

Intraground® N1 Series Control Stations

Nonmetallic

10 Amp, 600 Vac Max. for Heavy Duty Use.

N1 Series (Non-Factory Sealed) Ⓞ
Class I, Division 1 and 2, Groups C, D
NEMA 3R, 4X, 7CD, 12

Controls

CONTROLS: HAZARDOUS LOCATION CONTROL STATIONS AND SWITCHES

Applications

- Listed for use in Class I, Division 1 and 2, Group C and D atmospheres such as:
 - Diethyl ether
 - Methyl ethyl ketone
 - Acetone
 - Toluene
 - No. 3 fuel oil
 - Ammonium hydroxide (20%)
 - Benzene
 - Regular unleaded gas
 - Ethyl acetate
 - Hexane
 - Methanol
- Not suitable for:
 - Ethylene dichloride
 - Partially halogenated hydrocarbons
- Sealing fittings must be field installed adjacent to enclosure on all conduit runs.
- Explosionproof, with sealing fittings installed at each conduit entrance, the N1 Series enclosures withstood a hydrostatic test of four times the maximum internal explosion pressure that could be developed from a gas or vapor explosion.
- Push buttons and selector switches are used in conjunction with contactors or magnetic starters for remote control of motors in hazardous locations. They provide circuit control and/or selection.
- Pilot lights provide visual assurance that an electrical function is being performed at a remote or local hazardous location.

Features

- Nonmetallic construction with metal imbedded grounding grid. No need to install special wires and parts for grounding. Feed-thru or dead-end grounded 1/2" or 3/4" conduit openings for threaded conduit.
- Special grounding wire furnished with each box provides safe grounding when cover is removed.
- Ideal for use in corrosive environments. Nonmetallic enclosures with corrosion resistant parts coated with epoxy, Teflon® or Mylar®, these control stations offer unsurpassed resistance to chemicals.
- Unique labyrinth-path construction assures flame-tight joint between body and cover.
- Silicone gasket, specially designed for the labyrinth-path joint, prevents entrance of moisture without interfering with the venting of cooled hazardous gases and vapors.
- Typical mechanical properties of 24,500 psi tensile strength, 3% elongation at break, 33,000 psi flexural strength, and 1,200,000 psi flexural modulus.
- Electrical properties of sample specimens: dielectric strength (in air) of 769 at 1/16".
- High strength thermoplastic polyetherimide, together with thick walls (5/16") and sound structural design (rounded corners) provides superior resistance to impact and crushing.
- Excellent resistance to ultraviolet light and water.
- Excellent conduit connection strength.
- Excellent resistance to attack by fungi and mold.



Push Button



Pilot Light



Selector Switch



Combination Push Button and Pilot Light



Combination Selector Switch and Pilot Light

- Superior flammability resistance.

Related Products

- Sealing fitting must be installed at each conduit entrance of the N1 enclosure to be explosionproof. See *Fittings Section*.

Ⓞ For Class I, Division 1 applications, sealing fittings must be field installed adjacent to enclosure on all conduit runs.

Intraground® N2 Series Control Stations

Nonmetallic

10 Ampere, 600 Vac Max. for Heavy Duty Use.

N2 Series (Factory Sealed)
Class I, Division 2, Groups B, C, D
Class II, Division 1 and 2, Groups E, F, G
Class III
NEMA 3R, 4X, 9EFG, 12

Applications

- Listed for use in Class I, Division 2, Group B, C and D atmospheres such as:
 - Diethyl ether
 - Methyl ethyl ketone
 - Acetone
 - Toluene
 - No. 3 fuel oil
 - Ammonium hydroxide (20%)
 - Benzene
 - Regular unleaded gas
 - Ethyl acetate
 - Hexane
 - Methanol.
- Listed for use in Class II, Division 1 and 2, Groups E, F and G.
- Dust-tight construction. After 32 hour UL test, no magnesium dust entered the enclosure.
- Push buttons and selector switches are used in conjunction with contactors or magnetic starters for remote control of motors in hazardous locations. They provide circuit control and/or selection.
- Pilot lights provide visual assurance that an electrical function is being performed at a remote or local hazardous location.

