SIEMENS

Data sheet 3RT2027-1AN20



power contactor, AC-3e/AC-3, 32 A, 15 kW / 400 V, 3-pole, 220 V AC, 50/60 Hz, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S0 $\,$

| product brand name | SIRIUS |
|--|----------------------------|
| product designation | Power contactor |
| product type designation | 3RT2 |
| General technical data | |
| size of contactor | S0 |
| product extension | |
| function module for communication | No |
| auxiliary switch | Yes |
| power loss [W] for rated value of the current | |
| at AC in hot operating state | 6.3 W |
| at AC in hot operating state per pole | 2.3 W |
| without load current share typical | 2.7 W |
| type of calculation of power loss depending on pole | quadratic |
| insulation voltage | |
| of main circuit with degree of pollution 3 rated value | 690 V |
| of auxiliary circuit with degree of pollution 3 rated value | 690 V |
| surge voltage resistance | |
| of main circuit rated value | 6 kV |
| of auxiliary circuit rated value | 6 kV |
| maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 | 400 V |
| shock resistance at rectangular impulse | |
| • at AC | 8,3g / 5 ms, 5,3g / 10 ms |
| shock resistance with sine pulse | |
| • at AC | 13,5g / 5 ms, 8,3g / 10 ms |
| mechanical service life (operating cycles) | |
| of contactor typical | 10 000 000 |
| of the contactor with added electronically optimized auxiliary switch block typical | 5 000 000 |
| of the contactor with added auxiliary switch block typical | 10 000 000 |
| reference code according to IEC 81346-2 | Q |
| Substance Prohibitance (Date) | 10/01/2009 |
| Weight | 0.427 kg |
| Ambient conditions | |
| installation altitude at height above sea level maximum | 2 000 m |
| ambient temperature | |
| during operation | -25 +60 °C |
| during storage | -55 +80 °C |
| relative humidity minimum | 10 % |
| relative humidity at 55 °C according to IEC 60068-2-30 maximum | 95 % |

| Environmental footprint | |
|--|-----------|
| Environmental Product Declaration(EPD) | Yes |
| Global Warming Potential [CO2 eq] total | 74.2 kg |
| Global Warming Potential [CO2 eq] during manufacturing | 1.9 kg |
| Global Warming Potential [CO2 eq] during operation | 72.4 kg |
| Global Warming Potential [CO2 eq] after end of life | -0.117 kg |
| Main circuit | |
| number of poles for main current circuit | 3 |
| number of NO contacts for main contacts | 3 |
| operating voltage | |
| at AC-3 rated value maximum | 690 V |
| at AC-3e rated value maximum | 690 V |
| operational current | |
| at AC-1 at 400 V at ambient temperature 40 °C rated value at AC-1 | 50 A |
| — up to 690 V at ambient temperature 40 $^{\circ}\text{C}$ rated value | 50 A |
| — up to 690 V at ambient temperature 60 $^{\circ}\text{C}$ rated value | 42 A |
| • at AC-3 | |
| — at 400 V rated value | 32 A |
| — at 500 V rated value | 32 A |
| — at 690 V rated value• at AC-3e | 21 A |
| — at 400 V rated value | 32 A |
| — at 500 V rated value | 32 A |
| — at 690 V rated value | 21 A |
| at AC-4 at 400 V rated value | 22 A |
| at AC-5a up to 690 V rated value | 44 A |
| at AC-5b up to 400 V rated value | 26.5 A |
| • at AC-6a | |
| — up to 230 V for current peak value n=20 rated value | 30.8 A |
| — up to 400 V for current peak value n=20 rated value | 30.8 A |
| — up to 500 V for current peak value n=20 rated value | 27 A |
| — up to 690 V for current peak value n=20 rated value | 21 A |
| • at AC-6a | |
| — up to 230 V for current peak value n=30 rated value | 20.5 A |
| — up to 400 V for current peak value n=30 rated value | 20.5 A |
| — up to 500 V for current peak value n=30 rated value | 18 A |
| — up to 690 V for current peak value n=30 rated value | 18 A |
| minimum cross-section in main circuit at maximum AC-1 rated value | 10 mm² |
| operational current for approx. 200000 operating cycles at AC-4 | |
| • at 400 V rated value | 12 A |
| at 690 V rated value | 12 A |
| operational current | |
| • at 1 current path at DC-1 | |
| — at 24 V rated value | 35 A |
| — at 60 V rated value | 20 A |
