW4046-1BB14	73HR3_BFA		73HR3_DFA		73HR3_0FA		73HR3_EFA		73HR3_WFA	
98	30	30	75	—	52	3RW4047-1BB14	73JR3_BFA		73JR3_DFA		73JR3_0FA		73JR3_EFA		73JR3_WFA	
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C

② Starter selection is dependent on type of application. Ie = FLA rating of motor

3RW40 Enclosed features:
- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in bypass contactor
- Voltage ramp up and ramp down
- Current limit adjustment of 125 - 550%
- Internal overload class 10, 15, or 20
- Internal self protection
- Fault monitoring

Ordering Information

- Enclosed devices should be ordered by the FLA of the motor.
- The 3RW40 is designed for normal starting applications (Class 10 applications).
- For factory modifications see page 17-316.
- For dimensional drawings see page 17-317.

Class 73 non-combination starters include:
- NEMA rated enclosure
- 3RW40 Sirius softstarter with built-in OL and bypass
- Control circuit transformer
- Line side power terminal block
- Reset button

Ideal applications for 3RW40 enclosed softstarters:
- Fans
- Pumps
- Building/construction machines
- Presses
- Escalators
- Transport systems
- Air conditioning systems
- Ventilators
- Assembly lines

Class 73 starters are built to UL and CSA standards.

For all technical information, please consult the 2006 Industrial Controls Catalog or contact your local sales support center.

3RW40 for Standard Applications

Enclosed Non-Combination (Starter Only)

Rated Operating Current	MAX HP①				KW	Class 10 Light Duty (350% * Im for 10s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
117	30	40	75	—	56	**3RW4055-6BB34**	**73AS3_BFA**		**73AS3_DFA**		**73AS3_0FA**		**73AS3_EFA**		**73AS3_WFA**	
145	40	50	100	—	75	**3RW4056-6BB34**	**73BS3_BFA**		**73BS3_DFA**		**73BS3_0FA**		**73BS3_EFA**		**73BS3_WFA**	
205	60	75	150	—	112	**3RW4073-6BB34**	**73CS3_BFA**		**73CS3_DFA**		**73CS3_0FA**		**73CS3_EFA**		**73CS3_WFA**	
248	75	100	200	—	149	**3RW4074-6BB34**	**73DS3_BFA**		**73DS3_DFA**		**73DS3_0FA**		**73DS3_EFA**		**73DS3_WFA**	
315	100	125	250	—	186	**3RW4075-6BB34**	**73ES3_BFA**		**73ES3_DFA**		**73ES3_0FA**		**73ES3_EFA**		**73ES3_WFA**	
385	125	150	300	—	224	**3RW4076-6BB34**	**73FS3_BFA**		**73FS3_DFA**		**73FS3_0FA**		**73FS3_EFA**		**73FS3_WFA**	
						200V	**6**		**6**		**6**		**6**		**6**	
						230V	**2**		**2**		**2**		**2**		**2**	
						380V	**3**		**3**		**3**		**3**		**3**	
						460V	**4**		**4**		**4**		**4**		**4**	
117	—	—	75	100	—	**3RW4055-6BB35**	**73AS35BFA**		**73AS35DFA**		**73AS350FA**		**73AS35EFA**		**73AS35WFA**	
145	—	—	100	150	—	**3RW4056-6BB35**	**73BS35BFA**		**73BS35DFA**		**73BS350FA**		**73BS35EFA**		**73BS35WFA**	
205	—	—	150	200	—	**3RW4073-6BB35**	**73CS35BFA**		**73CS35DFA**		**73CS350FA**		**73CS35EFA**		**73CS35WFA**	
248	—	—	200	250	—	**3RW4074-6BB35**	**73DS35BFA**		**73DS35DFA**		**73DS350FA**		**73DS35EFA**		**73DS35WFA**	
315	—	—	250	300	—	**3RW4075-6BB35**	**73ES35BFA**		**73ES35DFA**		**73ES350FA**		**73ES35EFA**		**73ES35WFA**	
385	—	—	300	400	—	**3RW4076-6BB35**	**73FS35BFA**		**73FS35DFA**		**73FS350FA**		**73FS35EFA**		**73FS35WFA**	

Enclosed Non-Combination (Starter Only)

Rated Operating Current	MAX HP①				KW	Class 20 Severe Duty (350% * Ie for 20s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
112	30	40	75	—	56	**3RW4055-6BB34**	**73AS3_BFA**		**73AS3_DFA**		**73AS3_0FA**		**73AS3_EFA**		**73AS3_WFA**	
132	40	50	100	—	75	**3RW4056-6BB34**	**73BS3_BFA**		**73BS3_DFA**		**73BS3_0FA**		**73BS3_EFA**		**73BS3_WFA**	
185	60	60	125	—	93	**3RW4073-6BB34**	**73CS3_BFA**		**73CS3_DFA**		**73CS3_0FA**		**73CS3_EFA**		**73CS3_WFA**	
205	60	75	150	—	112	**3RW4074-6BB34**	**73DS3_BFA**		**73DS3_DFA**		**73DS3_0FA**		**73DS3_EFA**		**73DS3_WFA**	
280	75	100	200	—	149	**3RW4075-6BB34**	**73ES3_BFA**		**73ES3_DFA**		**73ES3_0FA**		**73ES3_EFA**		**73ES3_WFA**	
340	100	125	250	—	186	**3RW4076-6BB34**	**73FS3_BFA**		**73FS3_DFA**		**73FS3_0FA**		**73FS3_EFA**		**73FS3_WFA**	
						200V	**6**		**6**		**6**		**6**		**6**	
						230V	**2**		**2**		**2**		**2**		**2**	
						380V	**3**		**3**		**3**		**3**		**3**	
						460V	**4**		**4**		**4**		**4**		**4**	
112	—	—	75	75	—	**3RW4055-6BB35**	**73AS35BFA**		**73AS35DFA**		**73AS350FA**		**73AS35EFA**		**73AS35WFA**	
132	—	—	100	125	—	**3RW4056-6BB35**	**73BS35BFA**		**73BS35DFA**		**73BS350FA**		**73BS35EFA**		**73BS35WFA**	
185	—	—	125	150	—	**3RW4073-6BB35**	**73CS35BFA**		**73CS35DFA**		**73CS350FA**		**73CS35EFA**		**73CS35WFA**	
205	—	—	150	200	—	**3RW4074-6BB35**	**73DS35BFA**		**73DS35DFA**		**73DS350FA**		**73DS35EFA**		**73DS35WFA**	
280	—	—	200	250	—	**3RW4075-6BB35**	**73ES35BFA**		**73ES35DFA**		**73ES350FA**		**73ES35EFA**		**73ES35WFA**	
340	—	—	250	300	—	**3RW4076-6BB35**	**73FS35BFA**		**73FS35DFA**		**73FS350FA**		**73FS35EFA**		**73FS35WFA**	

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C.
② Starter selection is dependent on type of application. Im = FLA rating of motor.

3RW40 Enclosed features:
- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in Bypass contactor
- Voltage ramp up and ramp down
- Current limit adjustment of 125 - 550%
- Internal overload class 10, 15, or 20
- Internal self protection
- Fault monitoring
- Isolation Contactor

Ordering Information

- ► Enclosed devices should be ordered by the FLA of the motor.
- ► The 3RW40 is designed for normal starting applications.
- ► For factory modifications see page 17-316.
- ► For dimensional drawings see page 17-317.

Class 74 non-combination starters include:
- NEMA rated enclosure
- Circuit Breaker disconnect with shunt trip
- 3RW40 Sirius softstarter with built-in OL and bypass
- Control Circuit Transformer
- Isolation Contactor

Ideal applications for 3RW40 enclosed softstarters
- Fans
- Pumps
- Easy starting loads starting in less than 10 seconds

Class 74 starters are built to UL and CSA standards

3RW40 for Standard Applications

Enclosed Circuit Breaker Combination (Starter With Circuit Breaker Disconnect)

Rated Operating Current	MAX HP①				KW	Class 10 Light Duty (350% * Ie for 10s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
11	3	3	7.5	—	6	3RW4024-1BB14	74AR3_BFAP		74AR3_DFAP		74AR3_0FAP		74AR3_EFAP		74AR3_WFAP	
23	5	7.5	15	—	13	3RW4026-1BB14	74BR3_BFAP		74BR3_DFAP		74BR3_0FAP		74BR3_EFAP		74BR3_WFAP	
29	7.5	10	20	—	16	3RW4027-1BB14	74CR3_BFAP		74CR3_DFAP		74CR3_0FAP		74CR3_EFAP		74CR3_WFAP	
34	10	10	25	—	18	3RW4028-1BB14	74DR3_BFAP		74DR3_DFAP		74DR3_0FAP		74DR3_EFAP		74DR3_WFAP	
42	10	15	30	—	23	3RW4036-1BB14	74ER3_BFAP		74ER3_DFAP		74ER3_0FAP		74ER3_EFAP		74ER3_WFAP	
58	15	20	40	—	31	3RW4037-1BB14	74FR3_BFAP		74FR3_DFAP		74FR3_0FAP		74FR3_EFAP		74FR3_WFAP	
62	20	20	40	—	33	3RW4038-1BB14	74GR3_BFAP		74GR3_DFAP		74GR3_0FAP		74GR3_EFAP		74GR3_WFAP	
73	20	25	50	—	39	3RW4046-1BB14	74HR3_BFAP		74HR3_DFAP		74HR3_0FAP		74HR3_EFAP		74HR3_WFAP	
98	30	30	75	—	52	3RW4047-1BB14	74JR3_BFAP		74JR3_DFAP		74JR3_0FAP		74JR3_EFAP		74JR3_WFAP	
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C

② Starter selection is dependent on type of application. Ie = FLA rating of motor

3RW40 Enclosed features:
- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in bypass contactor
- Voltage ramp up and ramp down
- Current limit adjustment of 125 - 550%
- Internal overload class 10, 15, or 20
- Internal self protection
- Fault monitoring

Ordering Information

- ► Enclosed devices should be ordered by the FLA of the motor.
- ► The 3RW40 is designed for normal starting applications (Class 10 applications).
- ► For factory modifications see page 17-316.
- ► For dimensional drawings see page 17-317.

Class 74 non-combination starters include:
- NEMA rated enclosure
- Circuit breaker disconnect with shunt trip
- 3RW40 Sirius softstarter with built-in OL and bypass
- Control circuit transformer

Ideal applications for 3RW40 enclosed softstarters:
- Fans
- Pumps
- Building/construction machines
- Presses
- Escalators
- Transport systems
- Air conditioning systems
- Ventilators
- Assembly lines

Class 74 starters are built to UL and CSA standards.

For all technical information, please consult the 2006 Industrial Controls Catalog or contact your local sales support center.

3RW40 for Standard Applications

Enclosed Circuit Breaker Combination (Starter with Circuit Breaker Disconnect)

Rated Operating Current	MAX HP①				KW	Class 10 Light Duty (350% * Im for 10s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
117	30	40	75	—	56	3RW4055-6BB34	74AS3_BFAP		74AS3_DFAP		74AS3_0FAP		74AS3_EFAP		74AS3_WFAP	
145	40	50	100	—	75	3RW4056-6BB34	74BS3_BFAP		74BS3_DFAP		74BS3_0FAP		74BS3_EFAP		74BS3_WFAP	
205	60	75	150	—	112	3RW4073-6BB34	74CS3_BFAP		74CS3_DFAP		74CS3_0FAP		74CS3_EFAP			
248	75	100	200	—	149	3RW4074-6BB34	74DS3_BFAP		74DS3_DFAP		74DS3_0FAP		74DS3_EFAP			
315	100	125	250	—	186	3RW4075-6BB34	74ES3_BFAP		74ES3_DFAP		74ES3_0FAP		74ES3_EFAP			
385	125	150	300	—	224	3RW4076-6BB34	74FS3_BFAP		74FS3_DFAP		74FS3_0FAP		74FS3_EFAP			
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	
117	—	—	75	100	—	3RW4055-6BB35	74AS35BFAP		74AS35DFAP		74AS350FAP		74AS35EFAP		74AS35WFAP	
145	—	—	100	150	—	3RW4056-6BB35	74BS35BFAP		74BS35DFAP		74BS350FAP		74BS35EFAP		74BS35WFAP	
205	—	—	150	200	—	3RW4073-6BB35	74CS35BFAP		74CS35DFAP		74CS350FAP		74CS35EFAP			
248	—	—	200	250	—	3RW4074-6BB35	74DS35BFAP		74DS35DFAP		74DS350FAP		74DS35EFAP			
315	—	—	250	300	—	3RW4075-6BB35	74ES35BFAP		74ES35DFAP		74ES350FAP		74ES35EFAP			
385	—	—	300	400	—	3RW4076-6BB35	74FS35BFAP		74FS35DFAP		74FS350FAP		74FS35EFAP			

Enclosed Circuit Breaker Combination (Starter with Circuit Breaker Disconnect)

Rated Operating Current	MAX HP①				KW	Class 20 Severe Duty (350% * Ie for 20s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
112	30	40	75	—	56	3RW4055-6BB34	74AS3_BFAP		74AS3_DFAP		74AS3_0FAP		74AS3_EFAP		74AS3_WFAP	
132	40	50	100	—	75	3RW4056-6BB34	74BS3_BFAP		74BS3_DFAP		74BS3_0FAP		74BS3_EFAP		74BS3_WFAP	
185	60	60	125	—	93	3RW4073-6BB34	74CS3_BFAP		74CS3_DFAP		74CS3_0FAP		74CS3_EFAP			
205	60	75	150	—	112	3RW4074-6BB34	74DS3_BFAP		74DS3_DFAP		74DS3_0FAP		74DS3_EFAP			
280	75	100	200	—	149	3RW4075-6BB34	74ES3_BFAP		74ES3_DFAP		74ES3_0FAP		74ES3_EFAP			
340	100	125	250	—	186	3RW4076-6BB34	74FS3_BFAP		74FS3_DFAP		74FS3_0FAP		74FS3_EFAP			
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	
112	—	—	75	75	—	3RW4055-6BB35	74AS35BFAP		74AS35DFAP		74AS350FAP		74AS35EFAP		74AS35WFAP	
132	—	—	100	125	—	3RW4056-6BB35	74BS35BFAP		74BS35DFAP		74BS350FAP		74BS35EFAP		74BS35WFAP	
185	—	—	125	150	—	3RW4073-6BB35	74CS35BFAP		74CS35DFAP		74CS350FAP		74CS35EFAP			
205	—	—	150	200	—	3RW4074-6BB35	74DS35BFAP		74DS35DFAP		74DS350FAP		74DS35EFAP			
280	—	—	200	250	—	3RW4075-6BB35	74ES35BFAP		74ES35DFAP		74ES350FAP		74ES35EFAP			
340	—	—	250	300	—	3RW4076-6BB35	74FS35BFAP		74FS35DFAP		74FS350FAP		74FS35EFAP			

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C.

② Starter selection is dependent on type of application. Im = FLA rating of motor.

3RW40 Enclosed features:
- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in Bypass contactor
- Voltage ramp up and ramp down
- Current limit adjustment of 125 - 550%
- Internal overload class 10,15,or 20
- Internal self protection
- Fault monitoring
- Isolation Contactor

Ordering Information

- ► Enclosed devices should be ordered by the FLA of the motor.
- ► The 3RW40 is designed for normal starting applications.
- ► For factory modifications see page 17-316.
- ► For dimensional drawings see page 17-317.

Class 73 non-combination starters include:
- NEMA rated enclosure
- Fusible Disconnect
- 3RW40 Sirius softstarter with built-in OL and bypass
- Control Circuit Transformer
- Isolation Contactor

Ideal applications for 3RW40 enclosed softstarters
- Fans
- Pumps
- Easy starting loads starting in less than 10 seconds

Class 74 starters are built to UL and CSA standards

3RW40 for Standard Applications

Enclosed Fusible Combination (Starter With Fusible Disconnect)

Rated Operating Current	MAX HP① 200V	230V	460V	575V	KW 380V	Class 10 Light Duty (350% * Ie for 10s)② OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
11	3	3	7.5	—	6	3RW4024-1BB14	74AR3_BFAF		74AR3_DFAF		74AR3_0FAF		74AR3_EFAF		74AR3_WFAF	
23	5	7.5	15	—	13	3RW4026-1BB14	74BR3_BFAF		74BR3_DFAF		74BR3_0FAF		74BR3_EFAF		74BR3_WFAF	
29	7.5	10	20	—	16	3RW4027-1BB14	74CR3_BFAF		74CR3_DFAF		74CR3_0FAF		74CR3_EFAF		74CR3_WFAF	
34	10	10	25	—	18	3RW4028-1BB14	74DR3_BFAF		74DR3_DFAF		74DR3_0FAF		74DR3_EFAF		74DR3_WFAF	
42	10	15	30	—	23	3RW4036-1BB14	74ER3_BFAF		74ER3_DFAF		74ER3_0FAF		74ER3_EFAF		74ER3_WFAF	
58	15	20	40	—	31	3RW4037-1BB14	74FR3_BFAF		74FR3_DFAF		74FR3_0FAF		74FR3_EFAF		74FR3_WFAF	
62	20	20	40	—	33	3RW4038-1BB14	74GR3_BFAF		74GR3_DFAF		74GR3_0FAF		74GR3_EFAF		74GR3_WFAF	
73	20	25	50	—	39	3RW4046-1BB14	74HR3_BFAF		74HR3_DFAF		74HR3_0FAF		74HR3_EFAF		74HR3_WFAF	
98	30	30	75	—	52	3RW4047-1BB14	74JR3_BFAF		74JR3_DFAF		74JR3_0FAF		74JR3_EFAF		74JR3_WFAF	
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C

② Starter selection is dependent on type of application. Ie = FLA rating of motor

3RW40 Enclosed features:
- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in bypass contactor
- Voltage ramp up and ramp down
- Current limit adjustment of 125 - 550%
- Internal overload class 10, 15, or 20
- Internal self protection
- Fault monitoring

Ordering Information

- ► Enclosed devices should be ordered by the FLA of the motor.
- ► The 3RW40 is designed for normal starting applications (Class 10 applications).
- ► For factory modifications see page 17-316.
- ► For dimensional drawings see page 17-317.

Class 74 combination starters include:
- NEMA rated enclosure
- Fusible disconnect
- 3RW40 Sirius softstarter with built-in OL and bypass
- Control circuit transformer

Ideal applications for 3RW40 enclosed softstarters:
- Fans
- Pumps
- Building/construction machines
- Presses
- Escalators
- Transport systems
- Air conditioning systems
- Ventilators
- Assembly lines

Class 74 starters are built to UL and CSA standards.

For all technical information, please consult the 2006 Industrial Controls Catalog or contact your local sales support center.

3RW40 for Standard Applications

Enclosed Fusible Combination (Starter with Fusible Disconnect)

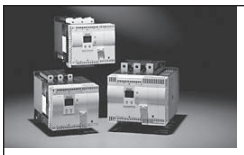
Rated Operating Current	MAX HP①				KW	Class 10 Light Duty (350% * Im for 10s)②										
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
117	30	40	75	—	56	3RW4055-6BB34	74AS3_BFAF		74AS3_DFAF		74AS3_0FAF		74AS3_EFAF		74AS3_WFAF	
145	40	50	100	—	75	3RW4056-6BB34	74BS3_BFAF		74BS3_DFAF		74BS3_0FAF		74BS3_EFAF		74BS3_WFAF	
205	60	75	150	—	112	3RW4073-6BB34	74CS3_BFAF		74CS3_DFAF		74CS3_0FAF		74CS3_EFAF			
248	75	100	200	—	149	3RW4074-6BB34	74DS3_BFAF		74DS3_DFAF		74DS3_0FAF		74DS3_EFAF			
315	100	125	250	—	186	3RW4075-6BB34	74ES3_BFAF		74ES3_DFAF		74ES3_0FAF		74ES3_EFAF			
385	125	150	300	—	224	3RW4076-6BB34	74FS3_BFAF		74FS3_DFAF		74FS3_0FAF		74FS3_EFAF			
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	
117	—	—	75	100	—	3RW4055-6BB35	74AS35BFAF		74AS35DFAF		74AS350FAF		74AS35EFAF		74AS35WFAF	
145	—	—	100	150	—	3RW4056-6BB35	74BS35BFAF		74BS35DFAF		74BS350FAF		74BS35EFAF		74BS35WFAF	
205	—	—	150	200	—	3RW4073-6BB35	74CS35BFAF		74CS35DFAF		74CS350FAF		74CS35EFAF			
248	—	—	200	250	—	3RW4074-6BB35	74DS35BFAF		74DS35DFAF		74DS350FAF		74DS35EFAF			
315	—	—	250	300	—	3RW4075-6BB35	74ES35BFAF		74ES35DFAF		74ES350FAF		74ES35EFAF			
385	—	—	300	400	—	3RW4076-6BB35	74FS35BFAF		74FS35DFAF		74FS350FAF		74FS35EFAF			

Enclosed Fusible Combination (Starter with Fusible Disconnect)

Rated Operating Current	MAX HP①				KW	Class 20 Severe Duty (350% * Ie for 20s)②										
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
112	30	40	75	—	56	3RW4055-6BB34	74AS3_BFAF		74AS3_DFAF		74AS3_0FAF		74AS3_EFAF		74AS3_WFAF	
132	40	50	100	—	75	3RW4056-6BB34	74BS3_BFAF		74BS3_DFAF		74BS3_0FAF		74BS3_EFAF		74BS3_WFAF	
185	60	60	125	—	93	3RW4073-6BB34	74CS3_BFAF		74CS3_DFAF		74CS3_0FAF		74CS3_EFAF			
205	60	75	150	—	112	3RW4074-6BB34	74DS3_BFAF		74DS3_DFAF		74DS3_0FAF		74DS3_EFAF			
280	75	100	200	—	149	3RW4075-6BB34	74ES3_BFAF		74ES3_DFAF		74ES3_0FAF		74ES3_EFAF			
340	100	125	250	—	186	3RW4076-6BB34	74FS3_BFAF		74FS3_DFAF		74FS3_0FAF		74FS3_EFAF			
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	
112	—	—	75	75	—	3RW4055-6BB35	74AS35BFAF		74AS35DFAF		74AS350FAF		74AS35EFAF		74AS35WFAF	
132	—	—	100	125	—	3RW4056-6BB35	74BS35BFAF		74BS35DFAF		74BS350FAF		74BS35EFAF		74BS35WFAF	
185	—	—	125	150	—	3RW4073-6BB35	74CS35BFAF		74CS35DFAF		74CS350FAF		74CS35EFAF			
205	—	—	150	200	—	3RW4074-6BB35	74DS35BFAF		74DS35DFAF		74DS350FAF		74DS35EFAF			
280	—	—	200	250	—	3RW4075-6BB35	74ES35BFAF		74ES35DFAF		74ES350FAF		74ES35EFAF			
340	—	—	250	300	—	3RW4076-6BB35	74FS35BFAF		74FS35DFAF		74FS350FAF		74FS35EFAF			

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C.

② Starter selection is dependent on type of application. Im = FLA rating of motor.



3RW44 Enclosed features:
- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in bypass contactor
- Multiple starting/stopping techniques including torque control
- Internal overload class 5, 10, 15, 20, or 30
- Built-in graphical LCD keypad
- Internal self protection
- Fault monitoring
- 3 parameter sets
- Communication capable via opt. Profibus module
- Programmable inputs and outputs
- External keypad available

Ordering Information

- ► Enclosed devices should be ordered by the FLA of the motor.
- ► The 3RW44 is designed for normal starting applications.
- ► For factory modifications see page 17-316.
- ► For dimensional drawings see page 17-317.

Class 74 non-combination starters include:
- NEMA rated enclosure
- 3RW44 Sirius softstarter with built-in OL and bypass
- Circuit breaker with disconnect
- Control circuit transformer
- Reset button

Ideal applications for 3RW44 enclosed softstarters:
- Fans
- Pumps
- Conveying systems and lifts
- Hydraulics
- Machine tools
- Mills saws
- Crushers and grinders
- Mixers
- HVAC systems

The 3RW44 severe duty rating table should be applied for high inertia applications such rock crushers, chippers, screw compressors, ect.

Class 74 starters are built to UL and CSA standards.

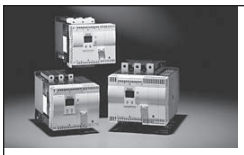
3RW44 For High Feature Applications

Enclosed Combination with Circuit Breaker Disconnect

Rated Operating Current	MAX HP①				KW	Class 10 Light Duty (350% * Im for 10s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
26	7.5	7.5	15	—	12	3RW4422-1BC34	74AT3_BFAP		74AT3_DFAP		74AT3_0FAP		74AT3_EFAP		74AT3_WFAP	
32	10	10	20	—	15	3RW4423-1BC34	74BT3_BFAP		74BT3_DFAP		74BT3_0FAP		74BT3_EFAP		74BT3_WFAP	
42	10	15	25	—	19	3RW4424-1BC34	74CT3_BFAP		74CT3_DFAP		74CT3_0FAP		74CT3_EFAP		74CT3_WFAP	
51	15	15	30	—	22	3RW4425-1BC34	74DT3_BFAP		74DT3_DFAP		74DT3_0FAP		74DT3_EFAP		74DT3_WFAP	
68	20	25	50	—	37	3RW4426-1BC34	74ET3_BFAP		74ET3_DFAP		74ET3_0FAP		74ET3_EFAP		74ET3_WFAP	
82	25	30	60	—	45	3RW4427-1BC34	74FT3_BFAP		74FT3_DFAP		74FT3_0FAP		74FT3_EFAP		74FT3_WFAP	
100	30	30	75	—	56	3RW4434-6BC34	74GT3_BFAP		74GT3_DFAP		74GT3_0FAP		74GT3_EFAP		74GT3_WFAP	
117	30	40	75	—	56	3RW4435-6BC34	74HT3_BFAP		74HT3_DFAP		74HT3_0FAP		74HT3_EFAP		74HT3_WFAP	
145	40	50	100	—	75	3RW4436-6BC34	74JT3_BFAP		74JT3_DFAP		74JT3_0FAP		74JT3_EFAP		74JT3_WFAP	
180	60	60	125	—	93	3RW4443-6BC34	74KT3_BFAP		74KT3_DFAP		74KT3_0FAP		74KT3_EFAP			
215	60	75	150	—	112	3RW4444-6BC34	74LT3_BFAP		74LT3_DFAP		74LT3_0FAP		74LT3_EFAP			
280	75	100	200	—	149	3RW4445-6BC34	74MT3_BFAP		74MT3_DFAP		74MT3_0FAP		74MT3_EFAP			
315	100	125	250	—	186	3RW4446-6BC34	74NT3_BFAP		74NT3_DFAP		74NT3_0FAP		74NT3_EFAP			
385	125	150	300	—	224	3RW4447-6BC34	74PT3_BFAP		74PT3_DFAP		74PT3_0FAP		74PT3_EFAP			
494	150	200	400	—	298	3RW4453-6BC34	74QT3_BFAT		74QT3_DFAT		74QT3_0FAT		74QT3_EFAT			
551	150	200	450	—	336	3RW4454-6BC34	74RT3_BFAT		74RT3_DFAT		74RT3_0FAT		74RT3_EFAT			
615	200	250	500	—	373	3RW4455-6BC34	74ST3_BFAT		74ST3_DFAT		74ST3_0FAT		74ST3_EFAT			
693	200	250	550	—	410	3RW4456-6BC34	74TT3_BFAT		74TT3_DFAT		74TT3_0FAT		74TT3_EFAT			
780	200	250	600	—	447	3RW4457-6BC34	74WT3_BFAT		74WT3_DFAT		74WT3_0FAT		74WT3_EFAT			
970	350	350	800	—	597	3RW4465-6BC34	74YT3_BFAT				74YT3_0FAT					
1076	350	400	900	—	672	3RW4466-6BC34	74ZT3_BFAT				74ZT3_0FAT					
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	
26	—	—	15	20	—	3RW4422-1BC35	74AT35BFAP		74AT35DFAP		74AT350FAP		74AT35EFAP		74AT35WFAP	
32	—	—	20	25	—	3RW4423-1BC35	74BT35BFAP		74BT35DFAP		74BT350FAP		74BT35EFAP		74BT35WFAP	
42	—	—	25	30	—	3RW4424-1BC35	74CT35BFAP		74CT35DFAP		74CT350FAP		74CT35EFAP		74CT35WFAP	
51	—	—	30	40	—	3RW4425-1BC35	74DT35BFAP		74DT35DFAP		74DT350FAP		74DT35EFAP		74DT35WFAP	
68	—	—	50	50	—	3RW4426-1BC35	74ET35BFAP		74ET35DFAP		74ET350FAP		74ET35EFAP		74ET35WFAP	
82	—	—	60	75	—	3RW4427-1BC35	74FT35BFAP		74FT35DFAP		74FT350FAP		74FT35EFAP		74FT35WFAP	
100	—	—	75	75	—	3RW4434-6BC35	74GT35BFAP		74GT35DFAP		74GT350FAP		74GT35EFAP		74GT35WFAP	
117	—	—	75	100	—	3RW4435-6BC35	74HT35BFAP		74HT35DFAP		74HT350FAP		74HT35EFAP		74HT35WFAP	
145	—	—	100	125	—	3RW4436-6BC35	74JT35BFAP		74JT35DFAP		74JT350FAP		74JT35EFAP		74JT35WFAP	
180	—	—	125	150	—	3RW4443-6BC35	74KT35BFAP		74KT35DFAP		74KT350FAP		74KT35EFAP			
215	—	—	150	200	—	3RW4444-6BC35	74LT35BFAP		74LT35DFAP		74LT350FAP		74LT35EFAP			
280	—	—	200	250	—	3RW4445-6BC35	74MT35BFAP		74MT35DFAP		74MT350FAP		74MT35EFAP			
315	—	—	250	300	—	3RW4446-6BC35	74NT35BFAP		74NT35DFAP		74NT350FAP		74NT35EFAP			
385	—	—	300	400	—	3RW4447-6BC35	74PT35BFAP		74PT35DFAP		74PT350FAP		74PT35EFAP			
494	—	—	400	500	—	3RW4453-6BC35	74QT35BFAT		74QT35DFAT		74QT350FAT		74QT35EFAT			
551	—	—	450	600	—	3RW4454-6BC35	74RT35BFAT		74RT35DFAT		74RT350FAT		74RT35EFAT			
615	—	—	500	700	—	3RW4455-6BC35	74ST35BFAT		74ST35DFAT		74ST350FAT		74ST35EFAT			
693	—	—	550	750	—	3RW4456-6BC35	74TT35BFAT		74TT35DFAT		74TT350FAT		74TT35EFAT			
780	—	—	600	850	—	3RW4457-6BC35	74WT35BFAT		74WT35DFAT		74WT350FAT		74WT35EFAT			
970	—	—	800	1000	—	3RW4465-6BC35	74YT35BFAT				74YT350FAT					
1076	—	—	900	1100	—	3RW4466-6BC35	74ZT35BFAT				74ZT350FAT					

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C.

② Starter selection is dependent on type of application. Im = FLA rating of motor.