Features

- Factory sealed — no external seals required.
- Nonmetallic construction with metal imbedded grounding grid. No need to install special wires and parts for grounding. Feed-thru or dead-end grounded 1/2" or 3/4" conduit openings for threaded conduit.
- Special grounding wire furnished with each box provides safe grounding when cover is removed.
- Ideal for use in corrosive environments. Nonmetallic enclosures with corrosion resistant parts coated with epoxy, Teflon® or Mylar®, these control stations offer unsurpassed resistance to chemicals.
- Silicone gasket, specially designed for the labyrinth-path point between cover and body, prevents entrance of moisture and dust.
- Molded of high-tensile 30% glass reinforced thermoplastic polyetherimide. Enclosure walls are 5/16" thick.
- Typical mechanical properties of 17,000 psi tensile strength, 3% elongation at break, 27,000 psi flexural strength, and 1,100,000 psi flexural modulus (UL tests showed 18,918 psi tensile strength and 30,675 psi flexural strength).
- Electrical properties of sample specimens: dielectric strength of 490 at 1/8" and a comparative track index of 185V/0.058".
- Superior impact resistance.
- Extremely low water absorption. This important quality assures dimensional stability.
- Excellent resistance to ultraviolet light and water.
- UL Temperature Index (continuous use temperature): 266°F/130 °C electrical properties, 266°F/130 °C mechanical properties with impact, and 284 °F/140 °C mechanical properties without impact.
- Superior flammability resistance.
- Excellent pull-out resistance.



Push Button



Pilot Light



Selector Switch



Combination Push Button and Pilot Light



Combination Selector Switch and Pilot Light

Intraground® N1 and N2 Series Control Stations

Nonmetallic

10 Ampere, 600 Vac Max. for Heavy Duty Use.

N1 Series (Non-Factory Sealed) ©
Class I, Division 1 and 2, Groups C, D
NEMA 3R, 4X, 7CD, 12

N2 Series (Factory Sealed)
Class I, Division 2, Groups B, C, D
Class II, Division 1 and 2, Groups E, F, G
Class III
NEMA 3R, 4X, 9EFG, 12

Features

- Heavy duty push button, 10 Amp 600 Vac rated.
- Dozens of possible combinations of push buttons, pilot lights and selector switches.
- Smooth, rounded integral bushing in each conduit opening protects conduct or insulation.
- Accurately tapped, tapered conduit openings for tight, rigid joints and ground continuity.
- Push Buttons, Selector Switches, and Pilot Lights
 - Stainless steel push button shaft operates within stainless steel bushing, assuring long, maintenance-free operation.
 - Push button and selector switch contacts are silver cadmium oxide which are “sealed” in lower phenolic chamber isolated from corrosive elements. Assures positive contact and long, trouble-free operation.
 - Enclosed stainless steel helper spring prevents accidental operation of push button in severe vibration installations.
 - Corrosion resistant stainless steel Teflon® coated hex head cap screws hold covers to body.
 - Push buttons are supplied with lockout type guards as standard. Hole in guard will accept locks with up to 1/4” hasp. Permits locking of push button to prevent unauthorized operation.
 - Clearly marked terminals with brass screws assure quick, easy wiring.
 - Pilot light supplied with jewel/guard assembly and 120 Vac, 6 Watt type 6S6 lamp, 120 Vac/Vdc, 50/60 Hz, 6 Watt.

Standard Materials

- Body and cover: 30% glass-reinforced thermoplastic polyetherimide
- SPBB push button: aluminum upper barrel and phenolic lower barrel with nylon plastic button. Glass reinforced polypropylene guard. Silicone weather boot. Aluminum nameplate
- SPLS pilot light: aluminum guard and body assembly; steel clamping ring; and tempered glass jewel
- SSBA selector switch: aluminum housing, nylon knobs and cams, and sealed phenolic contact block
- NBN rectangular button with weather boot: Nylon plastic button with neoprene weather boot. Aluminum nameplate
- NMRB mushroom button with weather boot: anodized aluminum buttons with neoprene weather boot
- Selector switch locking devices and push button securing rods: stainless steel
- Cover bolts: stainless steel
- Nameplates: copperfree (4/10 of 1% max.) aluminum
- Receptacles: copperfree (4/10 of 1% max.) aluminum

Standard Finishes

- Cover bolts: Teflon®
- Nameplates: Mylar®
- Pilot light guard and clamping ring: epoxy