| — at 110 V rated value | 4.5 A |
| — at 220 V rated value | 1 A |
| — at 440 V rated value | 0.4 A |
| — at 600 V rated value | 0.25 A |
| with 2 current paths in series at DC-1 | |
| — at 24 V rated value | 35 A |
| — at 60 V rated value | 35 A |
| — at 110 V rated value | 35 A |
| — at 220 V rated value | 5 A |
| — at 440 V rated value | 1 A |
| — at 600 V rated value | 0.8 A |

| with 3 current paths in series at DC-1 | |
|--|---|
| — at 24 V rated value | 35 A |
| — at 60 V rated value | 35 A |
| — at 110 V rated value | 35 A |
| — at 220 V rated value | 35 A |
| — at 440 V rated value | 2.9 A |
| — at 600 V rated value | 1.4 A |
| • at 1 current path at DC-3 at DC-5 | I.T.A. |
| — at 24 V rated value | 20 A |
| — at 60 V rated value | 5 A |
| — at 220 V rated value | 1A |
| — at 440 V rated value | 0.09 A |
| — at 600 V rated value | 0.06 A |
| with 2 current paths in series at DC-3 at DC-5 | 0.0071 |
| — at 24 V rated value | 35 A |
| — at 60 V rated value | 35 A |
| — at 110 V rated value | 15 A |
| — at 220 V rated value | 3 A |
| — at 440 V rated value | 0.27 A |
| — at 600 V rated value | 0.16 A |
| with 3 current paths in series at DC-3 at DC-5 | |
| — at 24 V rated value | 35 A |
| — at 60 V rated value | 35 A |
| — at 110 V rated value | 35 A |
| — at 220 V rated value | 10 A |
| — at 440 V rated value | 0.6 A |
| — at 600 V rated value | 0.6 A |
| operating power | |
| • at AC-3 | |
| — at 230 V rated value | 7.5 kW |
| — at 400 V rated value | 15 kW |
| — at 500 V rated value | 15 kW |
| — at 690 V rated value | 18.5 kW |
| • at AC-3e | |
| — at 230 V rated value | 7.5 kW |
| — at 400 V rated value | 15 kW |
| — at 500 V rated value | 15 kW |
| — at 690 V rated value | 18.5 kW |
| operating power for approx. 200000 operating cycles at AC- | |
| at 400 V rated value | 6 kW |
| at 690 V rated value | 10.3 kW |
| operating apparent power at AC-6a | |
| • up to 230 V for current peak value n=20 rated value | 12.2 kVA |
| • up to 400 V for current peak value n=20 rated value | 21.3 kVA |
| up to 500 V for current peak value n=20 rated value | 23.3 kVA |
| • up to 690 V for current peak value n=20 rated value | 25 kVA |
| operating apparent power at AC-6a | |
| up to 230 V for current peak value n=30 rated value | 8.1 kVA |
| • up to 400 V for current peak value n=30 rated value | 14.2 kVA |
| • up to 500 V for current peak value n=30 rated value | 15.5 kVA |
| • up to 690 V for current peak value n=30 rated value | 21.5 kVA |
| short-time withstand current in cold operating state up to 40 °C | |
| limited to 1 s switching at zero current maximum | 499 A; Use minimum cross-section acc. to AC-1 rated value |
| limited to 5 s switching at zero current maximum | 341 A; Use minimum cross-section acc. to AC-1 rated value |
| limited to 10 s switching at zero current maximum | 260 A; Use minimum cross-section acc. to AC-1 rated value |
| limited to 30 s switching at zero current maximum | 199 A; Use minimum cross-section acc. to AC-1 rated value |
| limited to 60 s switching at zero current maximum | 162 A; Use minimum cross-section acc. to AC-1 rated value |
| no-load switching frequency | |
| • at AC | 5 000 1/h |
| | |

| operating frequency 1 ACC1 maximum 1 000 1m at ACC2 maximum 750 1m at ACC3 maximum 750 1m at ACC3 maximum 250 1m at ACC3 maximum 200 1m at ACC3 maximum 200 1m control supply voltage of the control supply voltage AC control supply voltage at AC 200 V at 50 Hz rated value 200 V operating ange factor control supply voltage rated value of at 50 Hz 200 V at 50 Hz rated value 200 V at 50 Hz rated value 30 NA at 40 Nz rated value rated value 30 NA | | |
|--|--|---|
| * at AC-2 maximum | operating frequency | |
| a st AC-3 maximum | | |
| ** at AC-3e maximum | • at AC-2 maximum | 750 1/h |
| ### AC4 - maximum **type of voltage of the control supply voltage at Control supply voltage at Control supply voltage at Control supply voltage at Control supply voltage rated value **at 60 Hz **at 60 Hz **apparent pick-up power of magnet coil at AC **at 60 Hz **a | • at AC-3 maximum | 750 1/h |