3RW44 Enclosed features:
- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in bypass contactor
- Multiple starting/stopping techniques including torque control
- Internal overload class 5, 10, 15, 20, or 30
- Built-in graphical LCD keypad
- Internal self protection
- Fault monitoring
- 3 parameter sets
- Communication capable via opt. Profibus module
- Programmable inputs and outputs
- External keypad available

Ordering Information

- ► Enclosed devices should be ordered by the FLA of the motor.
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- 3RW44 Sirius softstarter with built-in OL and bypass
- Circuit breaker with disconnect
- Control circuit transformer
- Reset button

Ideal applications for 3RW44 enclosed softstarters:
- Fans
- Pumps
- Conveying systems and lifts
- Hydraulics
- Machine tools
- Mills saws
- Crushers and grinders
- Mixers
- HVAC systems

The 3RW44 severe duty rating table should be applied for high inertia applications such rock crushers, chippers, screw compressors, ect.

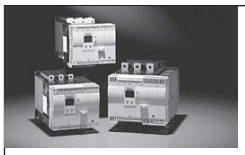
Class 74 starters are built to UL and CSA standards.

3RW44 For High Feature Applications

Enclosed Combination with Circuit Breaker Disconnect

Rated Operating Current	MAX HP①				KW	Class 20 Severe Duty (350% * Im for 20s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
26	7.5	7.5	15	—	12	3RW4422-1BC34	74AT3_BFAP		74AT3_DFAP		74AT3_0FAP		74AT3_EFAP		74AT3_WFAP	
32	10	10	20	—	15	3RW4423-1BC34	74BT3_BFAP		74BT3_DFAP		74BT3_0FAP		74BT3_EFAP		74BT3_WFAP	
42	10	15	25	—	19	3RW4424-1BC34	74CT3_BFAP		74CT3_DFAP		74CT3_0FAP		74CT3_EFAP		74CT3_WFAP	
51	15	15	30	—	22	3RW4425-1BC34	74DT3_BFAP		74DT3_DFAP		74DT3_0FAP		74DT3_EFAP		74DT3_WFAP	
68	20	25	50	—	37	3RW4426-1BC34	74ET3_BFAP		74ET3_DFAP		74ET3_0FAP		74ET3_EFAP		74ET3_WFAP	
82	25	30	60	—	45	3RW4427-1BC34	74FT3_BFAP		74FT3_DFAP		74FT3_0FAP		74FT3_EFAP		74FT3_WFAP	
97	30	30	60	—	45	3RW4434-6BC34	74GT3_BFAP		74GT3_DFAP		74GT3_0FAP		74GT3_EFAP		74GT3_WFAP	
113	30	40	75	—	56	3RW4435-6BC34	74HT3_BFAP		74HT3_DFAP		74HT3_0FAP		74HT3_EFAP		74HT3_WFAP	
134	40	50	75	—	56	3RW4436-6BC34	74JT3_BFAP		74JT3_DFAP		74JT3_0FAP		74JT3_EFAP		74JT3_WFAP	
175	50	60	100	—	75	3RW4443-6BC34	74KT3_BFAP		74KT3_DFAP		74KT3_0FAP		74KT3_EFAP			
195	60	75	125	—	93	3RW4444-6BC34	74LT3_BFAP		74LT3_DFAP		74LT3_0FAP		74LT3_EFAP			
243	75	75	150	—	112	3RW4445-6BC34	74MT3_BFAP		74MT3_DFAP		74MT3_0FAP		74MT3_EFAP			
263	75	100	200	—	149	3RW4446-6BC34	74NT3_BFAP		74NT3_DFAP		74NT3_0FAP		74NT3_EFAP			
326	100	125	250	—	186	3RW4447-6BC34	74PT3_BFAP		74PT3_DFAP		74PT3_0FAP		74PT3_EFAP			
494	150	150	400	—	224	3RW4453-6BC34	74QT3_BFAT		74QT3_DFAT		74QT3_0FAT		74QT3_EFAT			
551	150	200	450	—	298	3RW4454-6BC34	74RT3_BFAT		74RT3_DFAT		74RT3_0FAT		74RT3_EFAT			
615	200	200	500	—	336	3RW4455-6BC34	74ST3_BFAT		74ST3_DFAT		74ST3_0FAT		74ST3_EFAT			
634	200	250	500	—	373	3RW4456-6BC34	74TT3_BFAT		74TT3_DFAT		74TT3_0FAT		74TT3_EFAT			
650	200	250	550	—	410	3RW4457-6BC34	74WT3_BFAT		74WT3_DFAT		74WT3_0FAT		74WT3_EFAT			
880	300	350	700	—	522	3RW4465-6BC34	74YT3_BFAT				74YT3_0FAT					
940	300	350	750	—	559	3RW4466-6BC34	74ZT3_BFAT				74ZT3_0FAT					
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	
26	—	—	15	20	—	3RW4422-1BC35	74AT35BFAP		74AT35DFAP		74AT350FAP		74AT35EFAP		74AT35WFAP	
32	—	—	20	25	—	3RW4423-1BC35	74BT35BFAP		74BT35DFAP		74BT350FAP		74BT35EFAP		74BT35WFAP	
42	—	—	25	30	—	3RW4424-1BC35	74CT35BFAP		74CT35DFAP		74CT350FAP		74CT35EFAP		74CT35WFAP	
51	—	—	30	40	—	3RW4425-1BC35	74DT35BFAP		74DT35DFAP		74DT350FAP		74DT35EFAP		74DT35WFAP	
68	—	—	50	50	—	3RW4426-1BC35	74ET35BFAP		74ET35DFAP		74ET350FAP		74ET35EFAP		74ET35WFAP	
82	—	—	60	75	—	3RW4427-1BC35	74FT35BFAP		74FT35DFAP		74FT350FAP		74FT35EFAP		74FT35WFAP	
97	—	—	60	75	—	3RW4434-6BC35	74GT35BFAP		74GT35DFAP		74GT350FAP		74GT35EFAP		74GT35WFAP	
113	—	—	75	100	—	3RW4435-6BC35	74HT35BFAP		74HT35DFAP		74HT350FAP		74HT35EFAP		74HT35WFAP	
134	—	—	75	125	—	3RW4436-6BC35	74JT35BFAP		74JT35DFAP		74JT350FAP		74JT35EFAP		74JT35WFAP	
175	—	—	100	150	—	3RW4443-6BC35	74KT35BFAP		74KT35DFAP		74KT350FAP		74KT35EFAP			
195	—	—	125	200	—	3RW4444-6BC35	74LT35BFAP		74LT35DFAP		74LT350FAP		74LT35EFAP			
243	—	—	150	200	—	3RW4445-6BC35	74MT35BFAP		74MT35DFAP		74MT350FAP		74MT35EFAP			
263	—	—	200	250	—	3RW4446-6BC35	74NT35BFAP		74NT35DFAP		74NT350FAP		74NT35EFAP			
326	—	—	250	300	—	3RW4447-6BC35	74PT35BFAP		74PT35DFAP		74PT350FAP		74PT35EFAP			
494	—	—	400	500	—	3RW4453-6BC35	74QT35BFAT		74QT35DFAT		74QT350FAT		74QT35EFAT			
551	—	—	450	550	—	3RW4454-6BC35	74RT35BFAT		74RT35DFAT		74RT350FAT		74RT35EFAT			
615	—	—	500	600	—	3RW4455-6BC35	74ST35BFAT		74ST35DFAT		74ST350FAT		74ST35EFAT			
693	—	—	500	650	—	3RW4456-6BC35	74TT35BFAT		74TT35DFAT		74TT350FAT		74TT35EFAT			
780	—	—	550	700	—	3RW4457-6BC35	74WT35BFAT		74WT35DFAT		74WT350FAT		74WT35EFAT			
880	—	—	700	850	—	3RW4465-6BC35	74YT35BFAT				74YT350FAT					
940	—	—	750	900	—	3RW4466-6BC35	74ZT35BFAT				74ZT350FAT					

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C.
② Starter selection is dependent on type of application. Im = FLA rating of motor.



3RW44 Enclosed features:
- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in bypass contactor
- Multiple starting/stopping techniques including torque control
- Internal overload class 5, 10, 15, 20, or 30
- Built-in graphical LCD keypad
- Internal self protection
- Fault monitoring
- 3 parameter sets
- Communication capable via opt. Profibus module
- Programmable inputs and outputs
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- 3RW44 Sirius softstarter with built-in OL and bypass
- Fusible disconnect
- Control circuit transformer
- Reset button

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- Pumps
- Conveying systems and lifts
- Hydraulics
- Machine tools
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- Crushers and grinders
- Mixers
- HVAC systems

The 3RW44 severe duty rating table should be applied for high inertia applications such rock crushers, chippers, screw compressors, ect.

Class 74 starters are built to UL and CSA standards.

For all technical information, please consult the 2006 Industrial Controls Catalog or contact your local sales support center.

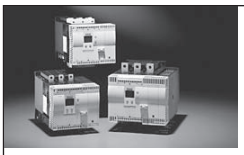
3RW44 For High Feature Applications

Enclosed Combination with Fusible Disconnect

Rated Operating Current	MAX HP①				KW	Class 10 Light Duty② (350% * Im for 10s)											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
26	7.5	7.5	15	—	12	3RW4422-1BC34	74AT3_BFAF		74AT3_DFAF		74AT3_0FAF		74AT3_EFAF		74AT3_WFAF	
32	10	10	20	—	15	3RW4423-1BC34	74BT3_BFAF		74BT3_DFAF		74BT3_0FAF		74BT3_EFAF		74BT3_WFAF	
42	10	15	25	—	19	3RW4424-1BC34	74CT3_BFAF		74CT3_DFAF		74CT3_0FAF		74CT3_EFAF		74CT3_WFAF	
51	15	15	30	—	22	3RW4425-1BC34	74DT3_BFAF		74DT3_DFAF		74DT3_0FAF		74DT3_EFAF		74DT3_WFAF	
68	20	25	50	—	37	3RW4426-1BC34	74ET3_BFAF		74ET3_DFAF		74ET3_0FAF		74ET3_EFAF		74ET3_WFAF	
82	25	30	60	—	45	3RW4427-1BC34	74FT3_BFAF		74FT3_DFAF		74FT3_0FAF		74FT3_EFAF		74FT3_WFAF	
100	30	30	75	—	56	3RW4434-6BC34	74GT3_BFAF		74GT3_DFAF		74GT3_0FAF		74GT3_EFAF		74GT3_WFAF	
117	30	40	75	—	56	3RW4435-6BC34	74HT3_BFAF		74HT3_DFAF		74HT3_0FAF		74HT3_EFAF		74HT3_WFAF	
145	40	50	100	—	75	3RW4436-6BC34	74JT3_BFAF		74JT3_DFAF		74JT3_0FAF		74JT3_EFAF		74JT3_WFAF	
180	60	60	125	—	93	3RW4443-6BC34	74KT3_BFAF		74KT3_DFAF		74KT3_0FAF		74KT3_EFAF			
215	60	75	150	—	112	3RW4444-6BC34	74LT3_BFAF		74LT3_DFAF		74LT3_0FAF		74LT3_EFAF			
280	75	100	200	—	149	3RW4445-6BC34	74MT3_BFAF		74MT3_DFAF		74MT3_0FAF		74MT3_EFAF			
315	100	125	250	—	186	3RW4446-6BC34	74NT3_BFAF		74NT3_DFAF		74NT3_0FAF		74NT3_EFAF			
385	125	150	300	—	224	3RW4447-6BC34	74PT3_BFAF		74PT3_DFAF		74PT3_0FAF		74PT3_EFAF			
494	150	200	400	—	298	3RW4453-6BC34	74QT3_BFAF				74QT3_0FAF					
551	150	200	450	—	336	3RW4454-6BC34	74RT3_BFAF				74RT3_0FAF					
615	200	250	500	—	373	3RW4455-6BC34	74ST3_BFAF				74ST3_0FAF					
693	200	250	550	—		3RW4456-6BC34	74TT3_BFAF				74TT3_0FAF					
780	200	250	600	—	447	3RW4457-6BC34	74WT3_BFAF				74WT3_0FAF					
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	
26	—	—	15	20	—	3RW4422-1BC35	74AT35BFAF		74AT35DFAF		74AT350FAF		74AT35EFAF		74AT35WFAF	
32	—	—	20	25	—	3RW4423-1BC35	74BT35BFAF		74BT35DFAF		74BT350FAF		74BT35EFAF		74BT35WFAF	
42	—	—	25	30	—	3RW4424-1BC35	74CT35BFAF		74CT35DFAF		74CT350FAF		74CT35EFAF		74CT35WFAF	
51	—	—	30	40	—	3RW4425-1BC35	74DT35BFAF		74DT35DFAF		74DT350FAF		74DT35EFAF		74DT35WFAF	
68	—	—	50	50	—	3RW4426-1BC35	74ET35BFAF		74ET35DFAF		74ET350FAF		74ET35EFAF		74ET35WFAF	
82	—	—	60	75	—	3RW4427-1BC35	74FT35BFAF		74FT35DFAF		74FT350FAF		74FT35EFAF		74FT35WFAF	
100	—	—	75	75	—	3RW4434-6BC35	74GT35BFAF		74GT35DFAF		74GT350FAF		74GT35EFAF		74GT35WFAF	
117	—	—	75	100	—	3RW4435-6BC35	74HT35BFAF		74HT35DFAF		74HT350FAF		74HT35EFAF		74HT35WFAF	
145	—	—	100	125	—	3RW4436-6BC35	74JT35BFAF		74JT35DFAF		74JT350FAF		74JT35EFAF		74JT35WFAF	
180	—	—	125	150	—	3RW4443-6BC35	74KT35BFAF		74KT35DFAF		74KT350FAF		74KT35EFAF			
215	—	—	150	200	—	3RW4444-6BC35	74LT35BFAF		74LT35DFAF		74LT350FAF		74LT35EFAF			
280	—	—	200	250	—	3RW4445-6BC35	74MT35BFAF		74MT35DFAF		74MT350FAF		74MT35EFAF			
315	—	—	250	300	—	3RW4446-6BC35	74NT35BFAF		74NT35DFAF		74NT350FAF		74NT35EFAF			
385	—	—	300	400	—	3RW4447-6BC35	74PT35BFAF		74PT35DFAF		74PT350FAF		74PT35EFAF			
494	—	—	400	500	—	3RW4453-6BC35	74QT35BFAF				74QT350FAF					
551	—	—	450	600	—	3RW4454-6BC35	74RT35BFAF				74RT350FAF					
615	—	—	500	700	—	3RW4455-6BC35	74ST35BFAF				74ST350FAF					
693	—	—	550	750	—	3RW4456-6BC35	74TT35BFAF				74TT350FAF					
780	—	—	600	850	—	3RW4457-6BC35	74WT35BFAF				74WT350FAF					

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C.

② Starter selection is dependent on type of application. Im = FLA rating of motor.



3RW44 Enclosed features:
- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in bypass contactor
- Multiple starting/stopping techniques including torque control
- Internal overload class 5, 10, 15, 20, or 30
- Built-in graphical LCD keypad
- Internal self protection
- Fault monitoring
- 3 parameter sets
- Communication capable via opt. Profibus module
- Programmable inputs and outputs
- External keypad available

Ordering Information

- ▶ Enclosed devices should be ordered by the FLA of the motor.
- ▶ The 3RW44 is designed for normal starting applications.
- ▶ For factory modifications see page 17-316.
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Class 74 non-combination starters include:
- NEMA rated enclosure
- 3RW44 Sirius softstarter with built-in OL and bypass
- Fusible disconnect
- Control circuit transformer
- Reset button

Ideal applications for 3RW44 enclosed softstarters:
- Fans
- Pumps
- Conveying systems and lifts
- Hydraulics
- Machine tools
- Mills saws
- Crushers and grinders
- Mixers
- HVAC systems

The 3RW44 severe duty rating table should be applied for high inertia applications such rock crushers, chippers, screw compressors, ect.

Class 74 starters are built to UL and CSA standards.

For all technical information, please consult the 2006 Industrial Controls Catalog or contact your local sales support center.

3RW44 For High Feature Applications

Enclosed Combination with Fusible Disconnect

Rated Operating Current	MAX HP①				KW	Class 20 Severe Duty (350% * Im for 20s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
26	7.5	7.5	15	—	12	3RW4422-1BC34	74AT3_BFAF		74AT3_DFAF		74AT3_0FAF		74AT3_EFAF		74AT3_WFAF	
32	10	10	20	—	15	3RW4423-1BC34	74BT3_BFAF		74BT3_DFAF		74BT3_0FAF		74BT3_EFAF		74BT3_WFAF	
42	10	15	25	—	19	3RW4424-1BC34	74CT3_BFAF		74CT3_DFAF		74CT3_0FAF		74CT3_EFAF		74CT3_WFAF	
51	15	15	30	—	22	3RW4425-1BC34	74DT3_BFAF		74DT3_DFAF		74DT3_0FAF		74DT3_EFAF		74DT3_WFAF	
68	20	25	50	—	37	3RW4426-1BC34	74ET3_BFAF		74ET3_DFAF		74ET3_0FAF		74ET3_EFAF		74ET3_WFAF	
82	25	30	60	—	45	3RW4427-1BC34	74FT3_BFAF		74FT3_DFAF		74FT3_0FAF		74FT3_EFAF		74FT3_WFAF	
97	30	30	60	—	45	3RW4434-6BC34	74GT3_BFAF		74GT3_DFAF		74GT3_0FAF		74GT3_EFAF		74GT3_WFAF	
113	30	40	75	—	56	3RW4435-6BC34	74HT3_BFAF		74HT3_DFAF		74HT3_0FAF		74HT3_EFAF		74HT3_WFAF	
134	40	50	75	—	56	3RW4436-6BC34	74JT3_BFAF		74JT3_DFAF		74JT3_0FAF		74JT3_EFAF		74JT3_WFAF	
175	50	60	100	—	75	3RW4443-6BC34	74KT3_BFAF		74KT3_DFAF		74KT3_0FAF		74KT3_EFAF			
195	60	75	125	—	93	3RW4444-6BC34	74LT3_BFAF		74LT3_DFAF		74LT3_0FAF		74LT3_EFAF			
243	75	75	150	—	112	3RW4445-6BC34	74MT3_BFAF		74MT3_DFAF		74MT3_0FAF		74MT3_EFAF			
263	75	100	200	—	149	3RW4446-6BC34	74NT3_BFAF		74NT3_DFAF		74NT3_0FAF		74NT3_EFAF			
326	100	125	250	—	186	3RW4447-6BC34	74PT3_BFAF		74PT3_DFAF		74PT3_0FAF		74PT3_EFAF			
494	150	150	400	—	298	3RW4453-6BC34	74QT3_BFAF				74QT3_0FAF					
551	150	200	450	—	336	3RW4454-6BC34	74RT3_BFAF				74RT3_0FAF					
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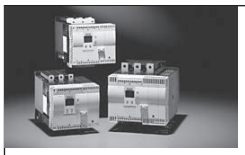
634	200	250	500	—	373	3RW4456-6BC34	74TT3_BFAF				74TT3_0FAF					
650	200	250	550	—	373	3RW4457-6BC34	74WT3_BFAF				74WT3_0FAF					
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	
26	—	—	15	20	—	3RW4422-1BC35	74AT35BFAF		74AT35DFAF		74AT350FAF		74AT35EFAF		74AT35WFAF	
32	—	—	20	25	—	3RW4423-1BC35	74BT35BFAF		74BT35DFAF		74BT350FAF		74BT35EFAF		74BT35WFAF	
42	—	—	25	30	—	3RW4424-1BC35	74CT35BFAF		74CT35DFAF		74CT350FAF		74CT35EFAF		74CT35WFAF	
51	—	—	30	40	—	3RW4425-1BC35	74DT35BFAF		74DT35DFAF		74DT350FAF		74DT35EFAF		74DT35WFAF	
68	—	—	50	50	—	3RW4426-1BC35	74ET35BFAF		74ET35DFAF		74ET350FAF		74ET35EFAF		74ET35WFAF	
82	—	—	60	75	—	3RW4427-1BC35	74FT35BFAF		74FT35DFAF		74FT350FAF		74FT35EFAF		74FT35WFAF	
97	—	—	60	75	—	3RW4434-6BC35	74GT35BFAF		74GT35DFAF		74GT350FAF		74GT35EFAF		74GT35WFAF	
113	—	—	75	100	—	3RW4435-6BC35	74HT35BFAF		74HT35DFAF		74HT350FAF		74HT35EFAF		74HT35WFAF	
134	—	—	75	125	—	3RW4436-6BC35	74JT35BFAF		74JT35DFAF		74JT350FAF		74JT35EFAF		74JT35WFAF	
175	—	—	100	150	—	3RW4443-6BC35	74KT35BFAF		74KT35DFAF		74KT350FAF		74KT35EFAF			
195	—	—	125	200	—	3RW4444-6BC35	74LT35BFAF		74LT35DFAF		74LT350FAF		74LT35EFAF			
243	—	—	150	200	—	3RW4445-6BC35	74MT35BFAF		74MT35DFAF		74MT350FAF		74MT35EFAF			
263	—	—	200	250	—	3RW4446-6BC35	74NT35BFAF		74NT35DFAF		74NT350FAF		74NT35EFAF			
326	—	—	250	300	—	3RW4447-6BC35	74PT35BFAF		74PT35DFAF		74PT350FAF		74PT35EFAF			
494	—	—	400	500	—	3RW4453-6BC35	74QT35BFAF				74QT350FAF					
551	—	—	450	550	—	3RW4454-6BC35	74RT35BFAF				74RT350FAF					
615	—	—	500	600	—	3RW4455-6BC35	74ST35BFAF				74ST350FAF					
693	—	—	550	650	—	3RW4456-6BC35	74TT35BFAF				74TT350FAF					
780	—	—	600	700	—	3RW4457-6BC35	74WT35BFAF				74WT350FAF					

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C.

② Starter selection is dependent on type of application. Im = FLA rating of motor.



3RW44 Enclosed features:
- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in bypass contactor
- Multiple starting/stopping techniques including torque control
- Internal overload class 5, 10, 15, 20, or 30
- Built-in graphical LCD keypad
- Internal self protection
- Fault monitoring
- 3 parameter sets
- Communication capable via opt. Profibus module
- Programmable inputs and outputs
- External keypad available

Ordering Information

- ▶ Enclosed devices should be ordered by the FLA of the motor.
- ▶ The 3RW44 is designed for normal starting applications.
- ▶ For factory modifications see page 17-316.
- ▶ For dimensional drawings see page 17-317.

Class 74 non-combination starters include:
- NEMA rated enclosure
- 3RW44 Sirius softstarter with built-in OL and bypass
- Fusible disconnect
- Control circuit transformer
- Reset button

Ideal applications for 3RW44 enclosed softstarters:
- Fans
- Pumps
- Conveying systems and lifts
- Hydraulics
- Machine tools
- Mills saws
- Crushers and grinders
- Mixers
- HVAC systems

The 3RW44 severe duty rating table should be applied for high inertia applications such rock crushers, chippers, screw compressors, ect.

Class 74 starters are built to UL and CSA standards.

For all technical information, please consult the 2006 Industrial Controls Catalog or contact your local sales support center.

3RW44 For High Feature Applications

Enclosed Combination with Fusible Disconnect

Rated Operating Current	MAX HP①				KW	Class 10 Light Duty② (350% * Im for 10s)											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
26	7.5	7.5	15	—	12	3RW4422-1BC34	74AT3_BFAF		74AT3_DFAF		74AT3_0FAF		74AT3_EFAF		74AT3_WFAF	
32	10	10	20	—	15	3RW4423-1BC34	74BT3_BFAF		74BT3_DFAF		74BT3_0FAF		74BT3_EFAF		74BT3_WFAF	
42	10	15	25	—	19	3RW4424-1BC34	74CT3_BFAF		74CT3_DFAF		74CT3_0FAF		74CT3_EFAF		74CT3_WFAF	
51	15	15	30	—	22	3RW4425-1BC34	74DT3_BFAF		74DT3_DFAF		74DT3_0FAF		74DT3_EFAF		74DT3_WFAF	
68	20	25	50	—	37	3RW4426-1BC34	74ET3_BFAF		74ET3_DFAF		74ET3_0FAF		74ET3_EFAF		74ET3_WFAF	
82	25	30	60	—	45	3RW4427-1BC34	74FT3_BFAF		74FT3_DFAF		74FT3_0FAF		74FT3_EFAF		74FT3_WFAF	
100	30	30	75	—	56	3RW4434-6BC34	74GT3_BFAF		74GT3_DFAF		74GT3_0FAF		74GT3_EFAF		74GT3_WFAF	
117	30	40	75	—	56	3RW4435-6BC34	74HT3_BFAF		74HT3_DFAF		74HT3_0FAF		74HT3_EFAF		74HT3_WFAF	
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180	60	60	125	—	93	3RW4443-6BC34	74KT3_BFAF		74KT3_DFAF		74KT3_0FAF		74KT3_EFAF			
215	60	75	150	—	112	3RW4444-6BC34	74LT3_BFAF		74LT3_DFAF		74LT3_0FAF		74LT3_EFAF			
280	75	100	200	—	149	3RW4445-6BC34	74MT3_BFAF		74MT3_DFAF		74MT3_0FAF		74MT3_EFAF			
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494	150	200	400	—	298	3RW4453-6BC34	74QT3_BFAF				74QT3_0FAF					
551	150	200	450	—	336	3RW4454-6BC34	74RT3_BFAF				74RT3_0FAF					
615	200	250	500	—	373	3RW4455-6BC34	74ST3_BFAF				74ST3_0FAF					
693	200	250	550	—		3RW4456-6BC34	74TT3_BFAF				74TT3_0FAF					
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42	—	—	25	30	—	3RW4424-1BC35	74CT35BFAF		74CT35DFAF		74CT350FAF		74CT35EFAF		74CT35WFAF	
51	—	—	30	40	—	3RW4425-1BC35	74DT35BFAF		74DT35DFAF		74DT350FAF		74DT35EFAF		74DT35WFAF	
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180	—	—	125	150	—	3RW4443-6BC35	74KT35BFAF		74KT35DFAF		74KT350FAF		74KT35EFAF			
215	—	—	150	200	—	3RW4444-6BC35	74LT35BFAF		74LT35DFAF		74LT350FAF		74LT35EFAF			
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315	—	—	250	300	—	3RW4446-6BC35	74NT35BFAF		74NT35DFAF		74NT350FAF		74NT35EFAF			
385	—	—	300	400	—	3RW4447-6BC35	74PT35BFAF		74PT35DFAF		74PT350FAF		74PT35EFAF			
494	—	—	400	500	—	3RW4453-6BC35	74QT35BFAF				74QT350FAF					
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615	—	—	500	700	—	3RW4455-6BC35	74ST35BFAF				74ST350FAF					
693	—	—	550	750	—	3RW4456-6BC35	74TT35BFAF				74TT350FAF					
780	—	—	600	850	—	3RW4457-6BC35	74WT35BFAF				74WT350FAF					

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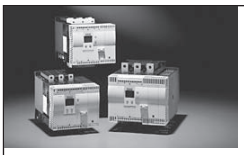

3RW44 Enclosed features:
- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in bypass contactor
- Multiple starting/stopping techniques including torque control
- Internal overload class 5, 10, 15, 20, or 30
- Built-in graphical LCD keypad
- Internal self protection
- Fault monitoring
- 3 parameter sets
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- Mixers
- HVAC systems

The 3RW44 severe duty rating table should be applied for high inertia applications such rock crushers, chippers, screw compressors, ect.

Class 74 starters are built to UL and CSA standards.

For all technical information, please consult the 2006 Industrial Controls Catalog or contact your local sales support center.

3RW44 For High Feature Applications

Enclosed Combination with Fusible Disconnect

Rated Operating Current	MAX HP①				KW	Class 20 Severe Duty (350% * Im for 20s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
26	7.5	7.5	15	—	12	3RW4422-1BC34	74AT3_BFAF		74AT3_DFAF		74AT3_0FAF		74AT3_EFAF		74AT3_WFAF	
32	10	10	20	—	15	3RW4423-1BC34	74BT3_BFAF		74BT3_DFAF		74BT3_0FAF		74BT3_EFAF		74BT3_WFAF	
42	10	15	25	—	19	3RW4424-1BC34	74CT3_BFAF		74CT3_DFAF		74CT3_0FAF		74CT3_EFAF		74CT3_WFAF	
51	15	15	30	—	22	3RW4425-1BC34	74DT3_BFAF		74DT3_DFAF		74DT3_0FAF		74DT3_EFAF		74DT3_WFAF	
68	20	25	50	—	37	3RW4426-1BC34	74ET3_BFAF		74ET3_DFAF		74ET3_0FAF		74ET3_EFAF		74ET3_WFAF	
82	25	30	60	—	45	3RW4427-1BC34	74FT3_BFAF		74FT3_DFAF		74FT3_0FAF		74FT3_EFAF		74FT3_WFAF	
97	30	30	60	—	45	3RW4434-6BC34	74GT3_BFAF		74GT3_DFAF		74GT3_0FAF		74GT3_EFAF		74GT3_WFAF	
113	30	40	75	—	56	3RW4435-6BC34	74HT3_BFAF		74HT3_DFAF		74HT3_0FAF		74HT3_EFAF		74HT3_WFAF	
134	40	50	75	—	56	3RW4436-6BC34	74JT3_BFAF		74JT3_DFAF		74JT3_0FAF		74JT3_EFAF		74JT3_WFAF	
175	50	60	100	—	75	3RW4443-6BC34	74KT3_BFAF		74KT3_DFAF		74KT3_0FAF		74KT3_EFAF			
195	60	75	125	—	93	3RW4444-6BC34	74LT3_BFAF		74LT3_DFAF		74LT3_0FAF		74LT3_EFAF			
243	75	75	150	—	112	3RW4445-6BC34	74MT3_BFAF		74MT3_DFAF		74MT3_0FAF		74MT3_EFAF			
263	75	100	200	—	149	3RW4446-6BC34	74NT3_BFAF		74NT3_DFAF		74NT3_0FAF		74NT3_EFAF			
326	100	125	250	—	186	3RW4447-6BC34	74PT3_BFAF		74PT3_DFAF		74PT3_0FAF		74PT3_EFAF			
494	150	150	400	—	298	3RW4453-6BC34	74QT3_BFAF				74QT3_0FAF					
551	150	200	450	—	336	3RW4454-6BC34	74RT3_BFAF				74RT3_0FAF					
615	200	200	500	—	373	3RW4455-6BC34	74ST3_BFAF				74ST3_0FAF					
634	200	250	500	—	373	3RW4456-6BC34	74TT3_BFAF				74TT3_0FAF					
650	200	250	550	—	373	3RW4457-6BC34	74WT3_BFAF				74WT3_0FAF					
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	
26	—	—	15	20	—	3RW4422-1BC35	74AT35BFAF		74AT35DFAF		74AT350FAF		74AT35EFAF		74AT35WFAF	
32	—	—	20	25	—	3RW4423-1BC35	74BT35BFAF		74BT35DFAF		74BT350FAF		74BT35EFAF		74BT35WFAF	
42	—	—	25	30	—	3RW4424-1BC35	74CT35BFAF		74CT35DFAF		74CT350FAF		74CT35EFAF		74CT35WFAF	
51	—	—	30	40	—	3RW4425-1BC35	74DT35BFAF		74DT35DFAF		74DT350FAF		74DT35EFAF		74DT35WFAF	
68	—	—	50	50	—	3RW4426-1BC35	74ET35BFAF		74ET35DFAF		74ET350FAF		74ET35EFAF		74ET35WFAF	
82	—	—	60	75	—	3RW4427-1BC35	74FT35BFAF		74FT35DFAF		74FT350FAF		74FT35EFAF		74FT35WFAF	
97	—	—	60	75	—	3RW4434-6BC35	74GT35BFAF		74GT35DFAF		74GT350FAF		74GT35EFAF		74GT35WFAF	
113	—	—	75	100	—	3RW4435-6BC35	74HT35BFAF		74HT35DFAF		74HT350FAF		74HT35EFAF		74HT35WFAF	
134	—	—	75	125	—	3RW4436-6BC35	74JT35BFAF		74JT35DFAF		74JT350FAF		74JT35EFAF		74JT35WFAF	
175	—	—	100	150	—	3RW4443-6BC35	74KT35BFAF		74KT35DFAF		74KT350FAF		74KT35EFAF			
195	—	—	125	200	—	3RW4444-6BC35	74LT35BFAF		74LT35DFAF		74LT350FAF		74LT35EFAF			
243	—	—	150	200	—	3RW4445-6BC35	74MT35BFAF		74MT35DFAF		74MT350FAF		74MT35EFAF			
263	—	—	200	250	—	3RW4446-6BC35	74NT35BFAF		74NT35DFAF		74NT350FAF		74NT35EFAF			
326	—	—	250	300	—	3RW4447-6BC35	74PT35BFAF		74PT35DFAF		74PT350FAF		74PT35EFAF			
494	—	—	400	500	—	3RW4453-6BC35	74QT35BFAF				74QT350FAF					
551	—	—	450	550	—	3RW4454-6BC35	74RT35BFAF				74RT350FAF					
615	—	—	500	600	—	3RW4455-6BC35	74ST35BFAF				74ST350FAF					
693	—	—	550	650	—	3RW4456-6BC35	74TT35BFAF				74TT350FAF					
780	—	—	600	700	—	3RW4457-6BC35	74WT35BFAF				74WT350FAF					

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C.