Options

- Three position selector switches with modified operation. For description and switch diagram, refer to switch operators.
 - Momentary contact right position, spring return to center, maintained contact left position. Add suffix **–SRC**.
 - Momentary contact left position, spring return to center, maintained contact right position. Add suffix **–SLC**.
- Alternate contacts add suffix **–ALT**.
- Selector switch Lockout: locks 2- or 3-position handle in any position. Suffix **–LD**.
- Push button front operated mushroom head (momentary contact):
 - Red **–NMRBRE**
 - Green **–NMRBGR**
 - Black, add suffix **–NMRBBL**.
- Pilot light jewel/guard assembly. Order by suffixes if color desired is other than red, as follows:
 - Amber **–JGBA**
 - Blue **–JGBB**
 - Clear **–JGBC**
 - Green **–JGBG**
 - Opal **–JGBO**
- For colored LED jewel/guard assembly, order by suffixes:
 - Red **–LEDR**
 - Green **–LEDG**
 - Amber **–LEDA**
- Pilot light transformers for single pilot light per gang. Order by suffix:

Primary Voltage	Lamp Voltage	Suffix
220	120	TR-2
277	120	TR-3
440	120	TR-4
550	120	TR-5

- Securing rod for push button lockout guard. Add suffix **–SR**.
- **NPBRKT** nameplate mounting bracket to make circuit description/ identification easy.
 - Pre-drilled holes in bottom of bracket allow direct mounting to control stations with existing cover bolts.
 - Pre-drilled holes in middle of bracket allow mounting of customer’s circuit identification nameplate; epoxy glue may also be used for mounting (phenolic nameplate not included).
 - Bracket eliminates costly field installation of drilling and tapping to accommodate circuit identification nameplate.
 - Brackets fit side-by-side on 2-, 3- and 4-gang boxes and 3-devices.

Certifications and Compliances

- UL Standards: UL 508, UL 698, UL 1203
- UL Listed: E10449, E81751

© For Class I, Division 1 applications, sealing fittings must be field installed adjacent to enclosure on all conduit runs.












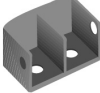
* Teflon and Mylar are registered trademarks of E. I. du Pont de Nemours and Company.

Intraground® N1 and N2 Series Control Station Push Button Accessories and Parts

Nonmetallic

10 Ampere, 600 Vac Max. for Heavy Duty Use. N1 Series – Neutral Color; N2 Series – Blue Color.

Class I, Division 1 and 2, Groups B*, C, D
 Class II, Division 1 and 2, Groups E, F, G
 Class III

Description		Catalog Number		
Push Button – Factory Sealed – Momentary Contact				
	10 Amp 600 Vac Heavy Duty 1/2" thread size (NPSM). Furnished with 1/2" to 3/4" enlarger, Weather Boot, Guard, Start, Stop and Blank Nameplates.			
SPBB-U1-Q	Single Push Button	Universal  SPBB-U1-Q		
				
SPBB-U2DBL	Double Push Button	Universal  SPBB-U2DBL		
Push Button – Red Mushroom Head – Factory Sealed – Maintained Contact				
	10 Amp 600 Vac Heavy Duty 1/2" thread size (NPSM). Furnished with 1/2" to 3/4" enlarger and Emergency Stop Nameplate (guard not furnished).			
	Single Push Button	Universal  SMPB-U1-Q		
Rectangular Button with Weather Boot				
	Furnished with Start, Stop and Blank Nameplates	NBN-WB		
Nameplates for Rectangular Push Buttons				
	Blank	SNP-B-Q	Off	SNP-OFF-Q
	Forward	SNP-FWD-Q	On	SNP-ON-Q
	Jog	SNP-JOG-Q	Reverse	SNP-REV-Q
	Run	SNP-RUN-Q	Open	SNP-OPEN-Q
SNP-OFF-Q	Stop	SNP-SP-Q	Close	SNP-CLOSE-Q
	Start	SNP-ST-Q	Up	SNP-UP-Q
	Down	SNP-DOWN-Q	Test	SNP-TEST-Q
	Fast	SNP-FAST-Q	Low	SNP-LOW-Q
	Slow	SNP-SLOW-Q	High	SNP-HIGH-Q
SNP-ON-Q	Raise	SNP-RAISE-Q		
	Lower	SNP-LOWER-Q		
	Reset	SNP-RESET-Q		
Push Button Replacement Locking Guards – Glass Reinforced Polypropylene – Gasketed				
	Maintained Mushroom Head Switch Guard	Single Guard (Maintained Switch)		SMPB-LG
	Single Guard	Double Guard		NPB-LG1
	Double Guard	Single Guard (No Lockout Holes)		NPB-LG2
	Double Guard (No Lockout Holes)			NPB-LG1-LL
				NPB-LG2-LL

◆ Suitable for Class I, Group B when installed in an enclosure rated for Class I, Group B.