| Control circuit/ Control AC type of voltage of the control supply voltage AC at 50 Hz rated value 220 V at 50 Hz rated value 220 V operating range factor control supply voltage rated value of graph (coll at AC 8 at 50 Hz at 50 Hz 0.8 1.1 apparent pick-up power of magnet coll at AC 81 VA at 50 Hz 90 VA inductive power factor with closing power of the coll 0.72 at 60 Hz 0.72 at 60 Hz 0.74 apparent holding power of magnet coll at AC 4 50 Hz at 60 Hz 0.72 at 60 Hz 0.74 at 50 Hz 0.74 at 60 Hz 0.5 VA Inductive power factor with the holding power of the coll 0.25 at 50 Hz 0.28 closing delay 4 - 16 ms at AC 4 - 16 ms at AC 4 - 16 ms arcing time 10 - 10 ms control version of the switch operating mechanism 10 - 10 ms control value 10 - 10 ms at 23 | • at AC-3e maximum | 750 1/h |
| Type of voltage of the control supply voltage at AC 20 | | 250 1/h |
| control supply voltage at AC at 50 Hz rated value 220 V sat 50 Hz rated value 220 V operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz at 50 Hz 20 Ns. 1.1 apparent pick-up power of magnet coil at AC at 50 Hz at 50 Hz 31 Ns. 1.1 apparent pick-up power of magnet coil at AC at 50 Hz at 60 Hz 31 Ns. 1.1 at 60 Hz 31 Ns. 1.1 at 60 Hz 31 Ns. 1.1 at 60 Hz at | Control circuit/ Control | |
| a til 50 Hz raled value 220 V operating range factor control supply voltage rated value of magnet coll at AC 3.81.1 a til 50 Hz 0.81.1 a til 50 Hz 0.81.1 a til 50 Hz 8 | type of voltage of the control supply voltage | AC |
| • at 60 Hz rated value | control supply voltage at AC | |
| Special parage factor control supply voltage rated value of magnet coil at AC • at 50 Hz | at 50 Hz rated value | 220 V |
| magnet coil at AC | at 60 Hz rated value | 220 V |
| • at 50 Hz | | |
| • at 60 Hz | | 0.0 4.4 |
| ### 150 Hz | | |
| * at 50 Hz | | 0.85 1.1 |
| miductive power factor with closing power of the coil 2 | | 04 1/A |
| e 15 0 Hz | | |
| • at 50 Hz • at 60 Hz apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz • at 50 Hz • at 60 Hz • at 80 W rated value • at 80 W | | 79 VA |
| | | 0.72 |
| apparent holding power of magnet coil at AC | ***** | |
| • at 50 Hz • at 60 Hz • at 60 Hz 10ductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz • at AC • at AC | | U.14 |
| • at 60 Hz | | 10.5.\/\ |
| at 45 0 Hz | | |
| • at 50 Hz • at 60 Hz • at AC • at AC opening delay • at AC opening delay • at AC ontrol version of the switch operating mechanism control version of the switch operating mechanism bumber of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum 10 A operational current at AC-12 maximum 10 A operational current at AC-18 • at 230 V rated value • at 500 V rated value • at 600 V rated value • at 125 V rated value • at 24 V rated value • at 24 V rated value • at 27 V rated value • at 28 V rated value • at 28 V rated value • at 29 V rated value • at 20 V rated value • at 210 V rated value • at 220 V rated value • at 24 V rated value • at 25 V rated value • at 26 V rated value • at 27 V rated value • at 28 V rated value • at 28 V rated value • at 29 V rated value • at 29 V rated value • at 29 V rated value • at 20 V | | 0.5 VA |
| • at 60 Hz 0.28 closing delay | | 0.25 |
| e at AC | | |
| ● at AC | | 0.20 |
| e at AC 416 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum 10 A operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value • at 48 V rated value • at 80 V rated value • at 110 V rated value • at 110 V rated value • at 125 V rated value • at 48 V rated value • at 48 V rated value • at 29 V rated value • at 48 V rated value • at 48 V rated value • at 29 V rated value • at 20 V rated value • at 20 V rated value • at 20 V rated value • at 30 V rated value • at 48 V rated value • at 48 V rated value • at 20 V rated value • at 40 V rated value • at | | 8 40 ms |