② Starter selection is dependent on type of application. Im = FLA rating of motor.

3RW40/44 Factory Modifications

Modification Available modifications in STANDARD enclosure	3RW Version	Enclosed Style	Enclosure NEMA Type	Mod Suffix
Push Buttons				
Start/Stop	3RW40/44	73/74	ALL	A1
Emergency Stop	3RW40/44	73/74	ALL	ES
Selector Switches				
Hand-Off-Auto	3RW40/44	73/74	ALL	A3
Hand-Off-Auto w/ start pushbutton	3RW40/44	73/74	ALL	S3
Off-On	3RW40/44	73/74	ALL	A4
Pilot Light				
Red 'On'	3RW40/44	73/74	ALL	FA
Green 'On'	3RW40/44	73/74	ALL	FB
Red 'Run'	3RW40/44	73/74	ALL	FC
Green 'Run'	3RW40/44	73/74	ALL	FD
LED Bulb Upgrade④	3RW40/44	73/74	ALL	FE
Red 'Off'	3RW40/44	73/74	ALL	FJ
Green 'Off'	3RW40/44	73/74	ALL	FK
Amber 'Fault'	3RW40/44	73/74	ALL	FL
White 'Control Power On'	3RW40/44	73/74	ALL	FW
Red, 'On' Push-to-Test	3RW40/44	73/74	ALL	FS
Green 'On' Push-to-Test	3RW40/44	73/74	ALL	FT
Green 'Off' Push-to-Test	3RW40/44	73/74	ALL	FU
Custom pilot light (state color and nameplate text)	3RW40/44	73/74	ALL	FZ
Through the Door Metering				
External keypad for 3RW44	3RW44	73/74	1,12	K1
Elapse time meter	3RW40/44	73/74	1,12 (120V)	M5
Control Options				
Profibus Communication Module (installed-connection cable not supplied)	3RW44	73/74	ALL	P1
Profinet Communication Module (installed-connection cable not supplied)	3RW44	73/74	ALL	P2
Ground Lug - 1 Conductor	3RW40/44	73/74	ALL	L10
Alarm Package (horn, light, relay & push button)	3RW40/44	73/74	1,3R,12	M7
Electronic 8 function timing relay (.05s - 100h) 24V/100-127V supplied mounted and unwired	3RW40/44	73/74	ALL	TR
Control Relay supplied mounted and unwired (4 pole max)	3RW40/44	73/74	ALL	R04 R22 R40
Circuit Breaker Shunt Trip (included std in 3RW40 versions)	3RW44	74	ALL	L6
Function identification plate w/ marking as specified	3RW40/44	73/74	ALL	N1
Service Entrance Labeled	3RW40/44	74	ALL	N3
Terminal Block 3 point	3RW40/44	73/74	ALL	TC3
Terminal Block 6 point	3RW40/44	73/74	ALL	TC6
Terminal Block 9 point	3RW40/44	73/74	ALL	TC9
Terminal Block 12 point	3RW40/44	73/74	ALL	TC12

Emergency HP Rated Bypass Starter①②	3RW Version	Class	Enclosure NEMA Type	Mod Suffix
	3RW40/44	73/74	1/12/3R/4	A12

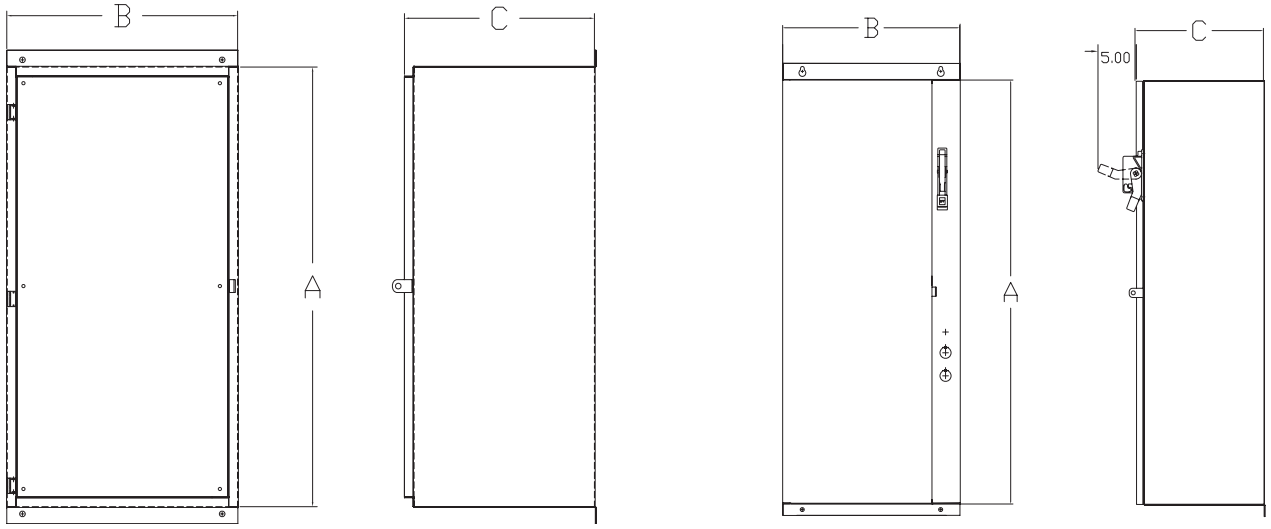
Available Modifications Requiring the MODIFIED OPTIONS Box Size (to be used with the selections ending in GA*)	3RW Version	Class	Enclosure NEMA Type	Mod Suffix
Isolation Contactor ③	3RW40/44	73/74	1/12/3R/4	IC
100 VA Extra CPT Capacity	3RW40/44	73/74	ALL	CA
Space Heater (120V separate control)	3RW40/44	73/74	ALL	SH
Space Heater w/ T-stat (120V separate control)	3RW40/44	73/74	ALL	ST
Lightning Arrestor	3RW40/44	73/74	ALL	L

① (A) For sizes 73YT & 73ZT, mods IC & A12 are available individually or together; (B) For sizes 74YT & 74ZT (combination w\CB), mods IC & A12 are only available individually (NOT together); (C) For sizes 74YT & 74ZT (combination w\ fusible disc), mods IC & A12 are NOT available individually or together.

② An isolation contactor is included with the emergency HP rated bypass starter for version 3RW40 soft starters.

③ Isolation contactor IC is included as standard with version 3RW40 model R (4th character of the cat. no.) soft starters.

④ Pilot lights are transformer type as standard. For LED type bulbs, order suffix FE in addition to the standard device suffix(es). For example, to order red "ON" and green "OFF" pilot lights with LED bulbs, order FA, FK and FE.



Dimensions are in inches and are for reference only (not for construction). Certain styles may deviate from values indicated.

Non-Combination Class 73

N1, N3R, N12, N4 Standard Enclosure

	Amps	A	B	C
3RW40new	11 - 73	25	18	13
	98	36	23	10
3RW40	117-145	36	18	15
	205-315	36	22	20
	385	54	36	20
3RW44	26 - 68	26	12.5	15
	82 - 117	36	18	15
	145 - 215	36	22	20
	280 - 385	54	36	20
	494 - 780	90	40	20
	970 - 1076	90	50	20

N4X Stainless Steel Standard Enclosure

	Amps	A	B	C
3RW40new	11- 98	55	29	11
3RW40	117	36	18	15
	145 - 205A	36	22	20
	248 - 385	54	36	20
3RW44	26 - 51	26	12.5	15
	68 - 82	36	18	15
	100 - 117	36	22	20
	145 - 385	54	36	20

N1, N3R, N12, N4 Modified Enclosure

	Amps	A	B	C
3RW40	117-385	56	36	20
3RW44	26-51	36	22	20
	68-385	54	36	20

N4X Stainless Steel Modified Enclosure

	Amps	A	B	C
3RW40	117-385	54	36	20
3RW44	26-51	36	22	20
	68-385	54	36	20

① Add 4" for N4.

Combination Type Class 74

N1, N3R, N12, N4 Standard Enclosure

	Amps	A	B	C
3RW40new	11 - 73	36	20	11
	98	46	20	10
3RW40	117	50	25	20
	145 - 205	66	25	20
	248 - 315	90	30	20
	385	90	40	20
3RW44	26 - 68	36	23	15
	82 - 117	50	25	20
	145 - 215	66	25	20
	280	90	30	20
	315 - 384	90	40	20
	494	90	40	20
	551 - 780	90	40①	20
	970 - 1076	90	50	20

N1, N12 Fusible

	Amps	A	B	C
3RW44	494-780	90	50	20

N4X Stainless Steel Standard Enclosure

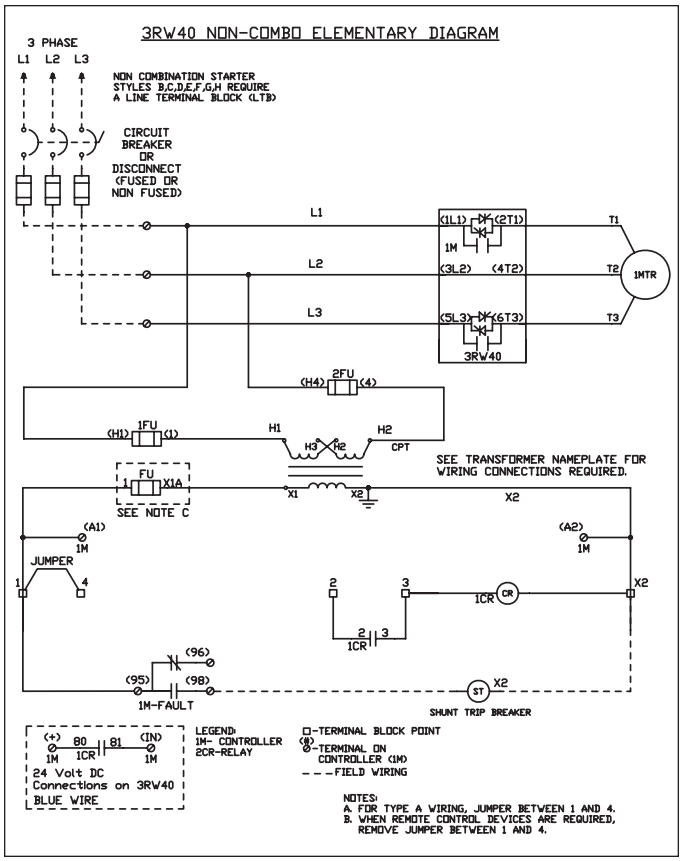
	Amps	A	B	C
3RW40new	11- 98	55	29	11
3RW40	117 - 145	54	36	20
	205 - 300	90	40	20
3RW44	26 - 42	36	23	15
	51 - 100	50	25	20
	117 - 145	54	36	20
	180 - 385	90	40	20

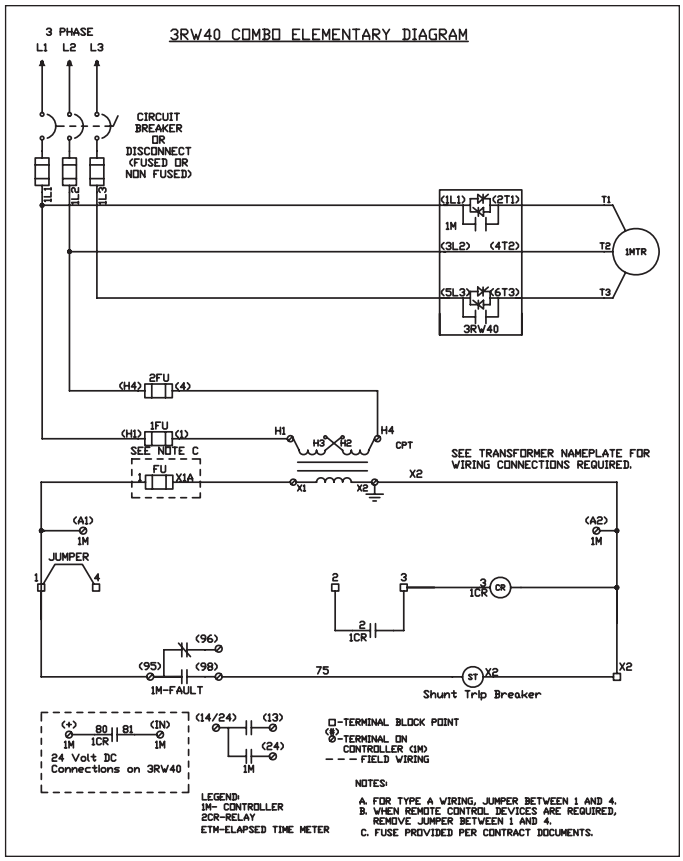
N1, N3R, N12, N4 Modified Enclosure

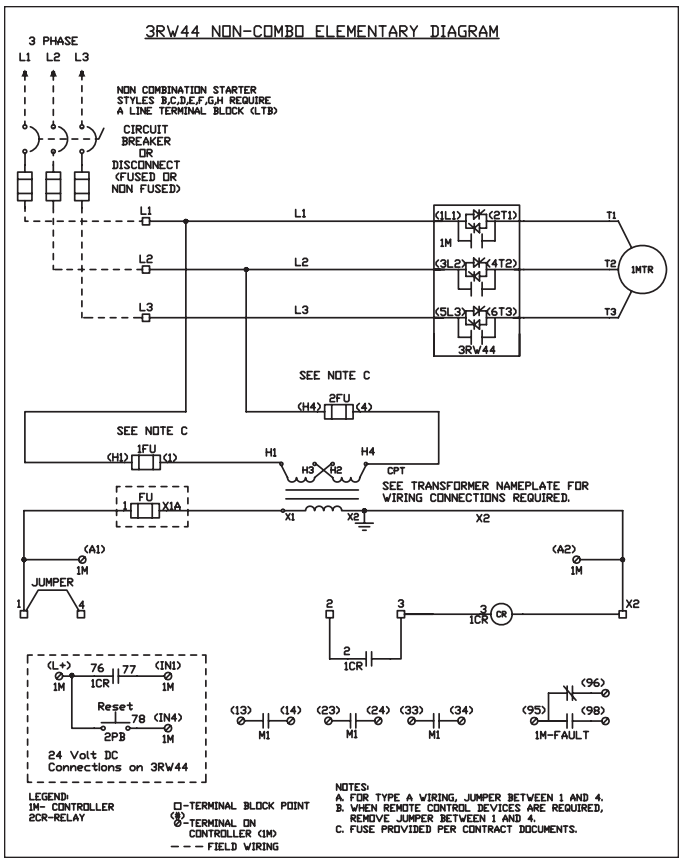
	Amps	A	B	C
3RW40	117 - 248	76	30	20
	315	90	30	20
	385	90	40	20
3RW44	26 - 215	76	30	20
	280	90	30	20
	315 - 385	90	40	20

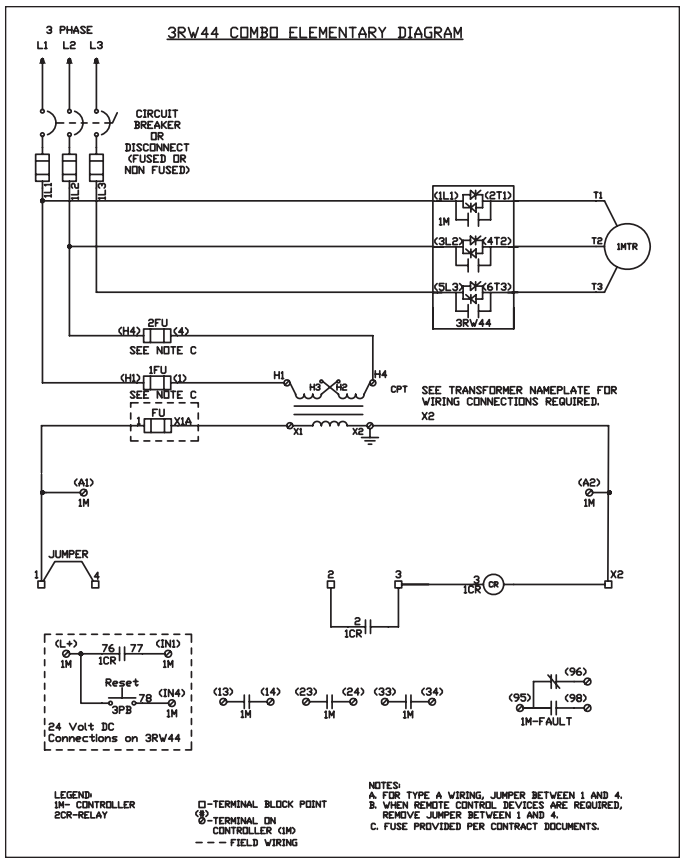
N4X Stainless Steel Modified Enclosure

	Amps	A	B	C
3RW40	117-145	76	30	20
3RW44	26-145	76	30	20


3RW40 NON-COMBO ELEMENTARY DIAGRAM
3 PHASE
L1 L2 L3
NON COMBINATION STARTER STYLES B,C,D,E,F,G,H REQUIRE A LINE TERMINAL BLOCK (LTB)
CIRCUIT BREAKER OR DISCONNECT (FUSED OR NON FUSED)
3RW40
1MTR
2FU
1FU
FU
X1A
CPT
SEE TRANSFORMER NAMEPLATE FOR WIRING CONNECTIONS REQUIRED.
SEE NOTE C
JUMPER
1CR
1M-FAULT
SHUNT TRIP BREAKER
24 Volt DC Connections on 3RW40
BLUE WIRE
LEGEND:
1M- CONTROLLER
2CR-RELAY
-TERMINAL BLOCK POINT
-TERMINAL ON CONTROLLER (1M)
- - - FIELD WIRING
NOTES:
A. FOR TYPE A WIRING, JUMPER BETWEEN 1 AND 4.
B. WHEN REMOTE CONTROL DEVICES ARE REQUIRED, REMOVE JUMPER BETWEEN 1 AND 4.


3RW40 COMBO ELEMENTARY DIAGRAM
3 PHASE
L1 L2 L3
CIRCUIT BREAKER OR DISCONNECT (FUSED OR NON FUSED)
3RW40
1MTR
2FU
1FU
FU
X1A
CPT
SEE NOTE C
SEE TRANSFORMER NAMEPLATE FOR WIRING CONNECTIONS REQUIRED.
JUMPER
1CR
1M-FAULT
Shunt Trip Breaker
24 Volt DC Connections on 3RW40
LEGEND:
1M- CONTROLLER
2CR-RELAY
ETM-ELAPSED TIME METER
-TERMINAL BLOCK POINT
-TERMINAL ON CONTROLLER (1M)
- - - FIELD WIRING
NOTES:
A. FOR TYPE A WIRING, JUMPER BETWEEN 1 AND 4.
B. WHEN REMOTE CONTROL DEVICES ARE REQUIRED, REMOVE JUMPER BETWEEN 1 AND 4.
C. FUSE PROVIDED PER CONTRACT DOCUMENTS.


3RW44 NON-COMBO ELEMENTARY DIAGRAM
3 PHASE
L1 L2 L3
NON COMBINATION STARTER STYLES B,C,D,E,F,G,H REQUIRE A LINE TERMINAL BLOCK (LTB)
CIRCUIT BREAKER OR DISCONNECT (FUSED OR NON FUSED)
3RW44
1MTR
2FU
1FU
FU
X1A
CPT
SEE NOTE C
SEE TRANSFORMER NAMEPLATE FOR WIRING CONNECTIONS REQUIRED.
JUMPER
1CR
Reset
2PB
1M-FAULT
24 Volt DC Connections on 3RW44
LEGEND:
1M- CONTROLLER
2CR-RELAY
-TERMINAL BLOCK POINT
-TERMINAL ON CONTROLLER (1M)
- - - FIELD WIRING
NOTES:
A. FOR TYPE A WIRING, JUMPER BETWEEN 1 AND 4.
B. WHEN REMOTE CONTROL DEVICES ARE REQUIRED, REMOVE JUMPER BETWEEN 1 AND 4.
C. FUSE PROVIDED PER CONTRACT DOCUMENTS.


3RW44 COMBO ELEMENTARY DIAGRAM
3 PHASE
L1 L2 L3
CIRCUIT BREAKER OR DISCONNECT (FUSED OR NON FUSED)
3RW44
1MTR
2FU
1FU
FU
X1A
CPT
SEE NOTE C
SEE TRANSFORMER NAMEPLATE FOR WIRING CONNECTIONS REQUIRED.
JUMPER
1CR
Reset
3PB
1M-FAULT
24 Volt DC Connections on 3RW44
LEGEND:
1M- CONTROLLER
2CR-RELAY
-TERMINAL BLOCK POINT
-TERMINAL ON CONTROLLER (1M)
- - - FIELD WIRING
NOTES:
A. FOR TYPE A WIRING, JUMPER BETWEEN 1 AND 4.
B. WHEN REMOTE CONTROL DEVICES ARE REQUIRED, REMOVE JUMPER BETWEEN 1 AND 4.
C. FUSE PROVIDED PER CONTRACT DOCUMENTS.

SINAMICS G120X

An infrastructure drive for pumps, fans and compressors

Siemens introduces an exciting new addition to the existing SINAMICS product portfolio—the G120X—an "infrastructure" drive up to 700 hp (630kW), which is targeted for pump, fan and compressor applications in the water/wastewater, HVAC, irrigation/agriculture and industrial chiller and refrigeration industries.

Seamless process for higher efficiency

SINAMICS G120X is simple, seamless, cost- and energy-efficient, robust, reliable and fit for digitalization. It integrates easily into existing applications, works with any standard motor (induction, synchronous and synchronous reluctance) and can be configured for cost-optimization and resource-saving operation which ultimately helps reduce total cost of ownership. SINAMICS G120X meets all the latest industry standards with regard to energy efficiency and product safety, and offers enhanced safety with SIL3-rated safety functions and up to 100kA short-circuit current rating according to new UL61800-5-1 design.

Application functions

Pump-specific

- Deragging or blockage protection
- Pipe filling
- Multi-pump control
  - Pump switchover
  - Stop mode
  - Service mode
  - Cascade control mode
- Blockage, leakage and dry-running protection
- Cavitation protection
- Condensation protection
- Frost protection

Fan-specific

- Flying restart
- Automatic restart
- Skip frequency bands
- Fire mode (essential service mode)
- No load, torque and rotation (belt) monitoring with sensor

Increase energy efficiency and system performance

- Eco mode
- Hibernation or sleep mode
- Bypass mode
- Energy/flow calculator
- Support to high efficiency motors (PMSM and SRM)
- Real time clock and programmable timer (3)

Optimize pump and fan operation and increase system availability

- Keep running mode
- PID controller
- Dual ramp
- Multi-speed setpoints

Protection functions

- Phase-loss detection for both supply and motor
- Overvoltage controller
- Undervoltage controller
- Drive overtemperature protection
- Loss of analog input signal monitoring
- External fault and warning monitoring (up to 3)
- Motor overtemperature protection (with and without sensor)
- Motor overload monitoring and protection
- Motor short-circuit and ground fault protection
- Speed and torque monitoring
- Blocking and stalling monitoring and protection
- Detection of missing communication telegrams
- Detection of communication bus interruption

Technical data

Line voltage and output power range	
FSA…FSF	3AC 200V (-20%)…240V (+10%) 1 hp…75 hp (0.75kW…55kW)
FSA…FSG	3AC 380V (-20%)…480V (+10%) 1 hp…400 hp (0.75kW…250kW)
FSH, FSJ	3AC 380V (-15%)…480V (+10%) 400 hp…700 hp (315kW…560kW)
FSD…FSG	3AC 500V (-20%)…690V (+10%) 4 hp…250 hp (3kW…250kW)
FSH, FSJ	3AC 500V (-15%)…690V (+10%) 350 hp…700 hp (315kW…630kW)
Output voltage	3AC 0V….line voltage x 0.97
Input frequency	47 Hz…63 Hz
Output frequency	
FSA…FSG	0 Hz…550 Hz (depending upon the control mode)
FSH, FSJ	0 Hz…150 Hz (depending upon the control mode)
Fundamental power factor (Cos ϕ)	0.96…0.99
Efficiency class	IE2 (Based on power losses according to EN 50598-2 and IEC 61800-9-2)
Efficiency (η)	98%
Motor control	▪ V/Hz control (linear, linear with flux current control/FCC, parabolic and eco mode) ▪ Sensorless less vector control (SLVC)
Supported motor types	▪ Asynchronous (induction) motor ▪ Permanent magnet synchronous motor (PMSM) ▪ Synchronous reluctance motor (SRM)
Degree of protection	IP20/UL Open Type
Operating temperature	-4° F to 113° F (-20° C to 45° C) without derating > 113° F up to 140° F (> 45° C up to 60° C) with derating For PROFINET, EtherNet/IP™ up to 55° C (131° F) with derating
Overload	
Low Overload (LO)/Variable Torque (VT)	110% x I_L for 60s
High Overload (HO)/Constant Torque (CT)	150% x I_H for 60s
Communication	PROFINET, EtherNet/IP™, USS, Modbus RTU, BACnet MS/TP, PROFIBUS DP
Functional safety	Hardware-based SIL3 Safe Torque Off (STO) function with on/off switch
Short-circuit current rating (SCCR)	Up to 100kA according to NEW UL 61800-5-1 design
Control inputs and outputs	
6 Digital Inputs (DI 0 … DI 5)	24V (12–30V) electrically isolated, 4mA current, PNP/NPN switchable
2 Digital (Relay) Outputs (DO 0…DO 1)	Type C, 250V AC, 2A/30V DC, 2A for resistive, inductive or capacitive load
2 Analog Inputs (AI 0…AI 1)	Differential input 0V… 10V or -10V … +10V: typical current drain: 0.1 mA, max. voltage 35V 0/4 mA ... 20 mA: 120 Ω input resistance, voltage < 10V, current < 80 mA
1 Analog Output (AO 0)	Not isolated, switchable between voltage (0V… 10V) and current (0/4 mA ... 20 mA) via parameter setting
1 motor temperature sensor input	PTC, KTY, PT1000, bi-metallic switch with normally closed contact
1 failsafe digital input	STO—electrically isolated
1 internal aux. supply voltage	24V DC, max. 250 mA 10V DC, max. 10 mA
1 external aux. supply voltage	24V DC (20.4 … 28.8V DC), current consumption 0.5A
1 memory card slot	For optional SD memory cards (as a backup storage device for saving of the settings after drive commissioning, and also for a series commissioning of a several identical drives via cloning of the settings)
Additional control inputs and outputs (With optional I/O Extension Module)	
2 Digital Inputs (DI 6…DI 7)	24V (12–30V) electrically isolated, 4mA current, PNP / NPN switchable
4 Digital (Relay) Outputs (DO 2…DO 5)	2x Type A and 2x Type C relay outputs rated 250V AC, 2A / 30V DC, 2A for resistive, inductive or capacitive load
1 Analog Input (AI 2)	Analog current input (0/4 mA … 20 mA) or Temperature sensor input (Pt10000 / LG-Ni10000 / DIN-Ni1000)
1 motor temperature sensor input (AI 3)	Temperature sensor input (Sensor Pt10000 / LG-Ni10000 / DIN-Ni1000)
2 Analog Output (AO 1 … AO 2)	Not isolated, switchable between voltage (0V… 10V) and current (0/4 mA ... 20 mA) via parameter setting
User interface	
Standard	Intelligent Operator Panel (IOP-2)—a high-resolution graphical color keypad
Optional	Smart Access Module (SAM) Part number: 6SL3255-0AA00-5AA0—a WiFi-based web server module and engineering tool for quick setup and diagnostics using a mobile device (PC, smartphone, tablet, etc.)
	Basic Operator Panel (BOP-2)—a basic keypad Blank (no Operator Panel/keypad)

SINAMICS G120X

It's the simple, seamless and easy-to-use drive — right out of the box.