| ● at AC 4 16 ms arcing time 10 10 ms Control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 1 number of NC contacts for auxiliary contacts instantaneous contact 1 number of NO contacts for auxiliary contacts instantaneous contact 1 operational current at AC-12 maximum 10 A operational current at AC-15 10 A • at 230 V rated value 3 A • at 400 V rated value 2 A • at 500 V rated value 10 A • at 48 V rated value 10 A • at 48 V rated value 6 A • at 48 V rated value 6 A • at 110 V rated value 3 A • at 125 V rated value 2 A • at 125 V rated value 2 A • at 220 V rated value 1 A • at 220 V rated value 2 A • at 48 V rated value 2 A | | 0 40 1113 |
| 10 10 ms Standard A1 - A2 | | 4 16 ms |
| Control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit Image: Contact of the switch operating mechanism of NC contacts for auxiliary contacts instantaneous contact 1 number of NC contacts for auxiliary contacts instantaneous contact 1 operational current at AC-12 maximum 10 A operational current at AC-15 Image: Contact of the switch operating mechanism of the switch of the | | |
| Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 400 V rated value • at 690 V rated value • at 890 V rated value • at 48 V rated value • at 48 V rated value • at 48 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 100 V rated value • at 110 V rated value • at 110 V rated value • at 110 V rated value • at 120 V rated value • at 110 V rated value | | |
| number of NC contacts for auxiliary contacts instantaneous contact 1 number of NO contacts for auxiliary contacts instantaneous contact 1 contact 1 operational current at AC-12 maximum 10 A operational current at AC-15 10 A • at 230 V rated value 3 A • at 690 V rated value 2 A • at 690 V rated value 1 A operational current at DC-12 10 A • at 24 V rated value 6 A • at 48 V rated value 6 A • at 60 V rated value 3 A • at 110 V rated value 2 A • at 220 V rated value 1 A • at 220 V rated value 0.15 A • at 600 V rated value 0.15 A • at 24 V rated value 10 A • at 220 V rated value 2 A • at 600 V rated value 2 A • at 48 V rated value 2 A • at 220 V rated value 2 A • at 220 V rated value 1 A • at 220 V rated value 0.9 A • at 600 V rated value 0.3 A • | · · · · · | |
| Number of NO contacts for auxiliary contacts instantaneous contact | number of NC contacts for auxiliary contacts instantaneous | 1 |
| contact operational current at AC-12 maximum 10 A operational current at AC-15 10 A • at 230 V rated value 10 A • at 400 V rated value 3 A • at 500 V rated value 1 A operational current at DC-12 10 A • at 24 V rated value 6 A • at 48 V rated value 6 A • at 60 V rated value 3 A • at 110 V rated value 2 A • at 220 V rated value 1 A • at 600 V rated value 0.15 A operational current at DC-13 10 A • at 24 V rated value 2 A • at 48 V rated value 2 A • at 60 V rated value 2 A • at 110 V rated value 2 A • at 25 V rated value 2 A • at 27 V rated value 1 A • at 28 V rated value 2 A • at 125 V rated value 0.9 A • at 220 V rated value 0.9 A • at 220 V rated value 0.3 A • at 600 V rated value 0.1 A | | • |
| operational current at AC-15 | | 1 |
| at 230 V rated value at 400 V rated value 3 A at 500 V rated value 2 A at 690 V rated value 1 A Operational current at DC-12 at 24 V rated value 6 A at 48 V rated value 6 A at 110 V rated value at 25 V rated value at 220 V rated value at 600 V rated value at 24 V rated value at 48 V rated value at 48 V rated value at 48 V rated value at 10 A at 600 V rated value at 10 A at 110 V rated value at 110 V rated value at 125 V rated value at 125 V rated value at 125 V rated value at 220 V rated value at 220 V rated value at 220 V rated value at 600 V rated value | operational current at AC-12 maximum | |
| at 400 V rated value at 500 V rated value 2 A at 690 V rated value 1 A Operational current at DC-12 at 24 V rated value 6 A at 60 V rated value 6 A at 110 V rated value at 220 V rated value at 24 V rated value at 25 V rated value at 25 V rated value at 200 V rated value at 600 V rated value at 600 V rated value at 60 V rated value at 24 V rated value at 24 V rated value at 48 V rated value at 60 V rated value at 60 V rated value at 70 A at 110 V rated value at 110 V rated value at 110 V rated value at 125 V rated value at 120 V rated value at 220 V rated value at 600 V rated value | operational current at 7 to 12 maximum | 10 A |