Digitalization

Digitalization and IoT based secured health monitoring	
SINAMICS CONNECT 300 and Analyze MyDrives	SINAMICS CONNECT 300 (Part number: 6SL3255-0AG30-0AA0) is the IoT gateway. It is designed to acquire data through the serial port of the SINAMICS G120X and synchronize the data to MindSphere (cloud-based open IoT operating system of Siemens) using the MindSphere application Analyze MyDrives (AMD). This offers users the opportunity to analyze valuable operating data gathered from the drive and enables the visualization and analysis of status information, providing users with valuable data which can be used as the basis for process optimization and maintenance strategies. For more information visit: www.siemens.com/sinamics-digitalization

Certification

Certification / marking	■ cULus marking according to UL61800-5-1 and CSA C22.2 No. 274 with SCCR up to 100kA ■ **CE** marking according to European Low-Voltage Directive 2014/35/EU EU and IEC/EN 61800-5-1, Machinery directive 2006/42/EC and IEC/EN 61800-5-2, EMC Directive 2014/30/EU and IEC/EN 61800-3, RoHS directive 2011/65/EU and EN 50581 ■ IE2 efficiency level based on power losses according to EN 50598-2 and IEC 61800-9-2 ■ Safe torque off (STO) SIL3 rating according to IEC/EN 61800-5-2 ■ EAC, K, RCM (formerly C-Tick), REACH, RoHS II, SEMI F47

Dimensions and clearance distances FSA...FSJ

Frame size	Dimensions				Max. weight of frame	
	H mm (inch)	W mm (inch)	D mm (inch)	Additional depth with Operator Panel mm (inch)	No filter kg (lbs)[1]	With filter kg (lbs)[1]
FSA	232 (9.1)	73 (2.9)	209 (8.2)	9 (0.4)	3.4 (7.5)	3.6 (8)
FSB	275 (10.8)	100 (3.9)			5.8 (12.8)	6.2 (13.7)
FSC	295 (11.6)	140 (5.5)			7.11 (15.7)	7.7 (17)
FSD	472 (18.6)	200 (7.9)	239 (9.4)		18.8 (41.5)	19.5 (43)
FSE	551 (21.7)	275 (10.8)			26.7 (59)	28.7 (63.3)
FSF	709 (27.9)	305 (12)	360 (14.2)		66.5 (146.6)	71 (156.53)
FSG	999.4 (39.3)	305 (12)			—	120 (264.6)
FSH	1696 (66.8)	548 (21.6)	393 (15.5)	—		162 (357.2)
FSJ	1621 (63.8)	801 (31.5)				250 (551.16)

[1] Refer to SINAMICS G120X operating instructions or rating plate information of a unit to obtain the weight specific to each rating / order number

For additional information on SINAMICS G120X

- SINAMICS G120X Catalog: click to download PDF
- SINAMICS G120X Webpage: www.usa.siemens.com/sinamics-g120x
- For additional technical information including operating instructions please visit SINAMICS G120X Technical Reference site: https://support.industry.siemens.com/cs/us/en/ps/25454

SINAMICS G120X — Selection and ordering data

Voltage class 3AC 200...240V, 47...63Hz

Frame size	kW (200V)	hp (240V)	Rated Output Current I_L, A (240V)	Order number
FSA	0.75	1	4.2	6SL3220-0YC10-0UU0
	1.1	1.5	6	6SL3220-0YC12-0UU0
	1.5	2	7.4	6SL3220-0YC14-0UU0
FSB	2	3	10.4	6SL3220-0YC16-0UU0
	3	4	13.6	6SL3220-0YC18-0UU0
	4	5.0	17.5	6SL3220-0YC20-0UU0
FSC	5.5	7.5	22	6SL3220-0YC22-0UU0
	7.5	10	28	6SL3220-0YC24-0UU0
FSD	11	15	42	6SL3220-0YC26-0UU0
	15	20	54	6SL3220-0YC28-0UU0
	18.5	25	68	6SL3220-0YC30-0UU0
FSE	22	30	80	6SL3220-0YC32-0UU0
	30	40	104	6SL3220-0YC34-0UU0
FSF	37	50	130	6SL3220-0YC36-0UU0
	45	60	154	6SL3220-0YC38-0UU0
	55	75	192	6SL3220-0YC40-0UU0

Special coating according to IEC/EN 60721-3-3	
Class 3C2 (Standard)	**2**
Class 3C3*	**3**
User interface	
Blank (No operator panel/keypad)	**1**
BOP-2 (Basic keypad, Class 3C3*)	**2**
IOP-2 (Standard — high-resolution graphical color keypad, Class 3C3*)	**3**
I/O extension module	
without I/O extenstion module	**0**
with I/O extenstion module, Class 3C3*	**1**
EMC class	
No EMI/RFI filter	**U**
Communication interface	
PROFINET, EtherNet/IP™ (Standard)	**F**
USS, Modbus, RTU, BACnet MS/TP	**B**
PROFIBUS DP	**P**

*Special coating or sealing for operation in harsh/corrosive environments

SINAMICS G120X — Selection and ordering data

Voltage class 3AC 380...480V, 47...63Hz

Frame size	kW (400V)	hp (480V)	Rated Output Current I_L, A (480V)	Order number
FSA	0.75	1	2.1	6SL3220-0YE10-□□□0
	1.1	1.5	3	6SL3220-0YE12-□□□0
	1.5	2	3.4	6SL3220-0YE14-□□□0
	2.2	3	4.8	6SL3220-0YE16-□□□0
	3	4	6.2	6SL3220-0YE18-□□□0
FSB	4	5	7.6	6SL3220-0YE20-□□□0
	5.5	7.5	11	6SL3220-0YE22-□□□0
	7.5	10	14	6SL3220-0YE24-□□□0
FSC	11	15	21	6SL3220-0YE26-□□□0
	15	20	27	6SL3220-0YE28-□□□0
FSD	18.5	25	34	6SL3220-0YE30-□□□0
	22	30	40	6SL3220-0YE32-□□□0
	30	40	52	6SL3220-0YE34-□□□0
	37	50	65	6SL3220-0YE36-□□□0
FSE	45	60	77	6SL3220-0YE38-□□□0
	55	75	96	6SL3220-0YE40-□□□0
FSF	75	100	124	6SL3220-0YE42-□□□0
	90	125	156	6SL3220-0YE44-□□□0
	110	150	180	6SL3220-0YE46-□□□0
	132	200	240	6SL3220-0YE48-□□□0
FSG	160	250	302	6SL3220-0YE50-□□□0
	200	300	361	6SL3220-0YE52-□□□0
	250	400	477	6SL3220-0YE54-□□□0
FSH	315	400	477	6SL3220-2YE56-□C□0
	355	450	515	6SL3220-2YE58-□C□0
	400	500	590	6SL3220-2YE60-□C□0
FSJ	450	500	663	6SL3220-2YE62-□C□0
	500	600	724	6SL3220-2YE64-□C□0
	560	700	830	6SL3220-2YE66-□C□0

Special coating according to IEC/EN 60721-3-3	
Class 3C2 (Standard)	**2**
Class 3C3*	**3**
User interface	
Blank (No operator panel/keypad)	**1**
BOP-2 (Basic keypad, Class 3C3*)	**2**
IOP-2 (Standard — high-resolution graphical color keypad, Class 3C3*)	**3**
I/O extension module	
without I/O extenstion module	**0**
with I/O extenstion module, Class 3C3*	**1**
EMC class	
No filter (Standard — without integrated EMI/RFI filter) for FSA to FSF only	**U**
Filter C2 (With integrated EMI/RFI filter Category C2) for FSA to FSG only, see Note 1	**A**
Filter C3 (Standard — with integrated EMI/RFI filter Category C3) for FSG to FSJ only, see Note 1	**C**
Communication interface	
PROFINET, EtherNet/IP™ (Standard)	**F**
USS, Modbus, RTU, BACnet MS/TP	**B**
PROFIBUS DP	**P**

*Special coating or sealing for operation in harsh/corrosive environments

Note 1: For frame sizes FSG, FSH and FSJ, the filter can be deactivated by removing a grounding screw/clip for applications in an ungrounded or a high-resistance grounded or a corner-grounded supply system. Please refer to the SINAMICS G120X Operating Instructions for more information.

SINAMICS G120X — Selection and ordering data

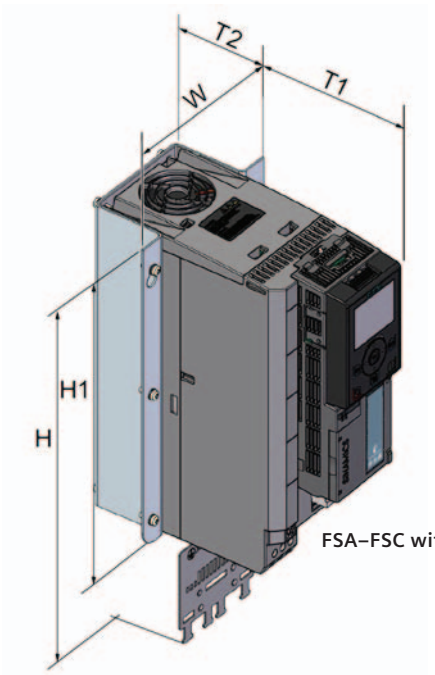
Voltage class 3AC 500...690V, 47...63Hz

Frame size	kW (690V)	hp (600V)	Rated Output Current I_L, A (600V)	Order number
FSD	3	4	5	6SL3220-0YH18-_ _ _0
	4	5	6.3	6SL3220-0YH20-_ _ _0
	5.5	7.5	9	6SL3220-0YH22-_ _ _0
	7.5	10	11	6SL3220-0YH24-_ _ _0
	11	10	14	6SL3220-0YH26-_ _ _0
	15	15	19	6SL3220-0YH28-_ _ _0
	18.5	20	23	6SL3220-0YH30-_ _ _0
	22	25	27	6SL3220-0YH32-_ _ _0
	30	30	35	6SL3220-0YH34-_ _ _0
	37	40	42	6SL3220-0YH36-_ _ _0
FSE	45	50	52	6SL3220-0YH38-_ _ _0
	55	60	62	6SL3220-0YH40-_ _ _0
FSF	75	75	80	6SL3220-0YH42-_ _ _0
	90	100	100	6SL3220-0YH44-_ _ _0
	110	125	125	6SL3220-0YH46-_ _ _0
	132	150	144	6SL3220-0YH48-_ _ _0
FSG	160	150	171	6SL3220-0YH50-_ _C_0
	200	200	208	6SL3220-0YH52-_ _C_0
	250	250	250	6SL3220-0YH54-_ _C_0
FSH	315	350	345	6SL3220-0YH56-_ _C_0
	355	400	388	6SL3220-0YH58-_ _C_0
	400	450	432	6SL3220-0YH60-_ _C_0
	450	500	487	6SL3220-0YH62-_ _C_0
FSJ	500	500	546	6SL3220-0YH64-_ _C_0
	560	600	610	6SL3220-0YH66-_ _C_0
	630	700	679	6SL3220-0YH68-_ _C_0

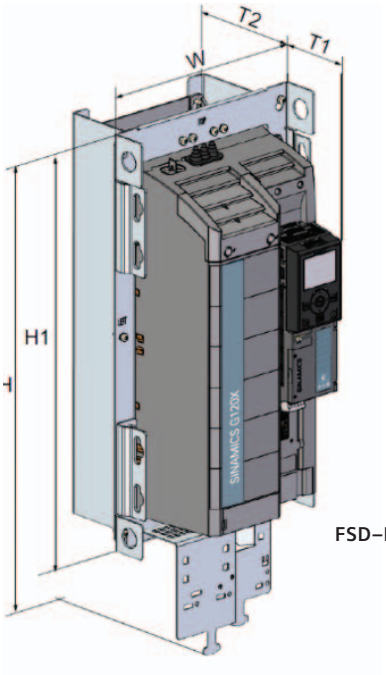
Order number	
Special coating according to IEC/EN 60721-3-3	
Class 3C2 (Standard)	2
Class 3C3*	3
User interface	
Blank (No operator panel/keypad)	1
BOP-2 (Basic keypad, Class 3C3*)	2
IOP-2 (Standard — high-resolution graphical color keypad, Class 3C3*)	3
I/O extension module	
without I/O extenstion module	0
with I/O extenstion module, Class 3C3*	1
EMC class	
No filter (Standard — without integrated EMI/RFI filter) for FSD to FSF only	U
Filter C2 (With integrated EMI/RFI filter Category C2) for FSD to FSE only	A
Filter C3 (With integrated EMI/RFI filter Category C3) for FSF to FSJ only, standard for FSG to FSJ, see Note 1	C
Communication interface	
PROFINET, EtherNet/IP™ (Standard)	F
USS, Modbus, RTU, BACnet MS/TP	B
PROFIBUS DP	P

*Special coating or sealing for operation in harsh/corrosive environments

Note 1: For frame sizes FSG, FSH and FSJ, the filter can be deactivated by removing a grounding screw/clip for applications in an ungrounded or a high-resistance grounded or a corner-grounded supply system. Please refer to the SINAMICS G120X Operating Instructions for more information.



FSA–FSC with PT kit



FSD–FSG with PT kit

SINAMICS G120X IP20 Push-Through kits

SINAMICS G120X	Push-Through kit (PT)	Overall dimensions of SINAIMCS G120X with PT kit installed				
		Width mm (inch)	Height mm (inch)		Depth mm (inch)	
Frame size	Part number	W	H = with shield plate	H1= without shield plate	T1 = front of PT bracket	T2 = back of PT bracket
FSA	**6SL3261-6GA00-0BA0**	127 (5.0)	324 (12.8)	234 (9.2)	160 (6.3)	57 (2.2)
FSB	**6SL3261-6GB00-0BA0**	154 (6.1)	384 (15.1)	279 (11.0)	153 (6.0)	66 (2.6)
FSC	**6SL3261-6GC00-0BA0**	192 (7.6)	407 (16.0)	295 (11.6)	154 (6.1)	65 (2.6)
FSD	**6SL3261-6GD00-0BA0**	271 (10.7)	647 (25.5)	514 (20.2)	142 (5.6)	98 (3.9)
FSE	**6SL3261-6GE00-0BA0**	360 (14.2)	773 (30.4)	600 (23.6)	145 (5.7)	93 (3.7)
FSF	**6SL3261-6GF00-0BA0**	396 (15.6)	1003 (39.5)	749 (29.5)	185 (7.3)	185 (7.3)
FSG	**6SL3261-6GG00-0BA0**	384 (15.1)	1275 (50.2)	1026 (40.4)	184 (7.3)	188 (7.4)

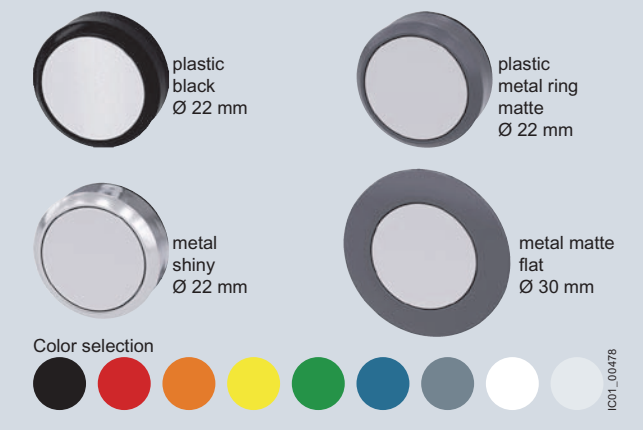
SINAMICS G120X—options and features

Options

- Special coating (Class 3C3) for operation of a drive in the harsh environments where corrosive gases for example, Hydrogen Sulfide (H_2S), Chlorine (Cl) or Ammonia (NH_3) are often present
- Add-on Push-Through (PT) kit to enable UL Open Type/IP20 drive in to UL Open Type/IP20 push-through drive (up to FSG)
- Input and output reactors
- Output dv/dt filter
- Output Sinusoidal filter
- Passive line harmonic filter
- EMI/RFI filters
- Communication: PROFINET, EtherNet/IP™, USS, Modbus RTU, BACnet MS/TP and PROFIBUS DP
- I/O extension module

Benefits

Design



SIRIUS ACT is available in four design lines.

Communication

- Direct connection of the enclosure to AS-Interface or IO-Link
- Direct connection in the control cabinet to PROFINET, IO-Link or AS-Interface
- Can be integrated easily via the TIA Portal

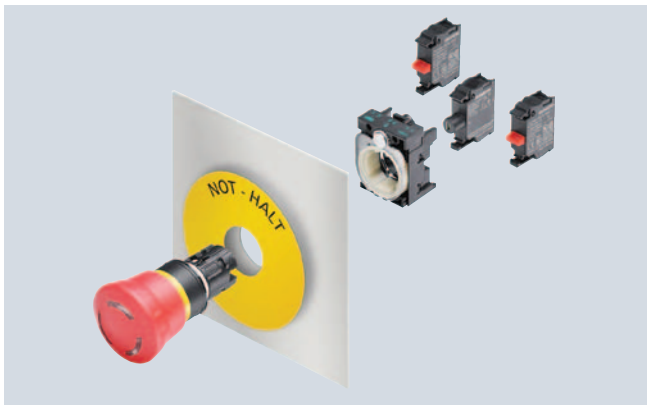
Ruggedness

- Degree of protection IP66, IP67, IP69 (IP69K)

IP66	
6 = Protection against the ingress of dust	6 = Protection against powerful splash-water
IP67	
6 = Protection against the ingress of dust	7 = Protection against temporary immersion
IP69 (IP69K)	
6 = Protection against the ingress of dust	9/9K = Protection against water in high-pressure cleaning (approx. 80 bar) and high water jet temperatures (approx. 80 °C)

- Service life of 100 000 hours thanks to use of LEDs
- Media resistance (chemicals) thanks to solid stainless steel and high-grade plastics
- Mechanical endurance of 10 x 10^6 switching cycles
- Suitable for use in extreme environments
- Reliable, friction-locked fixing with just one screw
- Design stability according to use
- Simple geometry for mounting holes

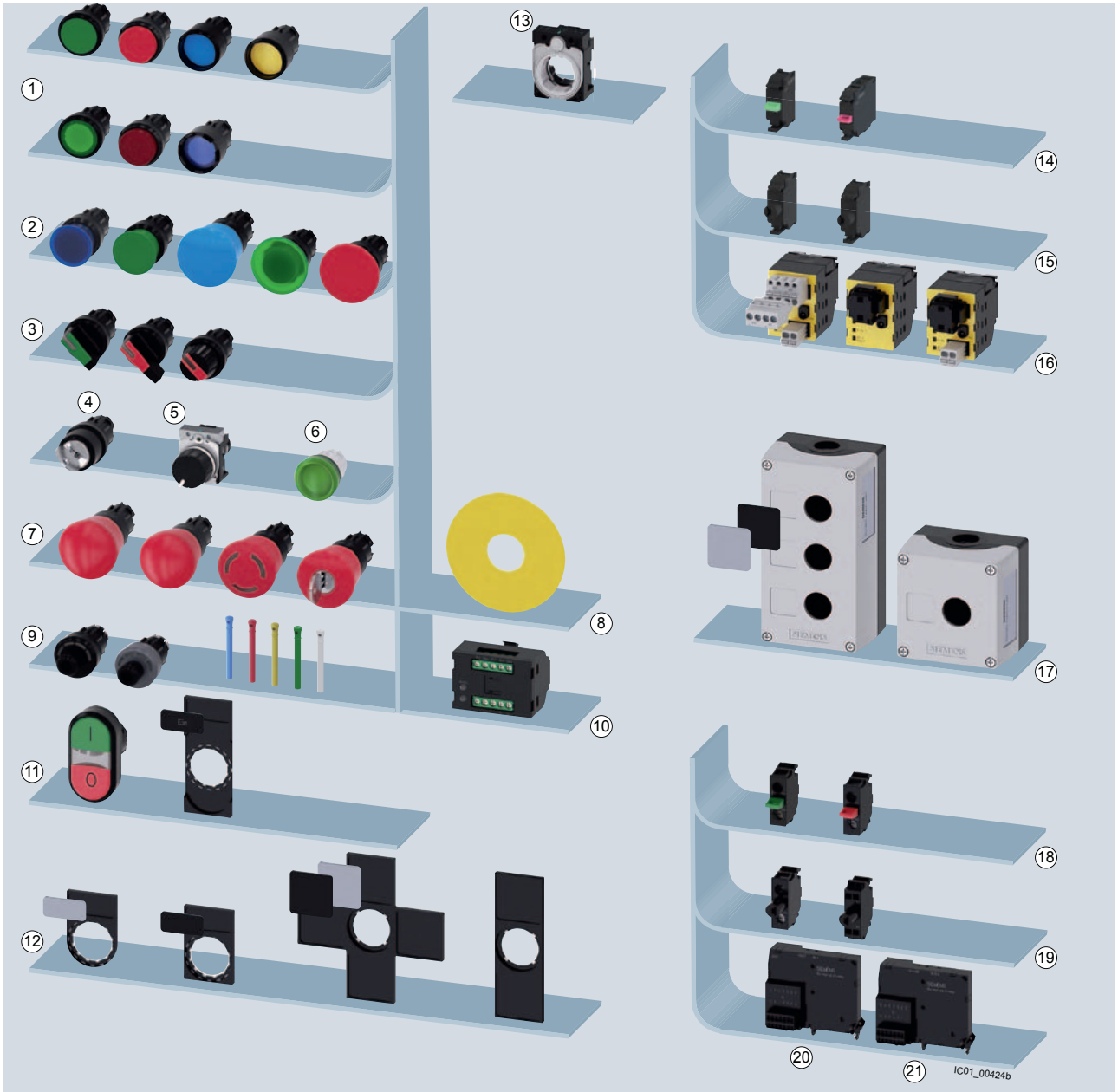
Easy handling



- Self-holding function of the actuator when mounting
- Twist prevention integrated into patented holder design
- Stackable contact modules
- Self-explanatory and fast installation using one hand
- Components can be mounted with holder removed
- No special tools required, simple size 2 screwdriver (cross-tip DIN ISO 87641PZD1, flat-head DIN ISO 2380-1 A/B 1x4.5) is sufficient

These two pages are a brief overview of the SIRIUS ACT 3SU Series. Please consult the Siemens Industrial Control products catalog for a complete listing of products or look for info online at usa.siemens.com/sirius-act

Actuating and signaling elements



Actuating and signaling elements		Pages
①	Pushbuttons, illuminated pushbuttons	10/39
②	Mushroom pushbuttons	10/41
③	Selector switches	10/42
④⑤⑥	Key-operated switches, potentiometers, indicator lights	10/43
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⑨⑩	ID key-operated switches, ID keys, electronic modules	10/59
⑪	Twin pushbuttons, label holders, labeling plates	10/51
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Holders and labels		**Pages**
⑬	Holders	10/138

Modules for front plate mounting		Pages
⑭	Contact modules	10/112
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Enclosures		**Pages**
⑰	Enclosures	10/122
Modules for base mounting		**Pages**
⑱	Contact modules	10/133
⑲	LED modules	10/133
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㉑	AS-Interface modules	10/136

System overview of SIRIUS ACT pushbuttons and indicator lights from the plastic design line.
Pushbuttons and indicator lights available in 4 design lines.

Page links above reference the U.S. Industrial Controls catalog available online

Pushbutton Units and Indicator Lights

Features

- Octagonal Mounting Nuts
- Meets Type 1, 3, 3R, 4, 4X, 12, 13 and Automotive Standards
- Heavy Duty Rated NEMA A600/P600 Contacts
- Ⓟ Positively Driven Contacts
- Positive Indexing Selectors
- Bifurcated Movable Contacts
- Attractive Chrome Plating
- Boots Not Required for Type 4
- UL Listed File # E22655
- CSA Certified File # LR6535
- Touchsafe Terminals
- Hazardous Location CL1, DIV2 Contact Blocks
- Hazardous Location CL1, DIV2 Light Modules

Application

Oil tight pilot controls and accessories are designed to provide long, trouble free service in the most demanding industrial applications. These controls are oil and dust tight and meet Type 3, 4, 4X, 12 and 13 specifications.

Rugged

Industrial control operators are durable one piece castings. Heavy duty plastic buttons resist oils and corrosion. Silver contacts carry heavy duty ratings.

Flexible

Accessories modify standard push buttons, selector switches and pilot lights. Building block construction of contact blocks makes possible many circuitry combinations.

Industrial Appearance

Pilot controls add luster to panels. Chrome plating covers exposed metal parts.

Push Button Operators

The Operator Base consists of a durable, one piece casting equipped with a heavy duty actuator with a stainless steel spring, a neoprene actuator sealing ring to prevent oil and dust from penetrating to the contact blocks, a neoprene gasket to seal operator mounting hole and a chrome plated lock nut.

Mushroom Head Push Button Operators

The Mushroom Head base construction is identical to the push button base. The actuator is molded of high impact material for either a 1 5⁄8 inch or 2 1⁄2 inch diameter molded head.

E-STOP Mushroom Head Operators according to EN 60947-5-5 Cat. No. 52BP, 52BR, 52PP, and 52PR, 2 Position, Twist-To-Release & 2 Position, Push Pull Maintained operators provided with red operating heads and 52BJK contact blocks meet the requirements of EN 60947-5-5 for Electrical Emergency Stop Device With Mechanical Latching Function (e-stop).

Contact Blocks

Standard Contact Blocks have double break bifurcated silver contacts as standard. Versions with gold flashing are available for improved contact reliability. Contact blocks are heavy duty rated NEMA A600 and suitable for applications down to 5V/1MA solid state outputs. 52BAJ and 52BJK versions offers Ⓟ Positive Opening Contacts according to IEC 60947-5-1, Appendix K. Molded bodies and pushers resist arcing and tracking. All units have stainless steel springs that resist corrosion and provide strong contact pressure. Captive mounting screws speed panel assembly. New HL Series Contact Blocks are also rated for Hazardous Locations Class 1, Division 2.

Push Pull Operators

Push Pull Operators combine two or three functions in one unit. The maintained operator has two positions, typically pull to start, push to stop. The momentary operator with three positions provides spring return from both pull and push positions. In addition, a three position push maintained, pull momentary operator is available. The actuator come is 1 3/4 inch or 2 1/2 inch diameter and is available in an illuminated version.

2 Button Maintained Operator

Maintained Push Buttons consist of two push buttons and a latching assembly. When actuated the button remains depressed and is freed only by the release operator to which it is linked. The button assembly adjusts for mounting from a 1 13⁄16 inch to a 2 5⁄8 inch center.

Transformer Type Pilot Lights

Transformer Type Pilot Lights are available with a 120, 240, 480 or 600 Volt primary (50/60 Hertz) and a separate secondary winding which supplies reduced voltage to a miniature bayonet base 6 Volt lamp. These units are suitable for applications where vibration is present and long bulb life is desirable.

Full Voltage Type Pilot Lights

Full Voltage Pilot Lights are available for 6,12, 24 and 120 Volt AC and DC applications.

Electrical Ratings

NEMA AC Ratings 50/60Hz

NEMA A600 10 Continuous Amps

Volts	Make	Break
120	60	6
240	30	3
480	15	1.5
600	12	1.2
VA	7200	720

Ordering Information

- Accessories: pages 17-351 – 17-355
- Selector Position and Contact Operation: page 17-349 – 17-350.
- Legend Plates: page 17-364.
- Enclosures: page 17-365.
- Technical Specifications: page 17-366.

Resistor Type Pilot Lights

Resistor Type Pilot Lights are available for 240 Volt AC and DC applications. The 240 Volt pilot light is supplied with a 120 Volt lamp and a voltage dropping resistor.

LED Type Pilot Lights

LED's (light emitting diodes) can be used in pilot lights instead of incandescent bulbs because of their long life (up to 10 years), resistance to vibration and ambient sensitivity. Clusted LED options are available for standard pilot lights only. Cluster LED options are not available on Push to test Pilot Lights, Illuminated Pushbuttons, Push-pull, or Twist-to-Release Operators.

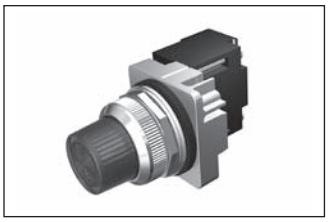
Integrated LED Module Type Pilot Lights

The integrated LED module is available for 24, 120, 240 and 24-240V. LED modules are vibration resistant and have a long life (up to 10 years).

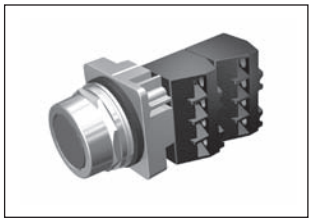
Selector Operators

Selector Operators have positive action indexing. Operators are available with either a short or long lever. The molded black lever is designed to accept a color insert. A white insert is provided as standard. Each operator is equipped with a cam to actuate plungers of contact blocks assembled behind the operator. Two, three and four position operators are available with seven different cams.

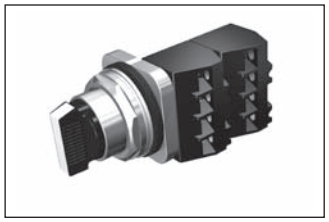
Lever color inserts are available in 8 colors.



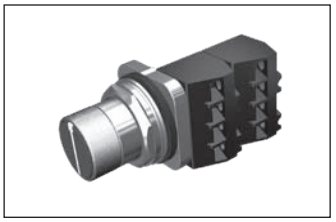
Indicator Light



Push Button



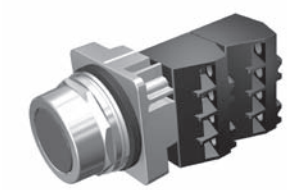
Selector Switch



Selector Push Button

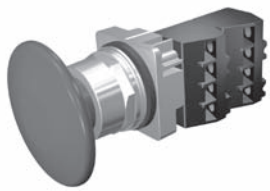
Selection Guid

Momentary Push Button - Non-Illuminated



Flush Head

Extended Head



Large Mushroom Head 2 1/2″

Small Mushroom Head 1 3/4″

Part Number	52	a	M b	c	d	e[1]

a

Code	Finish
P	Chrome - Command 52
B	Epoxy Coated - Black Max

b

Code	Type
M	Momentary Push Button

c

Code	Style / Head Type
	Flush / Extended Cap
8A	Flush
8B	Extended
	Mushroom Head Metal
9A	Small Mushroom Head 1 3/4" (44.5mm)
	Mushroom Head Plastic
9W	Small Mushroom Head 1 3/4" (44.5mm)
9V	Large Mushroom Head 2 1/2" (63.5mm)

d

Code	Plastic	Metal
1	Black	—
2	Red	Red
3	Green	Green
4	Yellow	—
5	Blue	—
6	Gray	—
7	All Color Caps	—
8	Orange	—
C	—	Chrome

e[1]

Code	Contact Blocks[2]
A	1 NO + 1 NC
B	2 NO + 2 NC
C	3 NO + 3 NC
D	4 NO + 4 NC
E	1 NC (LB)
F	2 NO
G	2 NC
H	1NO (EM)
J	1 NC
K	1 NO

1 For operator without contact blocks leave position e blank.

2 Complete Pushbutton Operators with Contact Block Codes: A, B, F, G, J & K are available with Hazardous Location CL1, DIV2 Rated Contacts when Suffix "HL" is added to the part number.

Selection Tables

Momentary Push Button - Non-Illumniated[1]

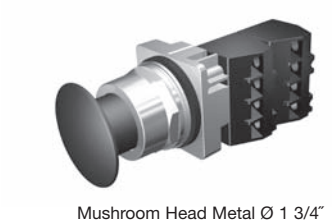
Head Style	Contacts	Color	Finish	
			Chrome	Black Max
Flush	—	Less cap	**52PM8**	**52BM8**
		Black	**52PM8A1**	**52BM8A1**
		Red	**52PM8A2**	**52BM8A2**
		Green	**52PM8A3**	**52BM8A3**
		Yellow	**52PM8A4**	**52BM8A4**
	1 NO - 1 NC	Black	**52PM8A1A**	**52BM8A1A**
		Red	**52PM8A2A**	**52BM8A2A**
		Green	**52PM8A3A**	**52BM8A3A**
	1 NO	Black	**52PM8A1K**	**52BM8A1K**
		Red	**52PM8A2K**	**52BM8A2K**
		Green	**52PM8A3K**	**52BM8A3K**
	1 NC	Red	**52PM8A2J**	**52BM8A2J**
Extended	—	Black	**52PM8B1**	**52BM8B1**
		Red	**52PM8B2**	**52BM8B2**
		Green	**52PM8B3**	**52BM8B3**
	1 NO	Black	**52PM8B1K**	**52BM8B1K**
		Red	**52PM8B2K**	**52BM8B2K**
	1 NC	Red	**52PM8B2J**	**52BM8B2J**
Mushroom Head Plastic Ø 1 3/4”	—	Less cap	**52PM9**	**52BM9**
		Red	**52PM9W2**	**52BM9W2**
	1 NO	Green	**52PM9W3K**	**52BM9W3K**
	1 NO - 1 NC	Black	**52PM9W1A**	**52BM9W1A**
		Red	**52PM9W2A**	**52BM9W2A**
	1 NO - 1 NC	Green	**52PM9W3A**	**52BM9W3A**
Mushroom Head Plastic Ø 2 1/2”	—	Red	**52PM9V2**	**52BM9V2**
	1 NO - 1 NC	Black	**52PM9V1A**	**52BM9V1A**
		Red	**52PM9V2A**	**52BM9V2A**
		Green	**52PM9V3A**	**52BM9V3A**

Readily available items are in **bold**.
This is a small representation of stocked items.

1 Complete Operators with 1 to 2 Contact Blocks are available with CL1, DIV2 Ratings when Suffix "HL" is added to the part number.

Selection Guide

2 & 3 Position Push-Pull Mushroom Head Devices - Non-Illuminated



Mushroom Head Metal Ø 1 3/4″

Mushroom Head Plastic Ø 2 1/2″

Mushroom Head Plastic Ø 1 3/4″

Part Number	52	____ a	P b	____ c	____ d	____ e	____ f[3]

a

Code	Finish
P	Chrome-Command 52
B	Epoxy Coated-Black Max

b

Code	Type
P	Push Pull

c

Code	Function
2	2 positions - maintained[1]
3	3 positions - momentary in - momentary out
7	3 positions - maintained in - momentary out

d

Code	Style
A	Small metal 1-3/4" (44.5 mm)
W	Small plastic 1-3/4" (44.5 mm)
V	Large plastic 2-1/2" (63.5 mm)

e

Code	Color	
	Plastic	Metal
1	Black	—
2	Red[1]	Red[1]
3	Green	Green
4	Yellow	—
5	Blue	—
6	Gray	—
8	Orange	—
C	—	Chrome
	No Operating Head	
Z	No head	

f[3]

Code	Contact Blocks[4]
	2 Position
A	1 NO + 1 NC[1]
B	2 NO + 2 NC[1]
C	3 NO + 3 NC[1]
D	4 NO + 4 NC[1]
E	1 NC (LB)
F	2 NO
G	2 NC[1]
H	1 NO (EM)
J	1 NC[1]
K	1 NO
Q	1 NO - 1 NC (ELB)
	3 Position
U	1 NO - 1 NC extra late break[2]

1 EMERGENCY-STOP control devices according to IEC 60947-5-5 when provided with red operating head and positively driven NC contact blocks. Positive opening contacts according to IEC 60947-5-1, Appendix K.

2 Blocks cannot be interchanged (stop-start circuit - pull to start, push to stop).

3 For operator without contact blocks leave position f blank.

4 Complete Push-Pull, 2-Position Operators with Contact Block Codes: A, B, F, G, J & K are available with Hazardous Location CL1, DIV2 Rated Contacts when Suffix "HL" is added to the part number.

Selection Tables

2 & 3 Position Push-Pull Mushroom Head Devices - Non-Illuminated

2 pos - maintained

		Metal Ø 1 3/4"		Plastic Ø 1 3/4"		Plastic Ø 2 1/2"	
Contacts	**Color**	**Chrome**	**Black Max**	**Chrome**	**Black Max**	**Chrome**	**Black Max**
—	Black	—	—	**52PP2W1**	52BP2W1	52PP2V1	2BP2V1
	Red	**52PP2A2**	52BP2A2	**52PP2W2**	**52BP2W2**	**52PP2V2**	52BP2V2
	Green	52PP2A3	52BP2A3	**52PP2W3**	52BP2W3	52PP2V3	52BP2V3
	Yellow	—	—	52PP2W4	52BP2W4	52PP2V4	52BP2V4
1 NO - 1 NC	Red	**52PP2A2A**[1]	**52BP2A2A**[1]	**52PP2W2A**[1]	**52BP2W2A**[1]	**52PP2V2A**[1]	52BP2V2A[1]
	Green	**52PP2A3A**	52BP2A3A	**52PP2W3A**	52BP2W3A	**52PP2V3A**	—
	Yellow	—	—	**52PP2W4A**	52BP2W4A	52BP2V4A	52BP2V4A
	Chrome	**52PP2ACA**	52BP2ACA	—	—	—	—

3 pos - momentary in - momentary out

		Metal Ø 1 3/4"		Plastic Ø 1 3/4"		Plastic Ø 2 1/2"	
Contacts	**Color**	**Chrome**	**Black Max**	**Chrome**	**Black Max**	**Chrome**	**Black Max**
—	Black	—	—	52PP3W1	52BP3W1	52PP3V1	52BP3V1
	Red	52PP3A2	52BP3A2	**52PP3W2**	52BP3W2	52PP3V2	52BP3V2
	Green	52PP3A3	52BP3A3	52PP3W3	52BP3W3	52PP3V3	2BP3V3
	Chrome	52PP3AC	52BP3AC	—	—	—	—
1 NO - 1 NCELB	Red	52PP3A2U	52BP3A2U	52PP3W2U	52BP3W2U	52PP3V2U	52BP3V2U
	Green	52PP3A3U	52BP3A3U	52PP3W3U	52BP3W3U	52PP3V3U	52BP3V3U

3 pos - maintained in - momentary out

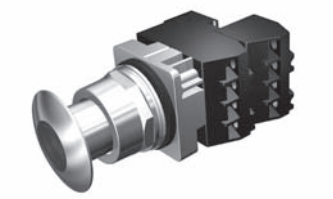
		Metal Ø 1 3/4"		Plastic Ø 1 3/4"		Plastic Ø 2 1/2"	
Contacts	**Color**	**Chrome**	**Black Max**	**Chrome**	**Black Max**	**Chrome**	**Black Max**
—	Black	—	—	52PP7W1	52BP7W1	52PP7V1	52BP7V1
	Red	**52PP7A2**	52BP7A2	52PP7W2	52BP7W2	52PP7V2	52BP7V2
	Green	52PP7A3	52BP7A3	52PP7W3	52BP7W3	52PP7V3	52BP7V3
	Chrome	52PP7AC	52BP7AC	—	—	—	—
1 NO - 1 NCELB	Red	52PP7A2U1	52BP7A2U	52PP7W2U	52BP7W2U	52PP7V2U	52BP7V2U
	Green	52PP7A3U	52BP7A3U	52PP7W3U	52BP7W3U	52PP7V3U	52BP7V3U

Readily available items are in **bold**.
This is a small representation of stocked items.

[1] EMERGENCY-STOP control devices according to IEC 60947-5-5

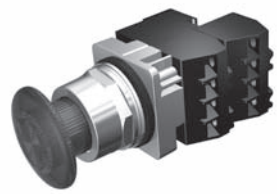
Selection Guide

2 & 3 Position Push-Pull Mushroom Head Devices - Illuminated



Mushroom Head Metal Ø 1 3/4”

Mushroom Head Plastic Ø 2 1/2”



Mushroom Head Plastic Ø 1 3/4”

Part Number	52	____ a	P b	____ c	____ d	____ e	____ f	____ g

a

Code	Finish
P	Chrome-Command 52
B	Epoxy Coated-Black Max

b

Code	Type
P	Push Pull Operator

c

Code	Function
2	2 positions - maintained[1]
3	3 positions - momentary in - momentary out[2]
7	3 positions - maintained in - momentary out[2]

d

Code	Operation	
	Full Voltage[3 6] (AC/DC)	
	Incandescent	LED[4]
B	6-8V	6V
C	12-13V	—
D	24-28V	24-28V
E	120V	120V
	Transformer[3 6]	
G	120V AC	
H	240V AC	
J	480V AC	
K	600V AC	
	Integrated LED Light Module[6]	
L	6-24V AC/DC	
U	24-240V AC/DC	

e

Code	Style / Color
	Mushroom Head Metal Ø 1 3/4” (44.5mm)
2	Red[1]
3	Green
5	Blue
9	Amber
A	Clear
B	White
	Mushroom Head Plastic Ø 1 3/4” (44.5 mm)
R	Red[1]
S	Green
T	Amber
	Mushroom Head Plastic Ø 2 1/2” (63.5mm)
D	Red[1]
E	Green
F	Amber
	No Head (full voltage & transformer only)
Z	No head

f

Code	Contact Blocks[7]
	2 Position
A	1 NO + 1 NC[1]
B	2 NO - 2 NC[1]
F	2 NO
G	2 NC[1]
J	1 NC[1]
K	1 NO
Q	1 NO - 1 NC (ELB)
	3 Position
U	1 NO - 1 NC extra late break[2]

g

Code	Bulb Type
Blank	Incandescent
B	LED
Y	Super-Bright LED[5]

1 EMERGENCY-STOP control devices according to IEC 60947-5-5 when provided with red operating head and positively driven NC contact blocks. Positive opening contacts according to IEC 60947-5-1, Appendix K,

2 Blocks cannot be interchanged (stop-start circuit - pull to start, push to stop).

3 Default bulb type is incandescent. For LED options, append field g. LED option not available on units sold “no head”.

4 LED voltages apply to table g option code B and Y.

5 Not available in 120V or 240V.

6 New for January 2021, Light Modules are dual rated for UL Ordinary Location and Hazardous Location CL1, DIV2 Ratings..

7 Complete Illuminated Push-Pull, 2-Position Operators with Contact Block Codes: A, B, F, G, J & K are available with Hazardous Location CL1, DIV2 Rated Contacts when Suffix "HL" is added to the part number.

Selection Tables

Type	Lamp Type	Voltage	Color	Contacts	Operator Type: 2 pos - maintained — Metal Ø 1 3/4" Chrome	Metal Ø 1 3/4" Black Max	Plastic Ø 1 3/4" Chrome	Plastic Ø 1 3/4" Black Max
Full Voltage (AC/DC)	LED	24V	Red	1 NO - 1 NC	**52PP2D2AB**[1]	**52BP2D2AB**[1]	**52PP2DRAB**[1]	52BP2DRAB[1]
			Green	1 NO - 1 NC	**52PP2D3AB**	52BP2D3AB	52PP2DSAB	52BP2DSAB
	Incandescent	24V	Red	1 NO - 1 NC	**52PP2D2A**[1]	52BP2D2A[1]	**52PP2DRA**[1]	52BP2DRA[1]
			Green	1 NO - 1 NC	**52PP2D3A**	52BP2D3A	**52PP2DSA**	52BP2DSA
		120V	Red	1 NO - 1 NC	52PP2E2A[1]	52BP2E2A[1]	52PP2ERA[1]	52BP2ERA[1]
				—	52PP2E2	52BP2E2	52PP2ER	52BP2ER
Transformer (AC)	LED	120V	Red	1 NO - 1 NC	**52PP2G2AB**[1]	52BP2G2AB[1]	52PP2GRAB[1]	52BP2GRAB[1]
			Green	1 NO - 1 NC	**52PP2G3AB**	52BP2G3AB	52PP2GSAB	52BP2GSAB
	Incandescent	120V	Red	1 NO - 1 NC	**52PP2G2A**[1]	52BP2G2A[1]	**52PP2GRA**[1]	52BP2GRA[1]
			Green	1 NO - 1 NC	**52PP2G3A**	**52BP2G3A**	**52PP2GSA**	52BP2GSA

Type	Lamp Type	Voltage	Color	Contacts	Operator Type: 3 pos - momentary in - momentary out — Metal Ø 1 3/4" Chrome	Metal Ø 1 3/4" Black Max	Plastic Ø 1 3/4" Chrome	Plastic Ø 1 3/4" Black Max
Full Voltage (AC/DC)	LED	24V	Green	1 NO - 1 NCELB	52PP3D3UB	52BP3D3UB	52PP3DRUB	52BP3DRUB
	Incandescent	24V	Green	1 NO - 1 NCELB	52PP3D3U	52BP3D3U	52PP3DSU	52BP3DSU
			Red	1 NO - 1 NCELB	52PP3D2U	52BP3D2U	52PP3DRU	52BP3DRU
		120V	Red	—	52PP3E2	52BP3E2	52PP3ER	52BP3ER
Transformer (AC)	LED	120V	Red	1 NO - 1 NCELB	52PP3G2UB	52BP3G2UB	52PP3GRUB	52BP3GRUB
			Green	1 NO - 1 NCELB	**52PP3G3UB**	52BP3G3UB	52PP3GSUB	52BP3GSUB
	Incandescent	120V	Red	1 NO - 1 NCELB	52PP3G2U	52BP3G2U	52PP3GRU	52BP3GRU
			Green	1 NO - 1 NCELB	52PP3G3U	52BP3G3U	52PP3GRU	52BP3GRU

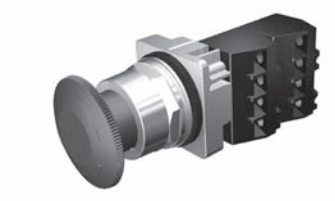
Type	Lamp Type	Voltage	Color	Contacts	Operator Type: 3 pos - maintained in - momentary out — Metal Ø 1 3/4" Chrome	Metal Ø 1 3/4" Black Max	Plastic Ø 1 3/4" Chrome	Plastic Ø 1 3/4" Black Max
Full Voltage (AC/DC)	LED	24V	Green	1 NO - 1 NCELB	52PP7D3UB	52BP7D3UB	52PP7DSUB	52BP7DSUB
	Incandescent	24V	Green	1 NO - 1 NCELB	52PP7D3U	52BP7D3U	52PP7DSU	52BP7DSU
			Red	1 NO - 1 NCELB	52PP7D2U	52BP7D2U	52PP7DRU	52BP7DRU
		120V	Red	—	52PP7E2	52BP7E2	52PP7ER	52BP7ER
Transformer (AC)	LED	120V	Red	1 NO - 1 NCELB	52PP7G2UB	52BP7G2UB	52PP7GRUB	52BP7GRUB
			Green	1 NO - 1 NCELB	52PP7G3UB	52BP7G3UB	52PP7GSUB	52BP7GSUB
	Incandescent	120V	Red	1 NO - 1 NCELB	52PP7G2U	52BP7G2U	52PP7GRU	52BP7GRU
			Green	1 NO - 1 NCELB	52PP7G3U	52BP7G3U	52PP7GRU	52BP7GRU

Readily available items are in **bold**.
This is a small representation of stocked items.

1 EMERGENCY-STOP control devices according to IEC 60947-5-5

Selection Guide

2 Position Twist-to-Release Devices Mushroom Head - Non-Illuminated



Plastic 1 3/4" Mushroom Head - Chrome

Plastic 1 3/4" Mushroom Head - Black Max

Part Number	52	____ a	R b	8 c	W d	____ e	____ f[2]

Finish	Function	Style	Color	Contacts	Part Number
Chrome	2 Position Twist-to-Release	Plastic 1 3/4" Mushroom Head	Red	1 NO - 1 NC	**52PR8W2A**
Black Max	2 Position Twist-to-Release	Plastic 1 3/4" Mushroom Head	Red	1 NO - 1 NC	**52BR8W2A**
Chrome	2 Position Twist-to-Release	Plastic 1 3/4" Mushroom Head	Red	None	**52PR8W2**

Readily available items are in **bold**.
This is a small representation of stocked items.

a

Code	Finish
P	Chrome-Command 52
B	Epoxy Coated-Black Max

b

Code	Function
R	2 Position Twist-to-Release, Maintained[1]

c

Code	Style
8	Plastic 1 3/4" Mushroom Head

d

Code	Lamp Type
W	Non-Illuminated

e

Code	Color
2	Red[1]
3	Green
4	Yellow
Z	No head

f[2]

Code	Contact Blocks[3]
A	1 NO + 1 NC[1]
B	2 NO + 2 NC[1]
C	3 NO + 3 NC[1]
D	4 NO + 4 NC[1]
E	1 NC (LB)
F	2 NO
G	2NC[1]
H	1NO (EM)
J	1 NC[1]
K	1 NO

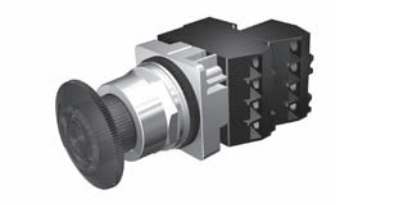
1 EMERGENCY-STOP control devices according to IEC 60947-5-5 when provided with red operating head and positively driven NC contact blocks. Positive opening contacts according to IEC 60947-5-1, Appendix K.

2 For operator without contact blocks leave position f blank.

3 Complete Twist release Operators with Contact Block Codes: A, B, F, G, J & K are available with Hazardous Location CL1, DIV2 Ratings when Suffix "HL" is added to the part number.

Selection Guide

2 Position Twist-to-Release Mushroom Head Devices - Illuminated



Plastic 1 3/4" Mushroom Head - Chrome

Plastic 1 3/4" Mushroom Head - Black Max

Part Number	52	____ a	R b	8 c	____ d	____ e	____ f	____ g

Finish	Style	Voltage	Bulb Type	Color	Contacts	Part Number
Chrome	Plastic 1 3/4" Mushroom Head	24V	LED	Red	1 NO - 1 NC	52PR8DRAB
Chrome	Plastic 1 3/4" Mushroom Head	120V	Incandescent	Red	1 NO - 1 NC	52PR8ERA
Chrome	Plastic 1 3/4" Mushroom Head	120V	LED	Red	1 NO - 1 NC	52PR8GRAB

Readily available items are in **bold**.
This is a small representation of stocked items.

a

Code	Finish
P	Chrome-Command 52
B	Epoxy Coated-Black Max

b

Code	Function
R	2 Position Twist-to-Release, Maintained

c

Code	Style
8	Plastic 1 3/4" Mushroom Head

d

Code	Operation	
	Full Voltage[2] [6] (AC/DC)	
	Incandescent	LED[3]
B	6-8V	6V
C	12-13V	—
D	24-28V	24-28V
E	120V	120V
	Transformer[2] [6]	
G	120V AC	
H	240V AC	
J	480V AC	
K	600V AC	
	Integrated LED Light Module[6]	
L	6-24V AC/DC	
U	24-240V AC/DC	

e

Code	Color
R	Red[1]
S	Green
T	Amber
Z	No head

f

Code	Contact Blocks[5]
A	1 NO + 1 NC[1]
B	2 NO + 2 NC[1]
C	3 NO + 3 NC[1]
D	4 NO + 4 NC[1]
E	1 NC (LB)
F	2 NO
G	2NC[1]
H	1NO (EM)
J	1 NC[1]
K	1 NO

g

Code	Bulb Type
Blank	Incandescent
B	LED
Y	Super-Bright LED[4]

1 EMERGENCY-STOP control devices according to IEC 60947-5-5 when provided with red operating head and positively driven NC contact blocks. Positive opening contacts according to IEC 60947-5-1, Appendix K, Molded bodies.

2 Default bulb type is incandescent. For LED options, append field g. LED option not available on units sold "no head."

3 LED voltages apply to table g option code B and Y.

4 Not available in 120V or 240V.

5 Complete Illuminated Twist Release Operators with Contact Block Codes: A, B, F, G, J & K are available with Hazardous Location CL1, DIV2 Ratings when Suffix "HL" is added to the part number.

6 New for January 2021, Light Modules are dual rated for UL Ordinary Location and Hazardous Location CL1, DIV2 Ratings.

Selection Guide

Indicator Light

Plastic Lens

Glass Lens

Part Number	52	_____ a	L b	_____ c	_____ d	_____ e	_____ f

a

Code	Finish
P	Chrome-Command 52
B	Epoxy Coated-Black Max

b

Code	Type
L	Indicator Light

c

Code	Style
4	Plastic Lens
5	Glass Lens

d

Code	Operation	
	Full Voltage[1] [4] (AC/DC)	
	Incandescent	LED[2]
B	6-8V	6V
C	12-13V	—
D	24-28V	24-28V
E	120V	120V
	Transformer[1] [4]	
G	120V AC	
H	240V AC	
J	480V AC	
K	600V AC	
T	277V AC	
	Integrated LED Light Module[4]	
L	6-24V AC/DC	
U	24-240V AC/DC	

e

Code	Color
2	Red
3	Green
5	Blue
7	All Colors
9	Amber
A	Clear
B	White
N	No Lens

f

Code	Bulb Type
Blank	Incandescent
XB	LED
XY	Super-Bright LED[3]

1 Default bulb type is incandescent. For LED options, append field f. LED option not available on units sold "No Lens".

2 LED voltages apply to table f option code XB and XY.

3 Not available in 120V or 240V.

4 New for January 2021, Light Modules are dual rated for UL Ordinary Location and Hazardous Location CL1, DIV2 Ratings.

Selection Tables

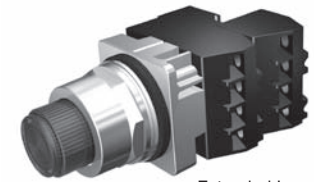
Indicator Light

Type	Lamp Type	Voltage	Color	Plastic Lens	
				Chrome	Black Max
Full Voltage (AC/DC)	LED	24V	Red	**52PL4D2XB**	**52BL4D2XB**
			Green	**52PL4D3XB**	**52BL4D3XB**
			Blue	**52PL4D5XB**	**52BL4D5XB**
			Amber	**52PL4D9XB**	**52BL4D9XB**
			White	**52PL4DBXB**	**52BL4DBXB**
		120V	Red	**52PL4E2XB**	**52BL4E2XB**
			Green	**52PL4E3XB**	**52BL4E3XB**
			Amber	**52PL4E9XB**	**52BL4E9XB**
			Clear	**52PL4EAXB**	**52BL4EAXB**
			White	**52PL4EBXB**	**52BL4EBXB**
	Incandescent	24V	Red	**52PL4D2**	**52BL4D2**
			Green	**52PL4D3**	**52BL4D3**
			Blue	**52PL4D5**	**52BL4D5**
			Amber	**52PL4D9**	**52BL4D9**
			White	**52PL4DB**	**52BL4DB**
			No Lens	**52PL4DN**	**52BL4DN**
		120V	Red	**52PL4E2**	**52BL4E2**
			Green	**52PL4E3**	**52BL4E3**
			Amber	**52PL4E9**	**52BL4E9**
			No Lens	**52PL4EN**	**52BL4EN**
Transformer (AC)	LED	120V	Red	**52PL4G2XB**	**52BL4G2XB**
			Green	**52PL4G3XB**	**52BL4G3XB**
			Amber	**52PL4G9XB**	**52BL4G9XB**
			White	**52PL4GBXB**	**52BL4GBXB**
		480V	Red	**52PL4J2XB**	**52BL4J2XB**
			Green	**52PL4J3XB**	**52BL4J3XB**
			White	**52PL4JBXB**	**52BL4JBXB**
	Incandescent	120V	Red	**52PL4G2**	**52BL4G2**
			Green	**52PL4G3**	**52BL4G3**
			Amber	**52PL4G9**	**52BL4G9**
			White	**52PL4GB**	**52BL4GB**
			No Lens	**52PL4GN**	**52BL4GN**
		240V	Red	**52PL4H2**	**52BL4H2**
			Green	**52PL4H3**	**52BL4H3**
		480V	Red	**52PL4J2**	**52BL4J2**
			Green	**52PL4J3**	**52BL4J3**
			Amber	**52PL4J9**	**52BL4J9**

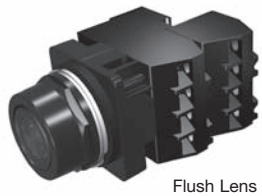
Readily available items are in **bold**.
This is a small representation of stocked items.

Selection Guide

Push Button & Push-to-Test - Illuminated



Extended Lens



Flush Lens

Part Number	52	_____ a	T b	_____ c	_____ d	_____ e	_____ f	_____ g

a

Code	Finish
P	Chrome-Command 52
B	Epoxy Coated-Black Max

b

Code	Function
T	Illuminated Push Button / Push-to-Test[1]

c

Code	Style
6	Extended Lens
8	Flush Lens

d

Code	Operation	
	Full Voltage[2 5] (AC/DC)	
	Incandescent	LED[3]
B	6-8V	6V
C	12-13V	—
D	24-28V	24-28V
E	120V	120V
	Transformer[2 5]	
G	120V AC	
H	240V AC	
J	480V AC	
K	600V AC	
	Integrated LED Light Module[5]	
L	6-24V AC/DC	
U	24-240V AC/DC	

e

Code	Color
2	Red
3	Green
5	Blue
7	All Colors
9	Amber
A	Clear
B	White
N	No Lens

f

Code	Contact Blocks[6]
A	1 NO - 1 NC
B	2 NO + 2 NC
C	3 NO + 3 NC
D	4 NO + 4 NC
E	1 NC (LB)
F	2 NO
G	2 NC
H	1NO (EM)
J	1 NC
K	1 NO

g

Code	Bulb Type
Blank	Incandescent
B	LED
Y	Super-Bright LED[4]

1 For push-to-test functionality, wire according to wiring diagram below.

2 Default bulb type is incandescent. For LED options, append field g. LED option not available on units sold "No Lens".

3 LED voltages apply to table g option code B and Y.

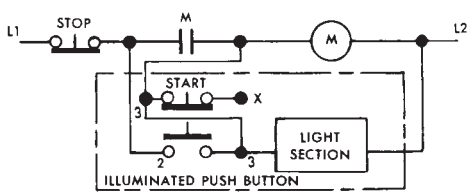
4 Not available in 120V or 240V.

5 New for January 2021, Light Modules are dual rated for UL Ordinary Location and Hazardous Location CL1, DIV2 Ratings.

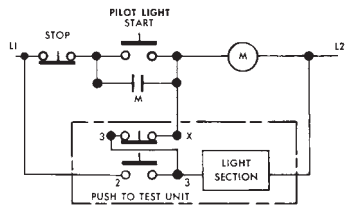
6 Complete PTT/Illuminated Pushbuttons with Contact Block Codes: A, B, F, G, J & K are available with Hazardous Location CL1, DIV2 Rated Contacts when Suffix "HL" is added to the part number.

Wiring Diagrams

Illuminated Push Button



Push to Test



Selection Tables

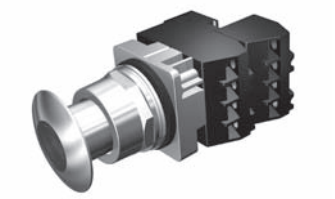
Push Button & Push-to-Test - Illuminated

Type	Lamp Type	Voltage	Color	Contacts	Extended Lens	
					Chrome	Black Max
Full Voltage (AC/DC)	LED	24V	Red	1 NO - 1 NC	**52PT6D2AB**	**52BT6D2AB**
			Green	1 NO - 1 NC	**52PT6D3AB**	**52BT6D3AB**
			Blue	1 NO - 1 NC	**52PT6D5AB**	**52BT6D5AB**
			Amber	1 NO - 1 NC	**52PT6D9AB**	**52BT6D9AB**
			White	1 NO - 1 NC	**52PT6DBAB**	**52BT6DBAB**
		120V	Red	1 NO - 1 NC	**52PT6E2AB**	**52BT6E2AB**
			Green	1 NO - 1 NC	**52PT6E3AB**	**52BT6E3AB**
	Incandescent	24V	Red	1 NO - 1 NC	**52PT6D2A**	**52BT6D2A**
			Green	1 NO - 1 NC	**52PT6D3A**	**52BT6D3A**
			Blue	1 NO - 1 NC	**52PT6D5A**	**52BT6D5A**
			Amber	1 NO - 1 NC	**52PT6D9A**	**52BT6D9A**
			White	1 NO - 1 NC	**52PT6DBA**	**52BT6DBA**
		120V	Red	1 NO - 1 NC	**52PT6E2A**	**52BT6E2A**
			Green	1 NO - 1 NC	**52PT6E3A**	**52BT6E3A**
Transformer (AC)	LED	120V	Red	1 NO - 1 NC	**52PT6G2AB**	**52BT6G2AB**
			Green	1 NO - 1 NC	**52PT6G3AB**	**52BT6G3AB**
			Amber	1 NO - 1 NC	**52PT6G9AB**	**52BT6G9AB**
			White	1 NO - 1 NC	**52PT6GBAB**	**52BT6GBAB**
		240V	Red	1 NO - 1 NC	**52PT6H2AB**	**52BT6H2AB**
			Green	1 NO - 1 NC	**52PT6H3AB**	**52BT6H3AB**
	Incandescent	120V	Red	1 NO - 1 NC	**52PT6G2A**	**52BT6G2A**
			Green	1 NO - 1 NC	**52PT6G3A**	**52BT6G3A**
			Amber	1 NO - 1 NC	**52PT6G9A**	**52BT6G9A**
			White	1 NO - 1 NC	**52PT6GBA**	**52BT6GBA**
			No Lens	1 NO - 1 NC	**52PT6GNA**	**52BT6GNA**
		240V	Green	1 NO - 1 NC	**52PT6H3A**	**52BT6H3A**
		480V	Clear	1 NO - 1 NC	**52PT6JAA**	**52BT6JAA**

Readily available items are in **bold**.
This is a small representation of stocked items.

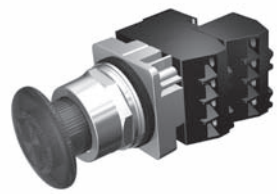
Selection Guide

Push Button Mushroom Head Devices – Illuminated



Mushroom Head Metal Ø 1 3/4”

Mushroom Head Plastic Ø 2 1/2”



Mushroom Head Plastic Ø 1 3/4”

Part Number	52	____ a	T b	9 c	____ d	____ e	____ f	____ g

a

Code	Finish
P	Chrome-Command 52
B	Epoxy Coated-Black Max

b

Code	Type
T	Push Button Operator

c

Code	Function
9	2 positions – momentary in

d

Code	Operation	
	Full Voltage[2] [5] (AC/DC)	
	Incandescent	LED[3]
B	6-8V	6V
C	12-13V	—
D	24-28V	24-28V
E	120V	120V
	Transformer[2] [5]	
G	120V AC	
H	240V AC	
J	480V AC	
K	600V AC	
	Integrated LED Light Module[5]	
L	6-24V AC/DC	
U	24-240V AC/DC	

e

Code	Style / Color
	Mushroom Head Metal Ø 1 3/4” (44.5mm)
2	Red[1]
3	Green
5	Blue
9	Amber
A	Clear
B	White
	Mushroom Head Plastic Ø 1 3/4” (44.5 mm)
R	Red
S	Green
T	Amber
	Mushroom Head Plastic Ø 2 1/2” (63.5mm)
D	Red[1]
E	Green
F	Amber
	No Head (full voltage & transformer only)
Z	No head

f

Code	Contact Blocks[6]
A	1 NO + 1 NC
B	2 NO + 2 NC
C	3 NO + 3 NC
D	4 NO + 4 NC
E	1 NC (LB)
F	2 NO
G	2 NC
H	1NO (EM)
J	1 NC
K	1 NO

g

Code	Bulb Type
Blank	Incandescent
B	LED
Y	Super-Bright LED[4]

1 Positive opening according to IEC 60947-5-1, Appendix K.

2 Default bulb type is incandescent. For LED options, append field g. LED option not available on units sold “no head”.

3 LED voltages apply to table g option code B and Y.

4 Not available in 120V or 240V.

5 New for January 2021, Light Modules are dual rated for UL Ordinary Location and Hazardous Location CL1, DIV2 Ratings.

6 Complete Illuminated Pushbuttons with Contact Block Codes: A, B, F, G, J & K are available with Hazardous Location CL1, DIV2 Rated Contacts when Suffix "HL" is added to the part number.

Selection Guide

Selector Switches – Illuminated

Short Lever – Chrome

Short Lever – Black Max

Part Number	52	S a	b	7 c	d	e	f	g	h	i

Finish	Style	Cam Type	Function	Color	Contacts	Part Number
Chrome	Maintained	2 Position: CAM A	24-28V AC/DC	No Insert	None	52SA7ADN
Chrome	Maintained	2 Position: CAM A	120V AC (Transformer)	No Insert	None	**52SA7AGN**
Chrome	Maintained	3 Position: CAM C	120V AC	No Insert	None	**52SA7CGN**

Readily available items are in **bold**.
This is a small representation of stocked items.

a

Code	Type
S	Selector Switch

b

Code	Finish
A	Chrome - Command 52
X	Epoxy Coated - Black Max

c

Code	Style
7	Maintained

d

Code	Function
A	2 Position: CAM A
B	3 Position: CAM B
C	3 Position: CAM C

e

Code	Operation	
	Full Voltage[1] (AC/DC)	
	Incandescent	LED[2]
B	6-8V	6V
C	12-13V	—
D	24-28V	24-28V
E	120V	120V
	Transformer[1]	
G	120V AC	
H	240V AC	
J	480V AC	
K	600V AC	
	Integrated LED Light Module	
L	6-24V AC/DC	
U	24-240V AC/DC	

f

Code	Color
2	Red
3	Green
5	Blue
9	Amber
A	Clear
N	No Insert

g

Code	Contact Blocks
A	1 NO - 1 NC
E	1 NC (LB)
H	1 NO (EM)
J	1 NC
K	1 NO

h

Code	Contact Quantity & Location	
	A CAM & C CAM Left	B CAM Right
0	1	—
1	—	1
3	2	—
4	—	2

i

Code	Bulb Type
Blank	Incandescent
B	LED
Y	Super-Bright LED[3]

1 Default bulb type is incandescent. For LED options, append field i. LED option not available on units sold "no head".

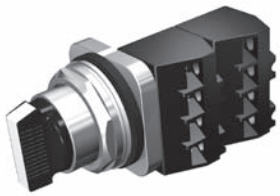
2 LED voltages apply to table i option code B and Y.

3 Not available in 120V or 240V.

For CAM selection see page 17-349.

Selection Guide

Selector Switch – Non-Illuminated



Short Lever

Long Lever

Part Number	52	S		2						
		a	b	c	d	e	f	g[2]	h[2]

a

Code	Type
S	Selector Switch

b

Code	Finish
A	Chrome - Short Lever
B	Chrome - Long Lever
X	BlackMax - Short Lever
W	BlackMax - Long Lever

c

Code	Style
2	Non-Illuminated

d

Code	Function[3]
A	2 Position: CAM A[3]
B	3 Position: CAM B
C	3 Position: CAM C[1 3]
D	3 Position: CAM D
E	3 Position: CAM E
G	3 Position: CAM G
H	4 Position: CAM H

e

Code	Type	
	2 Position	
	Maintained	Spring Return
A	All	—
C	Left	Right
	3 Position	
	Maintained	Spring Return
A	All	—
B	Center, Right	Left
C	Center, Left	Right
D	Center	Left, Right
	4 Position	
	Maintained Position	Spring Return
A	All	—

f

Code	Color
2	Red
3	Green
4	Yellow
5	Blue
6	Gray
8	Orange
B	White
N	No Insert (Black)

g[2]

Code	Contact Blocks[3]
A	1 NO - 1 NC
E	1 NC (LB)
H	1 NO (EM)
J	1 NC
K	1 NO

h[2]

Code	Contact Quantity & Location[3]	
	Left	Right
0	1	—
1	—	1
2	1	1
3	2	—
4	—	2
5	2	1
6	1	2
7	2	2
8	3	—
9	—	3

1 C CAM on spring return selectors is limited to 4 contact blocks. For CAM selection see page 17-349.

2 For operator without contact blocks leave positions g and h blank.

3 Non-Illuminated Selector Switches with CAM types: A or C with Contact Block Codes: A0, A1, A2, A3, A4, J0, J1, J2, J3, J4, K0, K1, K2, K3 or K4 are available with Hazardous Location CL1, DIV2 Rated Contacts when Suffix "HL" is added to the part number.

Selector Switch, Non-Illuminated[1)]

Contact Type	Contact	Switch Position Left	Switch Position Right	Type M = Maintained S = Spring Return	Chrome Short Lever	Chrome Long Lever	Black Max Short Lever	Black Max Long Lever
					2-Position Operator			
No Contacts	—	—	—	M M	**52SA2AAB**	**52SB2AAB**	**52SX2AAB**	**52SW2AAB**
				M<---S	**52SA2ACB**	**52SB2ACB**	**52SX2ACB**	52SW2ACB
1 N.O.	A	O	X	M M	**52SA2AABK1**	**52SB2AABK1**	**52SX2AABK1**	**52SW2AABK1**
				M<---S	**52SA2ACBK1**	**52SB2ACBK1**	**52SX2ACBK1**	**52SW2ACBK1**
1 N.O.	A	O	X	M M	**52SA2AABA1**	**52SB2AABA1**	**52SX2AABA1**	**52SW2AABA1**
1 N.C.	B	X	O	M<---S	**52SA2ACBA1**	**52SB2ACBA1**	**52SX2ACBA1**	**52SW2ACBA1**

Contact Type	Contact	Switch Position Left	Switch Position Center	Switch Position Right	Type M = Maintained S = Spring Return	Chrome Short Lever	Chrome Long Lever	Black Max Short Lever	Black Max Long Lever
					3-Position Operator				
No Contacts	—	—	—	—	M M M	**52SA2CAB**	**52SB2CAB**	**52SX2CAB**	**52SW2CAB**
					M M M	**52SA2BAB**	**52SB2BAB**	**52SX2BAB**	**52SW2BAB**
					S--->M M	**52SA2BBB**	52SB2BBB	**52SX2BBB**	52SW2BBB
					M M<----S	**52SA2BCB**	**52SB2BCB**	52SX2BCB	52SW2BCB
					S--->M<---S	**52SA2BDB**	**52SB2BDB**	**52SX2BDB**	**52SW2BDB**
1 N.O.	A	O	O	X	M M M	**52SA2CABA1**	**52SB2CABA1**	**52SX2CABA1**	**52SW2CABA1**
					S--->M M	**52SA2CBBA1**	**52SB2CBBA1**	**52SX2CBBA1**	52SW2CBBA1
1 N.C.	B	X	O	O	M M<----S	**52SA2CCBA1**	**52SB2CCBA1**	**52SX2CCBA1**	**52SW2CCBA1**
					S--->M<---S	**52SA2CDBA1**	**52SB2CDBA1**	**52SX2CDBA1**	**52SW2CDBA1**
1 N.O.	A	O	O	X	M M M	**52SA2CABA2**	**52SB2CABA2**	**52SX2CABA2**	**52SW2CABA2**
1 N.C.	B	X	O	O	S--->M M	**52SA2CBBA2**	**52SB2CBBA2**	**52SX2CBBA2**	52SW2CBBA2
1 N.O.	C	O	O	X	M M<----S	**52SA2CCBA2**	**52SB2CCBA2**	**52SX2CCBA2**	**52SW2CCBA2**
1 N.C.	D	X	O	O	S--->M<---S	**52SA2CDBA2**	**52SB2CDBA2**	**52SX2CDBA2**	**52SW2CDBA2**
1 N.O.	A	O	O	X					
1 N.C.	B	X	O	O	M M M	**52SA2GABJ2K1**	**52SB2GABJ2K1**	**52SX2GABJ2K1**	**52SW2GABJ2K1**
1 N.C.	C	O	X	O					

Contact Type	Contact	Switch Position Left	Switch Position Left Center	Switch Position Right Center	Switch Position Right	Type M = Maintained S = Spring Return	Chrome Short Lever	Chrome Long Lever	Black Max Short Lever	Black Max Long Lever
							4-Position Operator			
No Contacts	—	—	—	—	—	M M M M	**52SA2HAB**	**52SB2HAB**	**52SX2HAB**	52SW2HAB
1 N.O.	A	X	O	O	O					
1 N.C.	B	O	X	O	O	M M M M	**52SA2HABJ2K1**	52SB2HABJ2K1	52SX2HABJ2K1	52SW2HABJ2K1
1 N.C.	C	O	O	X	O					
1 N.O.	A	O	O	O	X					
1 N.O.	B	X	O	O	O					
1 N.C.	C	O	X	O	O	M M M M	**52SA2HABJ2K2**	**52SB2HABJ2K2**	52SX2HABJ2K2	52SW2HABJ2K2
1 N.C.	D	O	O	X	O					

Note: X = Closed / O = Open

1) Readily available items are in **bold**.

This is a small representation of stocked items.

Selection Guide

Keyed Selector Switch

Part Number	52	S (a)	C (b)	____ (c)	____ (d)	____ (e)	____ (f[3])	____ (g[3])	____ (h)

a

Code	Type
S	Selector Switch

b

Code	Finish
C	Chrome – Command 52

c

Code	Style
5	Non-Standard Lock/Key[1a]
6	Standard Lock/Key

d

Code	Function[4]
A	2 Position: CAM A[4]
B	3 Position: CAM B
C	3 Position: CAM C[2 4]
D	3 Position: CAM D
E	3 Position: CAM E
G	3 Position: CAM G
H	4 Position: CAM H

e

Code	2 Position		
	Maintained / Spring Return	Key Removal	
		Left	Right
E	All Maintained	X	X
F	All Maintained	X	—
G	All Maintained	—	X
X	Spring from Right	X	—

Code	3 Position				
	Maintained Position	Spring Return	Key Removal		
			Left	Center	Right
E	All	—	X	X	X
F	All	—	X	—	—
G	All	—	—	—	X
H	All	—	—	X	—
J	All	—	X	—	X
K	All	—	X	X	—
M	All	—	—	X	X
T	Center, Right	Left	—	X	—
U	Left, Center	Right	—	X	—
V	Center	Left, Right	—	X	—
W	Center, Right	Left	—	—	X
Y	Center, Right	Left	—	X	X
Z	Left, Center	Right	X	X	X

Code	4 Position				
	Maintained Position	Key Removal			
		Left	Left Center	Right Center	Right
E	All	X	X	X	X
F	All	X	—	—	—
G	All	—	—	—	X

f[3]

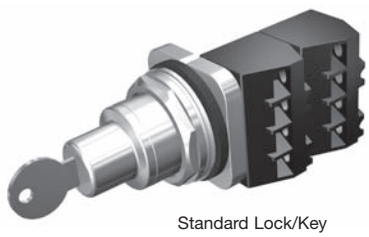
Code	Contact Blocks[4]
A	1 NO - 1 NC
J	1 NC
K	1 NO
E	1 NC (LB)
H	1 NO (EM)

g[3]

Code	Contact Quantity & Location[4]	
	Left	Right
0	1	—
1	—	1
2	1	1
3	2	—
4	—	2
5	2	1
6	1	2
7	2	2
8	3	—
9	—	3

h

Code	Key Type[1b]
Blank	501CH
X298	550CH
X299	549CH
X300	548CH
X301	547CH
X302	506CH



Standard Lock/Key

1a. See page 17-347 for replacement keys, and up-to 15 additional uniquely keyed M - Series Lock Options available for use with the 52SC6 key-operated selector switches.

1b. To order the specific lock types shown in table **h**, simply append the corresponding "X" suffix to a standard part number (Ordering Example: 52SC6AEX298).

Note: Same list price applies as standard keyed locks.

2. C CAM on spring return selectors is limited to 4 contact blocks. For CAM selection see page 17-349.

3 For operator without contact blocks leave positions f and g blank.

4 Key-Operated Selector Switches with CAM types: A or C with Contact Block Codes: A0, A1, A2, A3, A4, J0, J1, J2, J3, J4, K0, K1, K2, K3 or K4 are available with Hazardous Location CL1, DIV2 Rated Contacts when Suffix "HL" is added to the part number.

Key-operated Selector Switch, Non-Illuminated[1)]

Contact Type	Contact	Switch Position Left	Switch Position Right	Type M = Maintained S = Spring Return	Key Removal Left	Key Removal Both
					2-Position Operator	
No Contacts	—	—	—	M M	**52SC6AF**	**52SC6AE**
				M<---S	**52SC6AX**	—
1 N.O.	A	O	X	M M	**52SC6AFK1**	**52SC6AEK1**
				M<---S	**52SC6AXK1**	—
1 N.O.	A	O	X	M M	**52SC6AFA1**	**52SC6AEA1**
1 N.C.	B	X	O	M<---S	**52SC6AXA1**	—

Contact Type	Contact	Switch Position Left	Switch Position Center	Switch Position Right	Type M = Maintained S = Spring Return	Key Removal Left	Key Removal Right	Key Removal Center	Key Removal Left & Center	Key Removal Left & Right	Key Removal Center & Right	Key Removal All Positions
						3-Position Operator						
No Contacts	—	—	—	—	M M M	52SC6CF	52SC6CG	52SC6CH	52SC6CK	52SC6CJ	52SC6CM	**52SC6CE**
					M M M	**52SC6BF**	**52SC6BG**	52SC6BH	52SC6BK	52SC6BJ	52SC6BM	**52SC6BE**
					S--->M M	—	52SC6BW	52SC6BT	—	—	52SC6BY	—
					M M<----S	—	—	52SC6BU	52SC6BZ	—	—	—
					S--->M<---S	—	—	52SC6BV	—	—	—	—
1 N.O.	A	O	O	X	M M M	52SC6CFA1	52SC6CGA1	52SC6CHA1	52SC6CKA1	52SC6CJA1	52SC6CMA1	**52SC6CEA1**
					S--->M M	—	52SC6CWA1	52SC6CTA1	—	—	52SC6CYA1	—
1 N.C.	B	X	O	O	M M<----S	—	—	52SC6CUA1	52SC6CZA1	—	—	—
					S--->M<---S	—	—	52SC6CVA1	—	—	—	—
1 N.O.	A	O	O	X	M M M	52SC6CFA2	52SC6CGA2	52SC6CHA2	52SC6CKA2	52SC6CJA2	52SC6CMA2	**52SC6CEA2**
1 N.C.	B	X	O	O	S--->M M	—	52SC6CWA2	52SC6CTA2	—	—	52SC6CYA2	—
1 N.O.	C	O	O	X	M M<----S	—	—	52SC6CUA2	52SC6CZA2	—	—	—
1 N.C.	D	X	O	O	S--->M<---S	—	—	52SC6CVA2	—	—	—	—
1 N.O.	A	O	O	X								
1 N.C.	B	X	O	O	M M M	52SC6GFJ2K1	52SC6GGJ2K1	52SC6GHJ2K1	52SC6GKJ2K1	52SC6GJJ2K1	52SC6GMJ2K1	**52SC6GEJ2K1**
1 N.C.	C	O	X	O								

Contact Type	Contact	Switch Position Left	Switch Position Left Center	Switch Position Right Center	Switch Position Right	Type M = Maintained S = Spring Return	Key Removal Right	Key Removal All Positions
							4-Position Operator	
No Contacts	—	—	—	—	—	M M M M	**52SC6HG**	52SC6HE
1 N.O.	A	X	O	O	O			
1 N.C.	B	O	X	O	O	M M M M	52SC6HGJ2K1	52SC6HEJ2K1
1 N.C.	C	O	O	X	O			
1 N.O.	A	O	O	O	X			
1 N.O.	B	X	O	O	O			
1 N.C.	C	O	X	O	O	M M M M	52SC6HGJ2K2	52SC6HEJ2K2
1 N.C.	D	O	O	X	O			

Note: X = Closed / O = Open

All Operatores listed above are furnished with Lock No. 501CH

1) Readily available items are in bold.

This is a small representation of stocked items.

Options

Special locks for key-operated switches

Siemens Key-Operated Selector Switches beginning with 51SA6 or 52SC6 can be optionally ordered with the 15 uniquely keyed M-Series Locks by appending the corresponding **"X"** suffixes from the table below to the catalog number. (Ordering Example for Lock Number M705: 52SC6CEX705).

Note: Pricing for M - Series Locks on this page are slightly higher than standard lock types.

Suffix Code	Lock Number
X705	**M705**
X709	**M709**
X713	**M713**
X714	**M714**
X715	**M715**
X723	**M723**
X725	**M725**
X738	**M738**
X749	**M749**
X750	**M750**
X757	**M757**
X766	**M766**
X779	**M779**
X782	**M782**
X795	**M795**

Spare Keys for Key-Operated Selector Switches

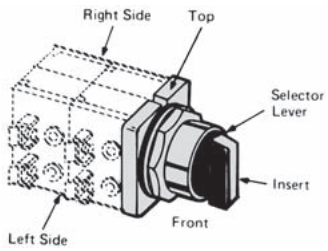
Spare Key	Part Number
550CH (1 Key)	**52KEY-550CH**
549CH (1 Key)	**52KEY-549CH**
548CH (1 Key)	**52KEY-548CH**
547CH (1 Key)	**52KEY-547CH**
501CH (1 Key)	**52KEY-501CH**
506CH (1 Key)	**52KEY-506CH**
M703 (1 Key)	**52KEY-M703**
M705 (1 Key)	**52KEY-M705**
M706 (1 Key)	**52KEY-M706**
M709 (1 Key)	**52KEY-M709**
M712 (1 Key)	**52KEY-M712**
M713 (1 Key)	**52KEY-M713**
M714 (1 Key)	**52KEY-M714**
M715 (1 Key)	**52KEY-M715**
M716 (1 Key)	**52KEY-M716**
M717 (1 Key)	**52KEY-M717**
M723 (1 Key)	**52KEY-M723**
M725 (1 Key)	**52KEY-M725**
M728 (1 Key)	**52KEY-M728**
M730 (1 Key)	**52KEY-M730**
M735 (1 Key)	**52KEY-M735**
M736 (1 Key)	**52KEY-M736**
M738 (1 Key)	**52KEY-M738**
M747 (1 Key)	**52KEY-M747**
M749 (1 Key)	**52KEY-M749**
M750 (1 Key)	**52KEY-M750**
M752 (1 Key)	**52KEY-M752**
M753 (1 Key)	**52KEY-M753**
M756 (1 Key)	**52KEY-M756**
M757 (1 Key)	**52KEY-M757**
M759 (1 Key)	**52KEY-M759**
M766 (1 Key)	**52KEY-M766**
M769 (1 Key)	**52KEY-M769**
M771 (1 Key)	**52KEY-M771**
M779 (1 Key)	**52KEY-M779**
M784 (1 Key)	**52KEY-M784**
M790 (1 Key)	**52KEY-M790**
M795 (1 Key)	**52KEY-M795**
M700 (1 Key)	**52KEY-M700**
M701 (1 Key)	**52KEY-M701**
M702 (1 Key)	**52KEY-M702**
M704 (1 Key)	**52KEY-M704**
M705 (1 Key)	**52KEY-M705**
M707 (1 Key)	**52KEY-M707**
M711 (1 Key)	**52KEY-M711**
M713 (1 Key)	**52KEY-M713**
M715 (1 Key)	**52KEY-M715**
M782 (1 Key)	**52KEY-M782**
M795 (1 Key)	**52KEY-M795**

Selection and ordering data

	Version	Ohms / color	Order no.	Pack Unit
	Potentiometer operator 2 Watts, 500 V AC/DC (NEMA Type 4)	50 150 250 500 750 1 K 2.5 K 5 K 10 K 15 K 25 K 50 K 100 K 150 K 250 K 500 K 1 M 1.5 M 2 M 5 M	**52MA3B01** **52MA3B03** **52MA3B04** **52MA3B06** **52MA3B07** **52MA3B08** **52MA3B10** **52MA3B12** **52MA3B14** **52MA3B15** **52MA3B16** **52MA3B18** **52MA3B20** **52MA3B21** **52MA3B22** **52MA3B24** **52MA3B26** **52MA3B27** **52MA3B28** **52MA3B31**	1
	2 Button maintained operator	black (flush) / red (flush) black (flush) / red (extended) black (flush) / yellow (mushroom) green (flush) / red (flush) green (flush) / red (extended) green (flush) / red (mushroom) green (flush) / green (mushroom)	**52MP2A1A2** **52MP2A1B2** **52MP2A1W4** **52MP2A3A2** **52MP2A3B2** **52MP2A3W2** **52MP2A3W3**	1
	Button remains depressed when pushed	less caps	**52MP2**	

① For use with 52BAJ (NC) contact block

Selection and ordering data



Ordering Information

- Contact blocks are ordered separately, see page 17-349
- Determine which table to use based upon the type of selector (non-illum selector switch-top, illum selector switch-middle, and selector pushbutton-bottom).
- Find the correct number of selector positions (2, 3 or 4 positions).
- Select the contact operation required for each selector position. X indicates the contacts are closed, while O indicates the contacts are open. (For the selector pushbutton, N=normal and D=depressed). Contact block must be assembled in position shown for each circuit application.
- Identify the CAM letter required for the chosen contact operation (only 1 CAM can be used per selector switch or selector pushbutton).
- Contact blocks must be assembled in the position shown for each circuit application. The mounting position is viewed from the front of the device.

Ordering CAMs D, E or G

- CAM D, E or G may be ordered at the same price by changing the 6th character of the selector catalog number. Example: Selector with D cam **52SX2D AB.**

Size Requirements

- C CAM on spring return selectors is limited to 4 contact blocks.
- Selector operators in enclosures are limited to depth of 1 contact block. (2 blocks wide).

Non-illuminated and keyed selector switches (viewed from front)

2 Selector Positions Left	Right	Contact Blocks	CAM	Mounting Left		Right
X	O	NC (52BAJ)	A	L	or	R
O	X	NO (52BAK)	A	L	or	R

3 Selector Positions Left	Center	Right	Contact Blocks	CAM	Mounting Left		Right
X	O	O	NO (52BAK)	B			R
O	O	X	NO (52BAK)	B	L		
X	X	O	NC (52BAJ)	B	L		
O	X	X	NC (52BAJ)	B			R
X	O	X	2NO (2-52BAK)	B	L	and	R
X	O	O	NC (52BAJ)	C	L	or	R
O	O	X	NO (52BAK)	C	L	or	R
O	X	O	NC (52BAJ)	D	L	or	R
O	O	X	NO (52BAK)	D	L	or	R
X	O	O	NO (52BAK)	E	L	or	R
O	X	O	NC (52BAJ)	E	L	or	R
X	O	O	NC (52BAJ)	G	L		
O	X	O	NC (52BAJ)	G			R
O	O	X	NO (52BAK)	G	L	or	R

4 Selector Positions Left	Left Center	Right Center	Right	Contact Blocks	CAM	Mounting Left	Right
X	O	O	O	NO (52BAK)	H		R
O	X	O	O	NC (52BAJ)	H	L	
O	O	X	O	NC (52BAJ)	H		R
O	O	O	X	NO (52BAK)	H	L	

Illuminated selector switches (viewed from front)

2 Selector Positions Left	Right	Contact Blocks	CAM	Mounting Left	Right
X	O	NC (52BAJ)	A	L	
O	X	NO (52BAK)	A	L	

3 Selector Positions Left	Center	Right	Contact Blocks	CAM	Mounting Left	Right
O	O	X	NC (52BAJ)	B		R
O	X	O	NO (52BAK)	B		R
X	O	O	NC (52BAJ)	C	L	
O	O	X	NO (52BAK)	C	L	

Selector Pushbuttons (viewed from front)

2 Selector Positions Left N	Left D	Right N	Right D	Contact Blocks	CAM	Mounting Left		Right
X	O	O	O	NC (52BAJ)	Q			R
X	X	O	O	NC (52BAJ)	Q	L		
O	X	O	X	NO (52BAK)	Q			R
O	O	O	X	NO (52BAK)	Q	L		
X	O	O	O	NC (52BAJ)	P	L	or	R
O	X	X	X	NO (52BAK)	P	L	or	R
X	X	X	O	NC (52BAJ)	R	L		
X	O	X	X	NC (52BAJ)	R			R
O	X	O	O	NO (52BAK)	R			R
O	O	O	X	NO (52BAK)	R	L		

3 Selector Positions Left N	Left D	Center N	Center D	Right N	Right D	Contact Blocks	CAM	Mounting Left	Right
X	O	O	O	O	O	NC (52BAJ)	S	L	
X	O	X	X	O	O	NC (52BAJ)	S		R
O	X	O	O	O	X	NO (52BAK)	S		R
O	O	O	X	O	X	NO (52BAK)	S	L	

Selection and ordering data

Assembled Non-illuminated Selector Switches

- Determine contact block and location from above.
- Select block suffix. Ex: **J** = **52BAJ**.
- Now select position suffix.
- **1-52BAJ** block mounted on right side, suffix will be **J 1**.
- Additional suffixes allow for multiple quantities and locations.
- Repeat process for next block if required.
- Add list price of blocks to operator list price.
- Consult factory for delivery.

Example 1: X O O
O O X
HAND-OFF-AUTO Maintained Switch
Catalog No **52SA2CAB A 1 = 52A2CABA1**
(**52BJK** block mounted on right side)

Example 2: X O O **52BAJ** (L)
O X O **52BAJ** (R)
O O X **52BAK** (L or R) **}K1**
G Cam required
Catalog No **52SA2GAB J2 K1 = 52SA2GABJ2K1**

Block Suffix
A = 1 NO - 1 NC, **52BJK**
E = NC Late Break, **52BAE**
H = NO Early Make, **52BAH**
J = NC, **52BAJ**
K = NO, **52BAK**

Position Suffix		
	Quantity and Location	
Suffix	Left	Right
0	1	—
1	—	1
2	1	1
3	2	—
4	—	2
5	2	1
6	1	2
7	2	2
8	3	—
9	—	3

Selection and ordering data

	Version	Suitable for	Color	Order no.
	Flush actuator lens cap The 52RC1 Screw-on style caps shown are used on the new 52BM8 & 52PM8 Pushbutton Operators.	For flush type, non-illuminated pushbuttons bag of 5 caps	black red green yellow blue gray orange kit- all colors	**52RC1A1** **52RC1A2** **52RC1A3** **52RC1A4** **52RC1A5** **52RC1A6** **52RC1A8** **52RC1AN**
	Extended actuator lens cap The 52RC1 Screw-on style caps shown are used on the new 52BM8 & 52PM8 Pushbutton Operators.	For extended type, non-illuminated pushbuttons bag of 5 caps	black red green yellow blue gray orange 1 of each color cap	**52RC1B1** **52RC1B2** **52RC1B3** **52RC1B4** **52RC1B5** **52RC1B6** **52RC1B8** **52RC1BN**
	Replacement Lens for Indicator Lights	For catalog numbers starting with 52PL or 52BL①		
		Plastic	red green blue amber clear white	**52RA4S2** **52RA4S3** **52RA4S5** **52RA4S9** **52RA4SA** **52RA4SB**
			1 of each color	**52RA4SN**
		Glass	red green blue amber clear white	**52RA4T2** **52RA4T3** **52RA4T5** **52RA4T9** **52RA4TA** **52RA4TB**
			1 of each color	**52RA4TN**
	Replacement Lens forPush to Test/ Illuminated Pushbuttons The 52RA5S Raised lens caps shown are used on the 52BT6 & 52PT6 PTT/Illuminated Pushbutton Operators. To order Flush lens caps for the new style 52BT8 & 52PT8 PTT/ Illuminated Pushbutton Operators change the 52RA5S prefix to 52RC5P (i.e. 52RC5P2).	For catalog numbers starting with 52PT or 52BT①		
		Plastic	red green blue amber clear white	**52RA5S2** **52RA5S3** **52RA5S5** **52RA5S9** **52RA5SA** **52RA5SB**

① It is possible to retrofit catalog numbers starting with 52PA, 52PE and 52PX with the replacement lens. The new lens have concentric ribs for improved light distribution.

Selection and ordering data

	Version	Suitable for	Color	Order no.
	Mushroom head push pull illuminated plastic screw-on type	For small 1 3/4" type, push-pull units	red	**52RC3JR**
			green	**52RC3JS**
			amber	**52RC3JT**
		For large 2 1/2" type, push-pull units	red	**52RC3KR**
			green	**52RC3KS**
			amber	**52RC3KT**
	Mushroom head push pull illuminated metal screw-on type	Chrome, for small 1 3/4" type, push-pull units	red	**52RB3H2**
			green	**52RB3H3**
			amber	**52RB3H9**
			white	**52RB3HB**
		BlackMax, for small 1 3/4" type, push-pull units	red	**52RX3H2**
			green	**52RX3H3**
			amber	**52RX3H9**
			white	**52RX3HB**
	Mushroom head push pull non-illuminated plastic screw-on type	For small 1 3/4" type, push-pull units (catalog numbers starting with 52PP, 52BP, 52PM9 or 52BM9)	black	**52RC3D1**
			red	**52RC3D2**
			green	**52RC3D3**
			yellow	**52RC3D4**
			blue	**52RC3D5**
			gray	**52RC3D6**
			orange	**52RC3D8**
			1 of each color	**52RC3DN**
		For large 2 1/2" type, push-pull units (catalog numbers starting with 52PP, 52BP, 52PM9 or 52BM9)	black	**52RC3E1**
			red	**52RC3E2**
			green	**52RC3E3**
			yellow	**52RC3E4**
			blue	**52RC3E5**
			gray	**52RC3E6**
			orange	**52RC3E8**
			1 of each color	**52RC3EN**
	Mushroom head push pull non-illuminated metal screw-on type	For small 1 3/4" type, push-pull units (catalog numbers starting with 52PP or 52BP)	red	**52RC3F2**
			green	**52RC3F3**
			chrome	**52RC3FC**
	Twist to release head illuminated plastic screw-on type	For small twist to release units	red	**52RC3RR**
			green	**52RC3RS**
			amber	**52RC3RT**
	Twist to release head non-illuminated plastic screw-on type	For small twist to release units	red	**52RC3R2**
			green	**52RC3R3**
			yellow	**52RC3R4**
	Replacement lens kit for Illuminated selector switches (Knob with Insert)		red	**52RA6P2**
			green	**52RA6P3**
			blue	**52RA6P5**
			amber	**52RA6P9**
			clear	**52RA6PA**
			white	**52RA6PB**
	Lever inserts Short lever		red	**52RA2A2**
			green	**52RA2A3**
			yellow	**52RA2A4**
			blue	**52RA2A5**
			gray	**52RA2A6**
			orange	**52RA2A8**
			white	**52RA2AB**
	Long lever		red	**52RA2B2**
			green	**52RA2B3**
			yellow	**52RA2B4**
			blue	**52RA2B5**
			gray	**52RA2B6**
			orange	**52RA2B8**
			white	**52RA2BB**

Selection and ordering data

	Version	Suitable for	Color	Order no.
	Protective boot Offers protection from ice and foreign sub-stances from interfering with button operation	Flush pushbutton operations	clear black	**52AABA** **52AAB1**
	Guards Prevents accidental operation	Non-illuminated basic pushbuttons	chrome blackmax	**52AAGP** **52AXGP**
		1 5/8" mushroom pushbuttons, 1 3/4" push-pull units①, and twist to release units	chrome blackmax	**52AAGM** **52AXGM**
		Push to test/illuminated pushbutton and indicator lights	chrome blackmax	**52AAGL** **52AXGL**
	EMERGENCY-STOP Backing Ring	Yellow 90mm E-STOP Backing Ring		**52AAR**
	Locknuts Replacement front ring	Non-illuminated basic pushbuttons	chrome blackmax	**52AANP** **52AXNP**
		Non-illuminated mushroom pushbuttons	chrome blackmax	**52AANL** **52AXNL**
		Push-pull and twist-to-release units (only for push-pull units starting with 52PP or 52BP)②	chrome blackmax	**52CANP** **52CXNP**
		Indicator Lights	blue amber	**52AANL** **52AXNL**
		Selector switches	chrome blackmax	**52AANS** **52AXNS**
	Mounting Accessories	Class 52 Trim Washer Kit (Set of 10 pcs) Class 52 Washer Kit (Include 2-Neoprene Gaskets, 1-Trim Washer, 1-Index Locking Ring (chrome)	chrome	**52AAQ** **52AAD**
	Padlock attachments	Non-illuminated basic pushbuttons	flush extended	**52AALA** **52AALB**
	EMERGENCY-STOP Lock Out	Class 52 Illuminated Mushroom Head Pushbuttons; 304 Stainless Steel	chrome (304 SS)	**52AALE**
	Padlock cover Lock devices in off position	Pushbuttons, selector switches, and non-illuminated mushroom heads		**52AALS**
	Lock nut wrench	All devices		**52MAWB**
	Hole plugs		corrosion resistant steel, grey stainless steel	**52AAH6** **52ABH6** **52ABHS**
	Spare keys (Kit includes 1 Key)	Class 52 Standard Keyed Selector Switch. Keyed Selector Switch ordered with Suffix X302. Keyed Selector Switch ordered with Suffix X301. Keyed Selector Switch ordered with Suffix X300. Keyed Selector Switch ordered with Suffix X299. Keyed Selector Switch ordered with Suffix X298.	501CH 506CH 547CH 548CH 549CH 550CH	**52KEY-501CH** **52KEY-506CH** **52KEY-547CH** **52KEY-548CH** **52KEY-549CH** **52KEY-550CH**
	Grounding kit	All devices		**52AL109145**

① These can also be used with the 1 5/8" push-pull devices.
② For push-pull units starting with part numbers 52PA, 52PE or 52PX, replacement locknuts can be ordered using 52AANL (Chrome) and 52AXNL (BlackMax).

Selection and ordering data⑥

	Contact version	Number of NO contacts	NC contacts	Version	Plunger color	SD	Article No.
Touchsafe contact blocks for UL Ordinary Location only							
							Screw terminals ⊕
52BAK	Silver alloy	1	0	1 NO	White		**52BAK**
		0	1 Ⓟ	1 NC	Red		**52BAJ**②
		1	1 Ⓟ	1 NO - 1 NC	Black		**52BJK**②
		1	0	1 NO early make (closes before 52BAK)	Green		**52BAH**
		0	1	1 NC late break (opens after 52BAJ)	Yellow		**52BAE**
		0	1	1 NC extra late break (opens after 52BAE)	Blue		**52BAU**
	Gold-plated	1	0	1 NO	White		**52BAKG**
		0	1 Ⓟ	1 NC	Red		**52BAJG**②
		1	1 Ⓟ	1 NO - 1 NC	Black		**52BJKG**②
		1	0	1 NO early make (closes before 52BAKG)	Green		**52BAHG**
		0	1	1 NC late break (opens after 52BAJG)	Yellow		**52BAEG**
		0	1	1 NC extra late break (opens after 52BAEG)	Blue		**52BAUG**
Touchsafe contact blocks for UL Ordinary Location & UL Hazardous Location, CL1, DIV2 ①							
52BJKHL	Factory Sealed	1	0	1 NO	NEW		**52BAKHL**③④
		0	1	1 NC	NEW		**52BAJHL**③④
		1	1	1 NO - 1 NC	NEW		**52BJKHL**③
Contact blocks for UL Ordinary Location & UL Hazardous Location, CL1, DIV2 ①⑤							
52BAR	Hermetically Sealed	1	1	1 NO - 1 NC Reed Switch .25A Max, 200V AC, 10 Watt max .5A Max, 200V DC, 10 Watt max	White		**52BAR**

① HL Series Contact Blocks and Reed Switch are UL listed, for Hazardous Location Class 1, Division 2 Applications.

② Ⓟ Positive opening according to IEC 60947-5-1, Appendix K.

③ HL Series Contact Blocks are Rated ½ HP@120Vac / 1 HP@208/240/277Vac. See Instruction Sheet E87010-0524-T003-A3, for complete ratings.

④ HL Series Single-contact Blocks are rated 690Vac, 16A, 50-60Hz, See Instruction Sheet E87010-0524-T003-A3, for complete ratings.

⑤ Reed Switch Terminals are not touch safe.

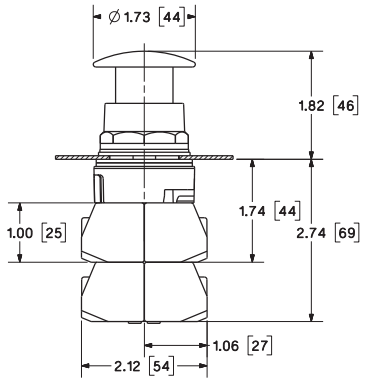
⑥ See Technical Data on page 17-363

Selection and ordering data

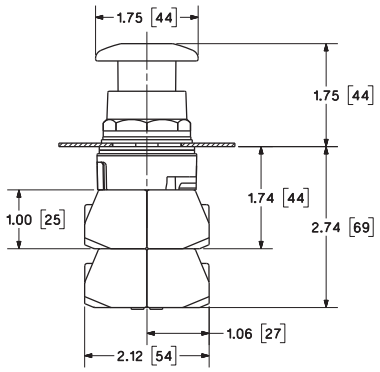
Version	Suitable for	Lamp voltage	Color	Order no.
Lamps with screw connection, miniature bayonet (BA 9s style)				
Incandescent lamps,				
Flashing, type 267 lamp (replaces 755 lamp)	51, 52	6 V		**52AABNF**
6V type 755 lamp (Rated 150 mA)	51, 52	6 V		**52AABN**
12V type 756 (Rated 80 mA)	51, 52	12 V		**52AACN**
24V type 757 (Rated 80 mA)	51, 52	24 V		**52AADN**
48V, 2W	52	48 V		**3SB1902-1AP**
60V, 2W	52	60 V		**3SR9424**
120V, 2.5W, type #120MB (Rated 250 mA)	52	120 V		**52AAENC1**
Neon (uses resistors) type B2A (NE-51H)	52	120 V		**52AAPN**
Candelabra, 120V, 3W, Full voltage type 3S6/5	52 older revision styles	120 V		**52AAENC**
LED bulbs①				
LED, BA9s type	Class 52	6 V AC/DC		**52AEB□**
		24 V AC/DC		**52AED□**
		120 V AC/DC		**52AEE□**
Super-Bright LED	Class 52	6 V AC/DC		**52AEB□7**
		24 V AC/DC		**52AED□7**
LED lighting module with integrated LED②				
Single LED	Class 52	6-24 V AC/DC		**52AAIL□**
		24-240V AC/DC		**52AAIU□**
Full voltage lighting module accessory with BA9s type lamp①③				
LED	Class 52	6 V AC/DC		**52AAFB□B**
		24 V AC/DC		**52AAFD□B**
		120 V AC/DC		**52AAFE□B**
Super-Bright LED	Class 52	6 V AC/DC		**52AAFB□Y**
		24 V AC/DC		**52AAFD□Y**
Incandescent bulb	Class 52	6 V AC/DC		**52AAFB**
		24 V AC/DC		**52AAFD**
		120 V AC/DC		**52AAFE**
Transformer lighting module accessory with BA9s type lamp①③				
LED	Class 52	120 V AC		**52AATG□B**
		240 V AC		**52AATH□B**
		277 V AC		**52AATT□B**
		480 V AC		**52AATJ□B**
		600 V AC		**52AATK□B**
Super-Bright LED	Class 52	120 V AC		**52AATG□Y**
		240 V AC		**52AATH□Y**
		277 V AC		**52AATT□Y**
		480 V AC		**52AATJ□Y**
		600 V AC		**52AATK□Y**
Incandescent bulb	Class 52	120 V AC		**52AATGN**
		240 V AC		**52AATHN**
		277 V AC		**52AATTN**
		480 V AC		**52AATJN**
		600 V AC		**52AATKN**
		Color options:	red	**2**
			green	**3**
			yellow/amber	**4**
			blue	**5**
			white/clear	**B**

① Standard LED lamps are recommended for indoor applications, Super-Bright LED Lamps are recommended for outdoor applications.
② Integrated LED Light Modules are rated, for UL Ordinary Location, UL Hazardous Location Class 1, Division 2 Applications.
③ Light Modules with BA9s Lamp Sockets are rated, for both UL Ordinary Location and UL Hazardous Location Class 1, Division 2 Applications.

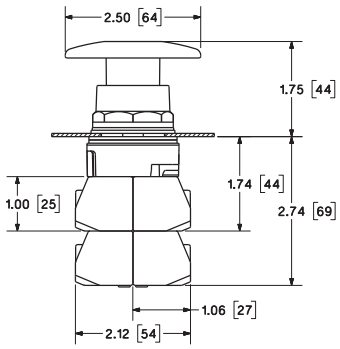
Non-Illuminated Push-Pull Metal Mushroom Head



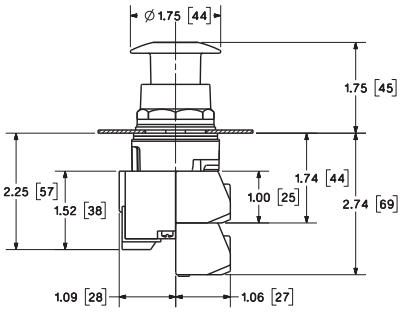
Non-Illuminated Push-Pull Small Plastic Mushroom Head



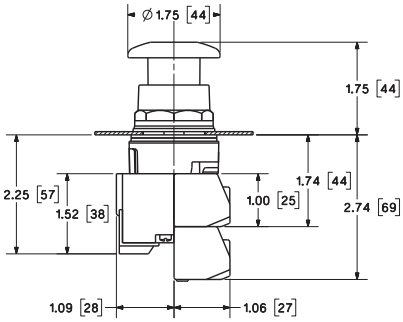
Non-Illuminated Push-Pull Large Plastic Mushroom Head



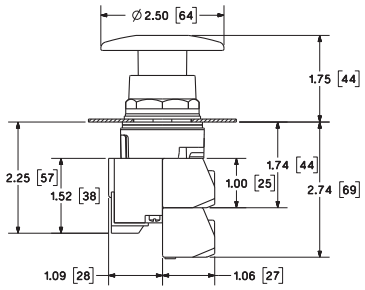
Illuminated Push-Pull Metal Mushroom Head



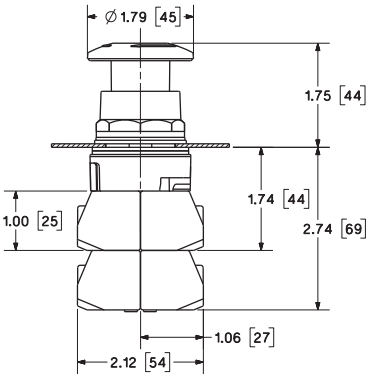
Fully Illuminated Push-Pull Small Plastic Mushroom Head



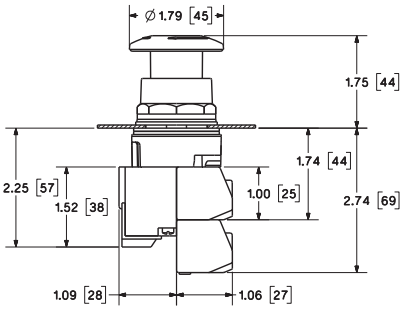
Illuminated Push-Pull Large Plastic Mushroom Head



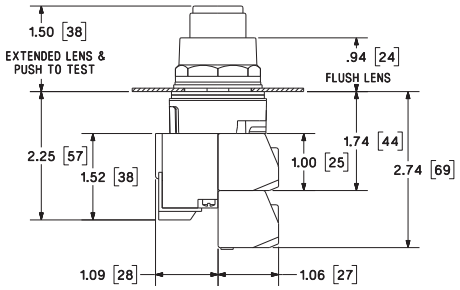
Non-Illuminated Twist Release Plastic Mushroom Head



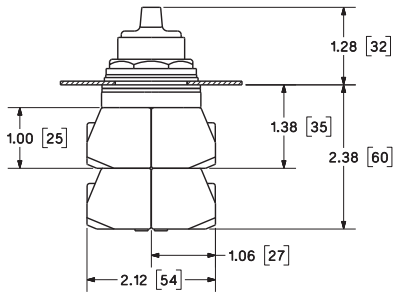
Illuminated Twist Release Plastic Mushroom Head



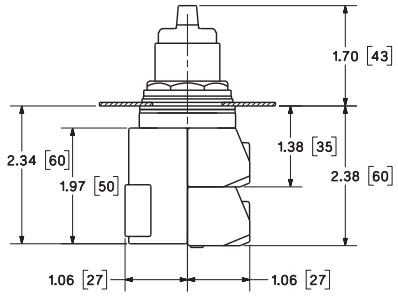
Illuminated Pushbutton Flush Lens
Illuminated Pushbutton Extended Lens
Illuminated Push to Test



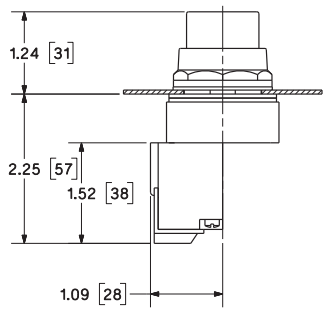
Selector Switch Non-Illuminated



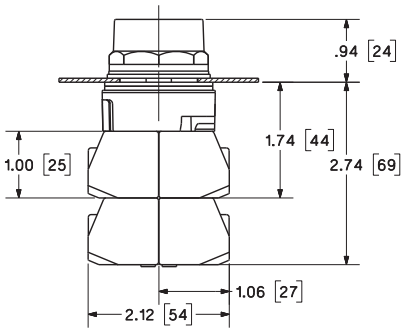
Selector Switch Illuminated



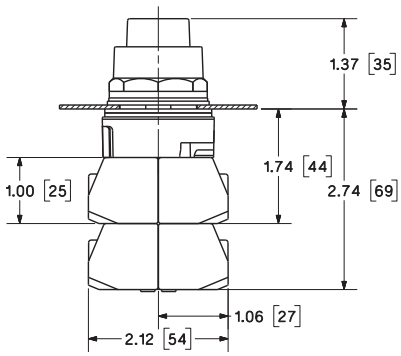
Indicator Light Plastic Lens



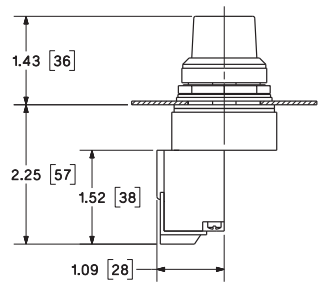
Momentary Pushbutton Non-Illuminated Flush Cap



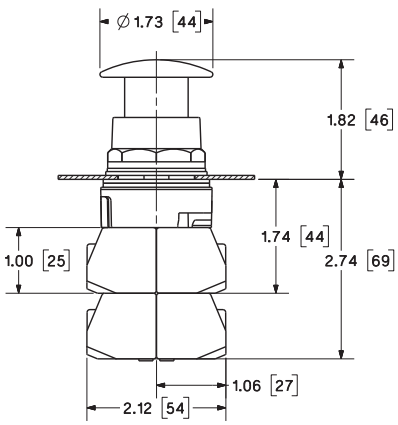
Momentary Pushbutton Non-Illuminated Raised Cap



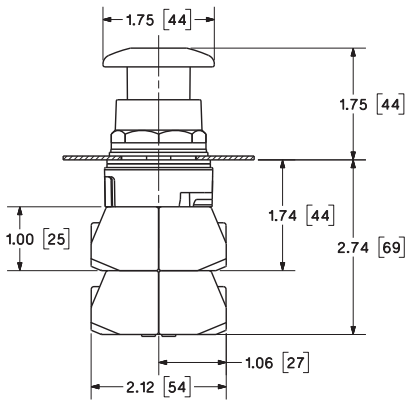
Indicator Light Glass Lens



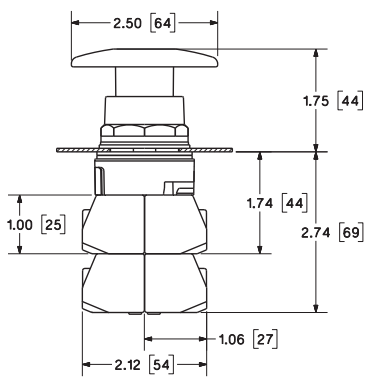
Momentary Pushbutton Metal Mushroom Head



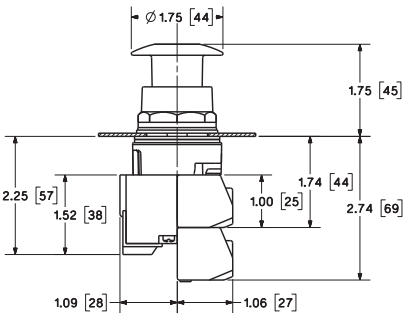
Momentary Pushbutton Small Plastic Mushroom Head



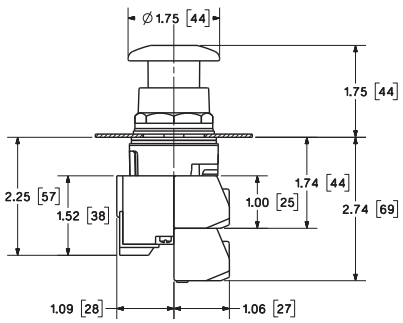
Momentary Pushbutton Large Plastic Mushroom Head



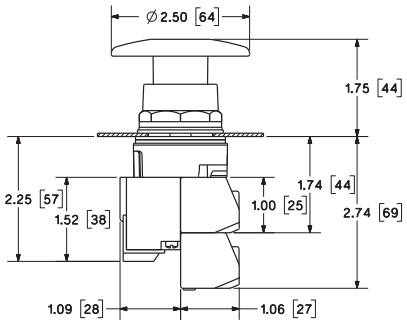
Illuminated Momentary Pushbutton Metal Mushroom Head



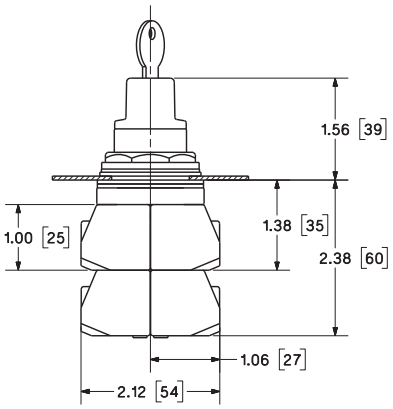
Illuminated Momentary Pushbutton Small Plastic Mushroom Head



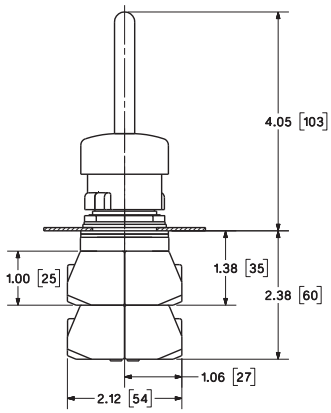
Illuminated Momentary Pushbutton Large Plastic Mushroom Head



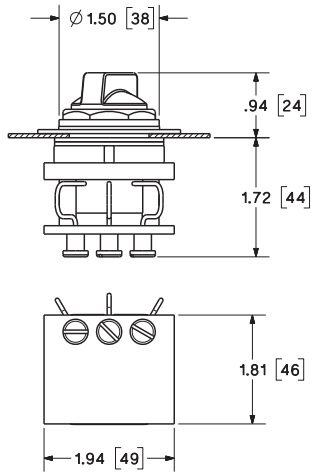
Selector Switch Keyed



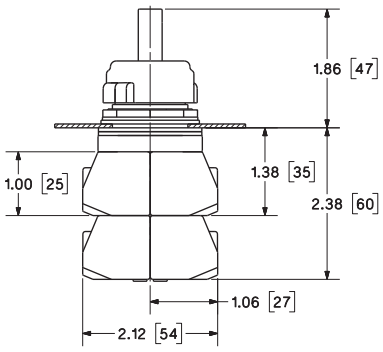
Wobble Switch



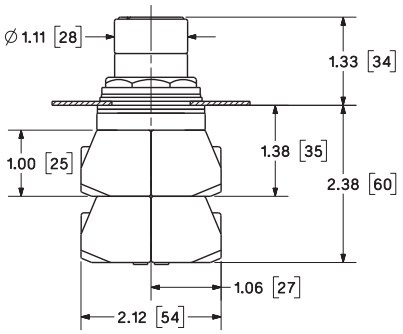
Potentiometer Switch



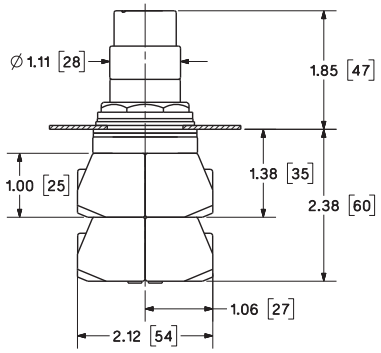
Toggle Switch



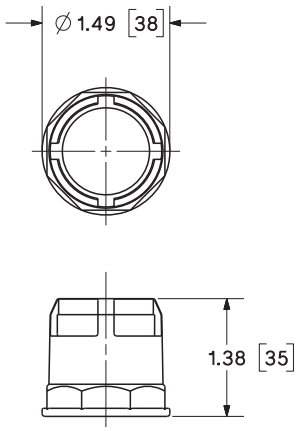
Selector Pushbutton Switch Flush Cap



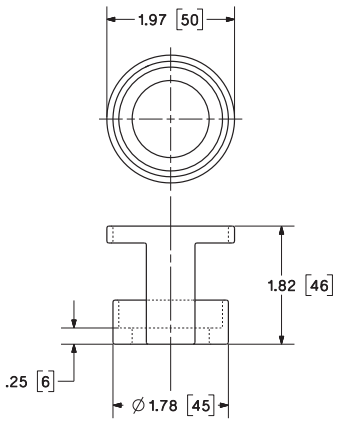
Selector Pushbutton Switch Raised Cap



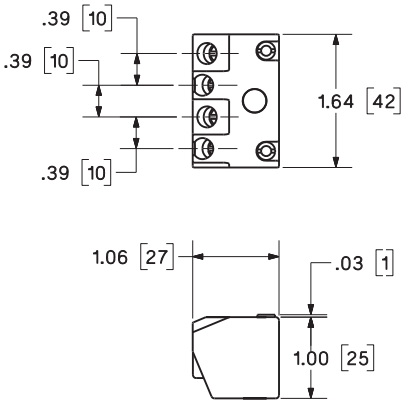
Momentary Pushbutton Guard
Illuminated Push to Test Guard



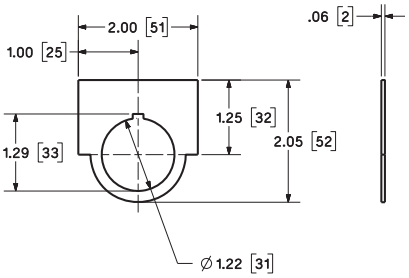
Mushroom Head Guard



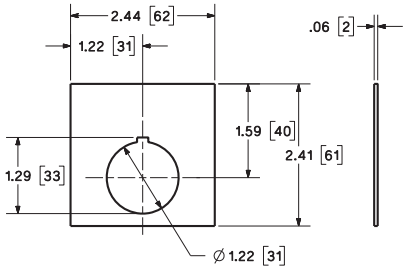
Contact Block



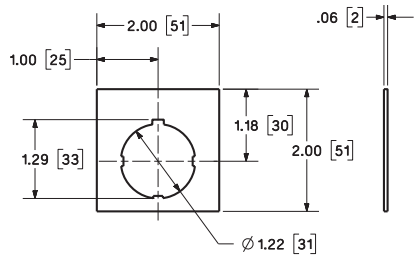
Large Metal Legend Plate



Automotive Metal Legend Plate



Large Plastic Legend Plate



Break Glass and Emergency Power Off Pushbutton (EPO) Stations NEW

Selection and ordering data

Description	Degree of protection	Conduit Entry 3/4" NPT	No. of command points	Contact①	Legend Plate	Order no.
Class 52 Oiltight Pushbutton Stations③						
Break Glass Pushbutton Station	NEMA 4X	Side	1	1NO-1NC	"EMERGENCY SHUT-OFF"	**52G112FB**
					"EMERGENCY OFF"	**52G113FB**
					"EMERGENCY POWER OFF"	**52G114FB**
					"EMERGENCY GENERATOR STOP"	**52G115FB**
		Rear②			"EMERGENCY SHUT-OFF"	**52G112FR**
					"EMERGENCY OFF"	**52G113FR**
					"EMERGENCY POWER OFF"	**52G114FR**
					"EMERGENCY GENERATOR STOP"	**52G115FR**
		Side and Rear②			"EMERGENCY SHUT-OFF"	**52G112FD**
					"EMERGENCY OFF"	**52G113FD**
					"EMERGENCY POWER OFF"	**52G114FD**
					"EMERGENCY GENERATOR STOP"	**52G115FD**
Emergency Power Off EPO Pushbutton Station	NEMA 4X	Side	1	1NO-1NC	"EMERGENCY POWER OFF"	**52C114EB**
	NEMA 12/13	N/A	1	1NO-1NC	"EMERGENCY POWER OFF"	**52C114A**

Accessories		
Break Glass Pushbutton with 1NO-1NC, 4 Extra Glass Lens Inserts		**52PM8AGA**
Break Glass Pushbutton with 1NO-1NC, 4 Extra Glass Lens Inserts, Mallet, Chain, Clip, Mounting Screw④		**52PM8AGAH**
Replacement Glass Lens Insert Kit (5 piece pack)		**52RC1AG**
Break Glass Legend Plates⑤	"EMERGENCY SHUT-OFF"	**52NL112R**
	"EMERGENCY OFF"	**52NL113R**
	"EMERGENCY POWER OFF"	**52NL114R**
	"EMERGENCY GENERATOR STOP"	**52NL115R**
EPO Legend Plate⑤	"EMERGENCY POWER OFF"	**52NF214R**
Enclosure, NEMA 4X Aluminum with ANSI 61 Gray finish comes with one 3/4" - 14 NPT conduit entry in side of enclosure, and one Empty Command Point for fitting 30mm Round Devices.		**P30EMS01EB**

① Pushbutton Station comes with 1) 52BJK, 1NO-1NC contact rated NEMA A600/P600. One additional Class 52 contact block may be field installed if required.
② Versions with Conduit Entry from the Rear available February 2020.
③ All Glass Break Pushbutton Stations come with 4 Extra Glass Lens Inserts.
④ Sealant is not supplied with 52PM8AGAH kits. Note: Teflon Tape or Pipe Dope is required on the Mallet Mounting Clip Screw when field installed in a NEMA 4X Enclosure.
⑤ For a more comprehensive list of our most common legend plates, see page 17-364.

Selection and ordering data

	Actuator identification C = top device in station B = middle device in station A = bottom device in station	Degree of protection①	Contact / voltage	No. of command points	Order no.	Pack Unit
1 unit control station	A = Momentary flush pushbutton black, label "START"	NEMA 12	1NO - 1NC	1	**52C101A**	
	A = Momentary raised pushbutton red, label "STOP"	NEMA 12	1NO - 1NC	1	**52C103A**	
	A = Momentary mushroom head red, label "STOP"	NEMA 12	1NO - 1NC	1	**52C104A**	
	A = Maintained metal mushroom head red, label "EMERGENCY STOP"	NEMA 12	1NO - 1NC	1	**52C117A**	
	A = 2 position selector switch "OFF-ON"	NEMA 12	1NO - 1NC	1	**52C159A**	
	A = 3 position selector switch "HAND-OFF-AUTO"	NEMA 12	1NO - 1NC	1	**52C156A**	
	A = Indicator light, red	NEMA 12	120V Transformer type	1	**52C131A**	
	A = Indicator light, green	NEMA 12	120V Transformer type	1	**52C135A**	
	A = Momentary flush pushbutton black, label "START"	NEMA 4X Stainless Steel	1NO - 1NC	1	**52C101S**	
	A = Momentary raised pushbutton red, label "STOP"	NEMA 4X Stainless Steel	1NO - 1NC	1	**52C103S**	
	A = Momentary mushroom head red, label "STOP"	NEMA 4X Stainless Steel	1NO - 1NC	1	**52C104S**	
	A = Maintained plastic mushroom head red, label "EMERGENCY STOP"	NEMA 4X Stainless Steel	1NO - 1NC	1	**52C116S**	
	A = 2 position selector switch "OFF-ON"	NEMA 4X Stainless Steel	1NO - 1NC	1	**52C159S**	
	A = 3 position selector switch "HAND-OFF-AUTO"	NEMA 4X Stainless Steel	1NO - 1NC	1	**52C156S**	
	A = Momentary flush pushbutton black, label "START"	NEMA 4X Fiberglass	1NO - 1NC	1	**52C101X**	
	A = Momentary raised pushbutton red, label "STOP"	NEMA 4X Fiberglass	1NO - 1NC	1	**52C103X**	
	A = Momentary mushroom head red, label "STOP"	NEMA 4X Fiberglass	1NO - 1NC	1	**52C104X**	
	A = Maintained plastic mushroom head red, label "EMERGENCY STOP"	NEMA 4X Fiberglass	1NO - 1NC	1	**52C116X**	
	A = 2 position selector switch "OFF-ON"	NEMA 4X Fiberglass	1NO - 1NC	1	**52C159X**	
	A = 3 position selector switch "HAND-OFF-AUTO"	NEMA 4X Fiberglass	1NO - 1NC	1	**52C156X**	
2 unit control station	B = Momentary flush pushbutton black, label "START" A = Momentary raised pushbutton red, label "STOP"	NEMA 12	1NO, 1NC 1NO, 1NC	2	**52C201A**	
	B = Momentary flush pushbutton black, label "START" A = Momentary Mushroom head pushbutton red, label "STOP"	NEMA 12	1NO, 1NC 1NO, 1NC	2	**52C202A**	
	B = Momentary flush pushbutton, label "FORWARD" A = Momentary flush pushbutton, label "REVERSE"	NEMA 12	1NO, 1NC 1NO, 1NC	2	**52C204A**	
	B = Momentary flush pushbutton, label "UP" A = Momentary flush pushbutton, label "DOWN"	NEMA 12	1NO, 1NC 1NO, 1NC	2	**52C223A**	
	B = Indicator light, red, label "RUN" A = Maintained selector switch, label "HAND-OFF-AUTO"	NEMA 12	120V Transformer type	2	**52C224A**	
	B = Indicator light, red A = Indicator light, green	NEMA 12	120V Transformer type	2	**52C230A**	
	B = Momentary flush pushbutton black, label "START" A = Momentary raised pushbutton red, label "STOP"	NEMA 4X Stainless Steel	1NO, 1NC 1NO, 1NC	2	**52C201S**	
	B = Momentary flush pushbutton black, label "START" A = Momentary Mushroom head pushbutton red, label "STOP"	NEMA 4X Stainless Steel	1NO, 1NC 1NO, 1NC	2	**52C202S**	
	B = Momentary flush pushbutton, label "UP" A = Momentary flush pushbutton, label "DOWN"	NEMA 4X Stainless Steel	1NO, 1NC 1NO, 1NC	2	**52C223S**	
	B = Indicator light, red, label "RUN" A = Maintained selector switch, label "HAND-OFF-AUTO"	NEMA 4X Stainless Steel	120V Transformer type 1NO, 1NC	2	**52C224S**	
	B = Momentary flush pushbutton black, label "START" A = Momentary raised pushbutton red, label "STOP"	NEMA 4X Fiberglass	1NO, 1NC 1NO, 1NC	2	**52C201X**	
	B = Momentary flush pushbutton black, label "START" A = Momentary Mushroom head pushbutton red, label "STOP"	NEMA 4X Fiberglass	1NO, 1NC 1NO, 1NC	2	**52C202X**	
	B = Momentary flush pushbutton, label "UP" A = Momentary flush pushbutton, label "DOWN"	NEMA 4X Fiberglass	1NO, 1NC 1NO, 1NC	2	**52C223X**	
	B = Indicator light, red, label "RUN" A = Maintained selector switch, label "HAND-OFF-AUTO"	NEMA 4X Fiberglass	120V Transformer type 1NO, 1NC	2	**52C224X**	

① NEMA 4X Stainless Steel Enclosure is 304 SS.

Selection and ordering data

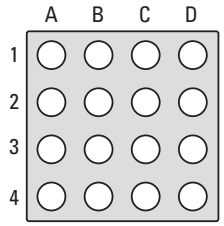
	Actuator identification	Degree of protection①	Contact / voltage	No. of command points	Order no.	Pack Unit
3 unit control station	C = Indicator light, red B = Momentary flush pushbutton black, label “START” A = Momentary raised pushbutton red, label “STOP”	NEMA 12	120V 1NO, 1NC 1NO, 1NC 1NO, 1NC	3	**52C307A**	
	C = Momentary flush pushbutton black, label “FORWARD” B = Momentary flush pushbutton black, label “REVERSE” A = Momentary raised pushbutton red, label “STOP”	NEMA 12	1NO, 1NC 1NO, 1NC 1NO, 1NC	3	**52C301A**	
	C = Momentary flush pushbutton black, label “UP” B = Momentary flush pushbutton black, label “DOWN” A = Momentary raised pushbutton red, label “STOP”	NEMA 12	1NO, 1NC 1NO, 1NC 1NO, 1NC	3	**52C332A**	
	C = Momentary flush pushbutton black, label “OPEN” B = Momentary flush pushbutton black, label “CLOSE” A = Momentary raised pushbutton red, label “STOP”	NEMA 12	1NO, 1NC 1NO, 1NC 1NO, 1NC	3	**52C333A**	
	C = Momentary flush pushbutton black, label “HI” B = Momentary flush pushbutton, black label “LOW” A = Momentary raised pushbutton red, label “STOP”	NEMA 12	1NO, 1NC 1NO, 1NC 1NO, 1NC	3	**52C334A**	
	C = Indicator light, red B = Momentary flush pushbutton black, label “START” A = Momentary raised pushbutton red, label “STOP”	NEMA 4X Stainless Steel	120V 1NO, 1NC 1NO, 1NC 1NO, 1NC	3	**52C307S**	
	C = Momentary flush pushbutton black, label “FORWARD” B = Momentary flush pushbutton black, label “REVERSE” A = Momentary raised pushbutton red, label “STOP”	NEMA 4X Stainless Steel	1NO, 1NC 1NO, 1NC 1NO, 1NC	3	**52C301S**	
	C = Momentary flush pushbutton black, label “UP” B = Momentary flush pushbutton black, label “DOWN” A = Momentary raised pushbutton red, label “STOP”	NEMA 4X Stainless Steel	1NO, 1NC 1NO, 1NC 1NO, 1NC	3	**52C332S**	
	C = Momentary flush pushbutton black, label “OPEN” B = Momentary flush pushbutton black, label “CLOSE” A = Momentary raised pushbutton red, label “STOP”	NEMA 4X Stainless Steel	1NO, 1NC 1NO, 1NC 1NO, 1NC	3	**52C333S**	
	C = Momentary flush pushbutton black, label “HI” B = Momentary flush pushbutton, black label “LOW” A = Momentary raised pushbutton red, label “STOP”	NEMA 4X Stainless Steel	1NO, 1NC 1NO, 1NC 1NO, 1NC	3	**52C334S**	
	C = Indicator light, red B = Momentary flush pushbutton black, label “START” A = Momentary raised pushbutton red, label “STOP”	NEMA 4X Fiberglass	120V 1NO, 1NC 1NO, 1NC	3	**52C307X**	
	C = Momentary flush pushbutton black, label “FORWARD” B = Momentary flush pushbutton black, label “REVERSE” A = Momentary raised pushbutton red, label “STOP”	NEMA 4X Fiberglass	1NO, 1NC 1NO, 1NC 1NO, 1NC	3	**52C301X**	
	C = Momentary flush pushbutton black, label “UP” B = Momentary flush pushbutton black, label “DOWN” A = Momentary raised pushbutton red, label “STOP”	NEMA 4X Fiberglass	1NO, 1NC 1NO, 1NC 1NO, 1NC	3	**52C332X**	
	C = Momentary flush pushbutton black, label “OPEN” B = Momentary flush pushbutton black, label “CLOSE” A = Momentary raised pushbutton red, label “STOP”	NEMA 4X Fiberglass	1NO, 1NC 1NO, 1NC 1NO, 1NC	3	**52C333X**	
	C = Momentary flush pushbutton black, label “HI” B = Momentary flush pushbutton, black label “LOW” A = Momentary raised pushbutton red, label “STOP”	NEMA 4X Fiberglass	1NO, 1NC 1NO, 1NC 1NO, 1NC	3	**52C334X**	

① NEMA 4X Stainless Steel Enclosure is 304 SS.

Selection and ordering data

Version	Number of command points	Degree of protection	Order No.①	Pack Unit
Standard enclosures come with 2 1/4" leg center for legend spacing. Automotive end plates require 2 1/2 " spacing. For more than 2 contact blocks on the right or left, use extra deep enclosure. Mounting hole arrangement 1 thu 4 are in one row 6 holes are 3 down and 2 across 9 holes are 3 down and 3 across 12 holes are 4 down and 3 across 16 holes are 4 down and 4 across	1	NEMA Type 12/13	**P30EMS01**	
	1	NEMA Type 12/13 extra deep	**P30EMS01D**	
	1	NEMA Type 4/4X stainless steel	**P30EMS014**	
	1	NEMA Type 4/4X Fiberglass	**P30EMS01X**	
	2	NEMA Type 12/13	**P30EMS02**	
	2	NEMA Type 12/13 extra deep	**P30EMS02D**	
	2	NEMA Type 4/4X stainless steel	**P30EMS024**	
	2	NEMA Type 4/4X Fiberglass	**P30EMS02X**	
	3	NEMA Type 12/13	**P30EMS03**	
	3	NEMA Type 12/13 extra deep	**P30EMS03D**	
	3	NEMA Type 4/4X stainless steel	**P30EMS034**	
	3	NEMA Type 4/4X Fiberglass	**P30EMS03X**	
	4	NEMA Type 12/13	**P30EMS04**	
	4	NEMA Type 12/13 extra deep	**P30EMS04D**	
	4	NEMA Type 4/4X stainless steel	**P30EMS044**	
	4	NEMA Type 4/4X Fiberglass	**P30EMS04X**	
	6	NEMA Type 12/13	**P30EMS06**	
	6	NEMA Type 12/13 extra deep	**P30EMS06D**	
	6	NEMA Type 4/4X stainless steel	**P30EMS064**	
	9	NEMA Type 12/13	**P30EMS09**	
	9	NEMA Type 12/13 extra deep	**P30EMS09D**	
	9	NEMA Type 4/4X stainless steel	**P30EMS094**	
	12	NEMA Type 12/13	**P30EMS12**	
	12	NEMA Type 12/13 extra deep	**P30EMS12D**	
	12	NEMA Type 4/4X stainless steel	**P30EMS124**	
	16	NEMA Type 12/13	**P30EMS16**	
	16	NEMA Type 12/13 extra deep	**P30EMS16D**	
	16	NEMA Type 4/4X stainless steel	**P30EMS164**	

Order Form



Enclosure Hole Arrangement

Ordering Information

To order non-standard control stations select catalog numbers from the previous pages, determine the required position in the enclosure and fill in the table below. If a special legend plate is required, specify description in the table. The combined list prices of the components is the list price of the station.

- Select enclosure
- Vertical or Horizontal. Outline Diagram at left starting at the top left-hand corner. Example: 3 unit vertical outline location No. 1A, 2A and 3A. 3 unit horizontal outline location No. 1A, 1B, and 1C
- List location No. and applicable catalog numbers in the table below. Use complete catalog numbers where possible

Order No./Item No.

Customer

Enclosure Catalog No.

Location	Operator PB-SEL.-PL	Accessories Key Lock, Boot, Etc,	Legend Plate Legend or Blank	Special Marking

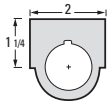
① NEMA 4X Stainless Steel Enclosure is 304 SS.

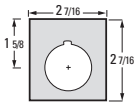
Design

The 30 mm legend plates are approved for the use with both Class 51 and Class 52 devices.
Automotive legend plates require 2 1/2" mounting centers. Plastic legend plates will have white letters ingraved.

When ordering custom engraved legend plates, specify the required inscription text.

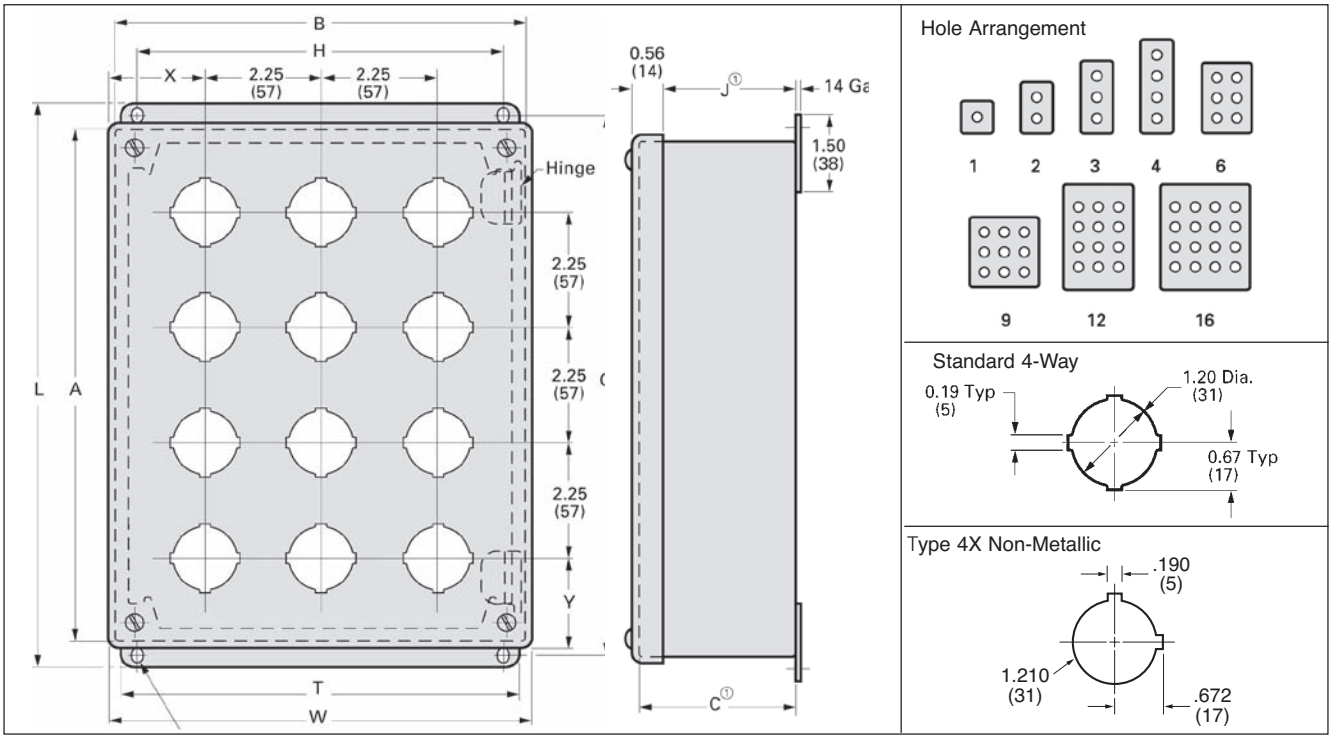
Selection and ordering data





Inscription	Large (1 1/4" x 2") Order No.	Automotive① (2 7/16" x 2 7/16") Order No.	Large Plastic② (2 1/16" x 2") Order No.	Automotive Plastic①② (2 7/16" x 2 7/16") Order No.
"Blank (brushed aluminum)"	**52NL02**	**52NA02**	—	—
"Blank (red)"	**52NL02R**	**52NA02R**	**52ND02R**	**52NE02R**
"Blank (Black)"	**52NL02B**	**52NA02B**	**52ND02B**	**52NE02B**
Inscribed legend plates with large brushed aluminum background				
Close	**52NL18**	**52NA18**	—	—
Down	**52NL10**	**52NA10**	—	—
Emerg Stop	**52NL16**	**52NA16**	—	—
Emerg Stop (red)	**52NL16R**	**52NA16R**	—	—
Fast-Slow	**52NL33**	**52NA33**	—	—
Forward	**52NL05**	**52NA05**	—	—
For-Off-Rev	**52NL38**	**52NA38**	—	—
For-Rev	**52NL31**	**52NA31**	—	—
Hand-Off-Auto	**52NL37**	**52NA37**	—	—
High	**52NL07**	**52NA07**	—	—
High-Low	**52NL30**	**52NA30**	—	—
High-Off-Low	**52NL44**	**52NA44**	—	—
In	**52NL21**	**52NA21**	—	—
Jog	**52NL13**	**52NA13**	—	—
Jog-Forward	**52NL24**	**52NA24**	—	—
Jog-Reverse	**52NL25**	**52NA25**	—	—
Low	**52NL08**	**52NA08**	—	—
Lower	**52NL20**	**52NA20**	—	—
Man-Auto	**52NL35**	**52NA35**	—	—
Off	**52NL12**	**52NA12**	—	—
Off-On	**52NL26**	**52NA26**	—	—
On	**52NL11**	**52NA11**	—	—
On-Off-Auto	**52NL40**	**52NA40**	—	—
Open	**52NL17**	**52NA17**	—	—
Open-Close	**52NL34**	**52NA34**	—	—
Open-Off-Close	**52NL41**	**52NA41**	—	—
Out	**52NL22**	**52NA22**	—	—
Pull to Start Push to Stop	**52NL47**	**52NA47**	—	—
Raise	**52NL19**	**52NA19**	—	—
Raise-Lower	**52NL36**	**52NA36**	—	—
Reset	**52NL14**	**52NA14**	—	—
Reverse	**52NL06**	**52NA06**	—	—
Run	**52NL23**	**52NA23**	—	—
Run-Jog	**52NL29**	**52NA29**	—	—
Safe-Run	**52NL27**	**52NA27**	—	—
Slow-Off-Fast	**52NL39**	**52NA39**	—	—
Start	**52NL03**	**52NA03**	—	—
Start-Jog	**52NL28**	**52NA28**	—	—
Start-Stop	**52NL32**	**52NA32**	—	—
Stop	**52NL04**	**52NA04**	—	—
Stop (red)	**52NL04R**	**52NA04R**	—	—
Up	**52NL09**	**52NA09**	—	—
Up-Down	**52NL49**	**52NA49**	—	—
Up-Off-Down	**52NL42**	**52NA42**	—	—
Inscription plates with custom engraving				
"Custom engraved (brushed aluminum)"	**52NL02E**	**52NA02E**	—	—
"Custom engraved (red)"	**52NL02RE**	**52NA02RE**	**52ND02RE**	**52NE02RE**
"Custom engraved (Black)"	**52NL02BE**	**52NA02BE**	**52ND02BE**	**52NE02BE**
Max. number of rows	2	2	2	2
Letter height	5/32"	1/4"	5/32"	1/4"
Characters per row	14	16	14	16

① Automotive requires 2 1/2" mounting centers
② White letters on plastic nameplate.



Type 12/13 and 4X Stainless Steel

	Enclosure Size			Mounting		Overall					
Units	**A**	**B**	**C**	**G**	**H**	**L**	**W**	**J**	**T**	**X**	**Y**
1	3.50 (89)	3.25 (83)	2.75 (70)	4.00 (102)	2.38 (60)	4.50 (114)	3.47 (88)	2.31 (59)	3.00 (76)	1.73 (44)	1.86 (47)
2	5.75 (146)	3.25 (83)	2.75 (70)	6.25 (159)	2.38 (60)	6.75 (171)	3.47 (88)	2.31 (59)	3.00 (76)	1.73 (44)	1.86 (47)
3	8.00 (203)	3.25 (83)	2.75 (70)	8.50 (216)	2.38 (60)	9.00 (229)	3.47 (88)	2.31 (59)	3.00 (76)	1.73 (44)	1.86 (47)
4	10.25 (260)	3.25 (83)	2.75 (70)	10.75 (273)	2.38 (60)	11.25 (286)	3.47 (88)	2.31 (59)	3.00 (76)	1.73 (44)	1.86 (47)
6	9.50 (241)	6.25 (159)	3.00 (76)	10.00 (254)	5.38 (137)	10.50 (267)	6.47 (164)	2.56 (65)	6.00 (152)	2.11 (54)	2.61 (66)
9	9.50 (241)	8.50 (216)	3.00 (76)	10.00 (254)	7.62 (194)	10.50 (267)	8.72 (221)	2.56 (65)	8.25 (210)	2.11 (54)	2.61 (66)
12	11.75 (298)	8.50 (216)	3.00 (76)	12.25 (311)	7.62 (194)	12.75 (324)	8.72 (221)	2.56 (65)	8.25 (210)	2.11 (54)	2.61 (66)
16[2])	11.75 (298)	10.75 (273)	3.00 (76)	12.25 (311)	9.88 (251)	12.75 (324)	10.97 (279)	2.56 (65)[2])	10.50 (267)	2.11 (54)	2.61 (66)

Type 12/13 Extra Deep Enclosures

	Enclosure Size			Mounting		Overall					
Units	**A**	**B**	**C**	**G**	**H**	**L**	**W**	**J**	**T**	**X**	**Y**
1	4.00	4.00	4.75	4.50	3.12	5.00	4.22	4.31	3.75	2.11	2.11
2	6.00	4.00	4.75	6.50	3.12	7.00	4.22	4.31	3.75	2.11	1.98
3	8.00	4.00	4.75	8.50	3.12	9.00	4.22	4.31	3.75	2.11	1.86
4	10.00	4.00	4.75	10.50	3.12	11.00	4.22	4.31	3.75	2.11	1.73
6	9.50	6.25	4.75	10.00	5.38	10.50	6.47	4.31	6.00	2.11	2.61
9	9.50	8.50	4.75	10.00	7.62	10.50	8.72	4.31	8.25	2.11	2.61
12	11.75	8.50	4.75	12.25	7.62	12.75	8.72	4.31	8.25	2.11	2.61
16[2])	11.75	10.75	4.75	12.25	9.88	12.75	10.97	4.31	10.50	2.11	2.61

Type 4X Non-Metallic

	Enclosure Size			Mounting		Overall	
Units	**A**	**B**	**C**	**G**	**H**	**L**	**W**
1	6.00	3.19	3.63	4.88	2.94	6.63	3.81
2	6.00	3.19	3.63	4.88	2.94	6.63	3.81
3	8.26	3.19	3.63	7.13	2.94	8.88	3.81
4	10.51	3.19	3.63	9.37	2.94	11.13	3.81

All dimensions shown in inches and (millimeters). For reference purposes only. Not to be used for design or construction purposes.

1) Grounding stud in body of enclosure.
2) For stainless steel add 1.75 (45) to depth.

Standards	UL Listed File # E22655	CSA Certified File # LR6535
Utilization	Category NEMA	A600/P600
Degree of Protection	52B, 52P-, 52S-, 52M- Operators	NEMA: 1, 3, 3R, 4, 4X, 12 and 13 IEC 529; IP10, IP11, IP14, IP52, IP54, IP56 and IP66

Rated Operational Current

NEMA A600 – 10 Continuous Amps

Voltage AC	Make Amps	Break Amps
120V	**60**	**6**
240V	**30**	**3**
480V	**15**	**1.5**
600V	**12**	**1.2**
Total VA	**7200**	**720**

NEMA P600 – Rating Codes for DC Control Circuit Application

Thermal Continuous Test Current Amps	5.0
Maximum Make or Break; Current / Amps	
125V	1.10
250V	0.55
301-600V	0.20
Maximum Make or Break Volt amperes at 300V or Less	138

Contact Blocks	52BAK, -BAJ①, -BAH, -BAU, -BJK① 52BAR	600VAC Maximum, Heavy Duty 200VAC .25 Amp, 10 Watt Maximum 200VDC .50 Amp, 10 Watt Maximum

① Ⓟ Positively driven contacts. Contact blocks are suitable for applications down to 5V/1MA low voltage applications as found in PLCs. *52BAR are Class 1; Division 2 Compliant*

Pilot Light	Full Voltage LED Module Transformer Type	52PL4/52PL5 or 52BL4/52BL5	-B (6-8V), -C (12V), -D (24V), -E (120V), -F (240V) -L (24V), -M (120V) -N (240V) -G (120V), -H (240V), -J (480V), -K (600V)	240V AC/DC Max. 240V AC Max. 600V AC Max., 50/60 Hz
Push-to-Test	Full Voltage LED Module Transformer Type	52PT6 or 52BT6	-B (6-8V), -C (12V), -D (24V), -E (120V), -F (240V) -L (24V), -M (120V), -N (240V) -G (120V), -H (240V), -J (480V), -K (600V)	240V AC/DC Max. 240V AC Max. 600VAC Max., 50/60 Hz
Illuminated Push-Pull	Full Voltage LED Module Transformer	52PP2(3,7) or 52BP2(3,7)	-B (6-8V), -C (12V), -D (24V), -E (120V), -F (240V) -L (24V), -M (120V), - N (240V) -G (120V), -H (240V), -J (480V), -K (600V)	240V AC/DC Max. 240V AC Max. 600VAC Max., 50/60 Hz
Twist-to-Release	Full Voltage LED Module Transformer	52BR8 or 52PR8	-B (6-8V), -C (12V), -D (24V), -E (120V), -F (240V) -L (24V), -M (120V), - N (240V) -G (120V), -H (240V), -J (480V), -K (600V)	240V AC/DC Max. 240V AC Max. 600VAC Max., 50/60 Hz
Illuminated Selector Switch	Full Voltage Transformer	52SA7(A,B,C) or 52SX7(A,B,C)	-B (6-8V), -C (12V), -D (24V), -E (120V), -F (240V) -G (120V), -H (240V), -J (480V), -K (600V)	240V AC/DC Max. 600V AC Max., 50/60 Hz
Dielectric Strength			2200V for one minute	

Mechanical Design Life Cycles

Vibration	Frequency 5 - 60Hz.; Disp. .030 inches, sweep 5 minutes for a duration of 30 minutes on each axis. Not to exceed 5.5 G's for maximum of 1 minute.	
Pushbuttons	Momentary, Non-illuminated Momentary, Illuminated	5,000,000 Operating Cycles 300,000 Operating Cycles
Push-Pull	Maintained Momentary	300,000 Operating Cycles 2,000,000 Operating Cycles
Twist-to-Release		300,000 Operating Cycles
Selector Switches	Non-illuminated Illuminated, Key-operated	2,000,000 Operating Cycles 2,000,000 Operating Cycles
Contact Operation	Standard Contact Black Logic Reed	
Wire Gauge	#18-12 AWG	
Terminal Screw Torque	2-10 lb-in / 20 lb-in max; 8 lb-in recommended	
Locknut Torque	15 ft. lbs. max	
Temperature Range	Operating Storage	31F to +158F (-35C to +70C) 40F to +185F (-40C to +85C)

All parts are designed and manufactured of corrosion resistant material or are plated or painted as corrosion protection. All contact block contacts are gold flashed as a standard offering. Internal return spring mechanisms of operators and contact blocks of stainless steel. RoHS Compliant.

Declaration of Conformity — The products listed below, to which this declaration relates, are in conformity with the following standards, following the provisions of the Low Voltage Directive (LVD) (73/23/EEC), and the Electromagnetic Compatibility Directive (89/336/EEC.)

Products: Contact Blocks: Cat Nos. 52BAE, 52BAH, 52BAJ, 52BAK, 52BAR, 52BAU and 52BJK, with suffixes. Pilot Lights: Cat Nos 52P, with suffixes. Operators: Cat Nos 52S or 52P, with suffixes.

Applicable Standards: EN 60947-5-1 Low-Voltage Switchgear and controlgear. Enclosed devices meet the requirements of environmental ratings of IP10, IP11, IP14, IP52, IP54, and IP56. Open devices, when mounted as instructed, in environmental type IP10, IP11, IP14, IP52, IP54 or IP56 enclosures, maintain the environmental requirements for those enclosure types. Cat. No. 52BP, 52BR, 52PP, and 52PR, 2 Position, Twist-To-Release and 2 Position, Push Pull Maintained operators provided with red operating heads and 52BJK contact blocks meet the requirements of EN 60947-5-5 for Electrical Emergency Stop Device With Mechanical Latching Function (e-stop).

Complete convenience center

Catalog number: POP2020

Complete point-of-purchase convenience center
This starter kit features all of the devices and stand required for you to start selling Siemens.

Includes point of-purchase components:

(12) Pilot light: Red, Integrated LED Light Module with Multi-Voltage Input 24-240V AC/DC	52PL4U2P
(8) Basic pushbutton: Red extended, 1NC	52PM8B2JP
(4) Basic pushbutton: Green flat, 1NO	52PM8A3KP
(4) Push-Pull E-STOP: Red mushroom head	52PP2W2AP
(4) Twist-to-Release E-STOP: Red Mushroom Head	52PR8W2AP
(4) Selector switch: 3-pos, maintained	52SA2CABA1P
(4) Selector switch: 2-pos, maintained	52SA2AABA1P
(8) Illum. pushbutton: Red, Integrated LED Light Module with Multi-Voltage Input 24-240V AC/DC	52PT6U2AP
(4) Contact Block: Qty. 3, 52BJK with 1NO-1NC Contact in each POP Kit	52BJKP
(4) 30mm pushbutton station: 1 hole	P30EMS01P
(2) 30mm pushbutton station: 2 hole	P30EMS02P
(2) 30mm pushbutton station: 3 hole	P30EMS03P
(1) Point-of-purchase display stand	52STANDPOP

Swivel stand features products on both sides of the display board.

Siemens POP2020 convenience center is more flexible than ever.

All Pilot Lights and Illuminated Pushbuttons are provided with the new Multi-Voltage Integrated LED Light Modules suitable for voltages ranging from 24–240V AC/DC. Due to the wide voltage range of the new Integrated LED Light Modules, you can cover more applications with fewer part numbers and less inventory. Additionally, the POP2020 comes with POP Kits containing additional Contact Blocks with 1NC-1NO Contacts, for those applications that require additional control circuits on the pushbuttons or selector switches.

Pilot lights

Catalog number: 52PL4U2P

Pilot light: Red, 24-240V AC/DC
with Multi-Voltage Integrated LED Light Module; two extra lenses in green and amber; and two legend plates: "On" and "Stop."

Includes components:

(1) Red, 24-240V AC/DC Pilot light, Integrated LED	52PL4U2
(1) Green lens	52RA4S3
(1) Amber lens	52RA4S9
(1) "On" legend	52NL11
(1) "Stop" legend	52NL04

Enclosures

Catalog number: P30EMS01P

30mm pushbutton station: 1 hole
NEMA 12/13 (IP52/54) standard enclosure

Catalog number: P30EMS02P

30mm pushbutton station: 2 hole
NEMA 12/13 (IP52/54) standard enclosure

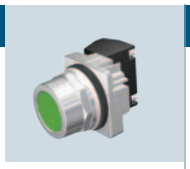
Catalog number: P30EMS03P

30mm pushbutton station: 3 hole
NEMA 12/13 (IP52/54) standard enclosure

Push Button Units and Indicator Lights

30.5mm Pilot Device *Class 52 convenience center*

Pushbuttons

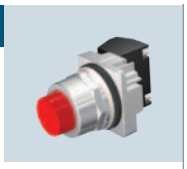


Catalog number:
52PM8A3KP

Basic pushbutton: Green flat
momentary with 1NO. Includes extra caps in black, red, yellow and blue and two legend plates: "On" and "Start."

Includes components:

(1) Green, momentary pushbutton with 1NO	52PM8A3K
(1) Black cap	52RC1A1
(1) Red cap	52RC1A2
(1) Yellow cap	52RC1A4
(1) Blue cap	52RC1A5
(1) "On" legend	52NL11
(1) "Start" legend	52NL03



Catalog number:
52PM8B2JP

Basic pushbutton: Red extended
momentary with 1NC. Includes extra caps in black and green and two legend plates: "Stop" and "Off."

Includes components:

(1) Red, momentary extended head pushbutton with 1NC	52PM8B2J
(1) Black cap	52RC1B1
(1) Green cap	52RC1B3
(1) "Stop" legend, red	52NL04R
(1) "Off" legend	52NL12

Emergency stop

Catalog number:
52PP2W2AP

Push-pull: Red mushroom head
2-Pos, maintained, 1 3/4" mushroom head, 1NO-1NC, includes extra 2 1/2" mushroom head, two "Stop" legends, and a 90mm ring inscribed with "Emergency Stop."

Includes components:

(1) Red, E-STOP with 1 3/4" mushroom head, 2-pos, mntd, 1NO-1NC	52PP2W2A
(1) 2 1/2" mushroom head	52RC3E2
(1) "Stop" legend, red	52NL04R
(1) "Stop" legend	52NL04
(1) E-STOP ring legend	52AAR

Pushbuttons

Catalog number:
52PT6U2AP

Illuminated pushbutton: Red
24-240V AC/DC with Multi-Voltage Integrated LED Light Module; 1NC-1NO includes extra lenses in green and amber, and two blank legend plates.

Includes components:

(1) 24-240V AC/DC with Multi-Voltage Integrated LED Light Module; with 1NC-1NO	52PT6U2A
(1) Green lens	52RA5S3
(1) Amber lens	52RA5S9
(1) Blank legend	52NL02

Contact Blocks

Catalog number:
52BJKP

Contact Block:
Contact Block, 1NC-1NO, Heavy Duty NEMA A600/P600 rating. Bifurcated movable contacts with touch safe terminals. Positive opening according to IEC 60947-5-1, Annex K.

Includes components:

(3) Contact Blocks with 1NC-1NO Contact	
52BJK	

Emergency stop

Catalog number:
52PR8W2AP

Twist-to-release: Red mushroom head
2-Pos, maintained, 1 3/4" mushroom head, 1NO-1NC, two "Stop" legends, and a 90mm ring inscribed with "Emergency Stop."

Includes components:

(1) Red, E-STOP with 1 3/4" mushroom mushroom head, 2pos, mntd, 1NO-1NC	52PR8W2A
(1) "Stop" legend, red	52NL04R
(1) "Stop" legend	52NL04
(1) E-STOP ring legend	52AAR

Selector switch

Catalog number:
52SA2CABA1P

Selector switch:
3 Position maintained, short lever, 1NO-1NC, with two legend plates: "Hand-Off-Auto" and "For-Off-Rev."

Includes components:

(1) 3-Position maintained short lever selector switch with 1NO-1NC	52SA2CABA1
(1) "Hand-Off-Auto" legend	52NL37
(1) "For-Off-Rev" legend	52NL38

Catalog Number:
52SA2AABA1P

Selector switch:
2 Position maintained, short lever, 1NO-1NC, with two legend plates: "Forward-Reversing" and "Off-On."

Includes components:

1) 2-Position maintained short lever selector switch with 1NO-1NC	52SA2AABA1
(1) "Forward-Reversing" legend	52NL31
(1) "Off-On" legend	52NL26

Display stand

Catalog number:
52STANDPOP

Point-of-purchase display stand
Two side swivel display stand.

POP Stand	52STANDPOP