| at 500 V rated value at 690 V rated value 1 A Operational current at DC-12 at 24 V rated value 6 A at 60 V rated value 6 A at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 600 V rated value at 600 V rated value at 220 V rated value at 600 V rated value at 24 V rated value at 60 V rated value at 60 V rated value at 60 V rated value at 20 V rated value | · | 10 A |
| • at 690 V rated value 10 A operational current at DC-12 • at 24 V rated value 10 A • at 48 V rated value 6 A • at 60 V rated value 3 A • at 110 V rated value 2 A • at 220 V rated value 1 A • at 600 V rated value 10.15 A operational current at DC-13 • at 24 V rated value 2 A • at 8 V rated value 10 A • at 60 V rated value 2 A • at 110 V rated value 10 A • at 24 V rated value 2 A • at 10 V rated value 2 A • at 10 V rated value 2 A • at 24 V rated value 2 A • at 10 V rated value 2 A • at 10 V rated value 1 A • at 125 V rated value 1 A | operational current at AC-15 | |
| operational current at DC-12 • at 24 V rated value 10 A • at 48 V rated value 6 A • at 60 V rated value 3 A • at 125 V rated value 2 A • at 220 V rated value 1 A • at 600 V rated value 0.15 A Operational current at DC-13 • at 24 V rated value 10 A • at 48 V rated value 2 A • at 60 V rated value 2 A • at 110 V rated value 1 A • at 125 V rated value 0.9 A • at 220 V rated value 0.3 A • at 600 V rated value 0.1 A | operational current at AC-15 • at 230 V rated value | 10 A |
| at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 600 V rated value at 24 V rated value at 24 V rated value at 24 V rated value at 26 V rated value at 27 V rated value at 28 V rated value at 29 V rated value at 20 V rated value at 10 V rated value at 125 V rated | operational current at AC-15 • at 230 V rated value • at 400 V rated value | 10 A 3 A |
| at 48 V rated value at 60 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 600 V rated value onumber of the control of t | operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value | 10 A 3 A 2 A |
| at 60 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value ot 600 V rated value operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 60 V rated value at 110 V rated value at 110 V rated value at 125 V rated value at 125 V rated value at 220 V rated value at 600 V rated value | operational current at AC-15 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value | 10 A 3 A 2 A |
| at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 60 V rated value at 110 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 200 V rated value at 200 V rated value at 300 V rated value at 300 V rated value at 300 V rated value 300 V rated value 300 V rated value 300 V rated value 300 V rated value | operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 | 10 A 3 A 2 A 1 A |
| at 125 V rated value at 220 V rated value at 600 V rated value operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 60 V rated value at 110 V rated value at 125 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 600 V rated value at 100 V rated value at 125 V rated value | operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value | 10 A 3 A 2 A 1 A |
| at 220 V rated value at 600 V rated value 0.15 A Operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 125 V rated value at 220 V rated value at 600 V rated value | operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value | 10 A 3 A 2 A 1 A |
| at 600 V rated value operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 115 V rated value at 220 V rated value at 600 V rated value 1A at 220 V rated value at 600 V rated value 10 A | operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value | 10 A 3 A 2 A 1 A 10 A 6 A 6 A |
| operational current at DC-13 • at 24 V rated value 10 A • at 48 V rated value 2 A • at 60 V rated value 2 A • at 110 V rated value 1 A • at 125 V rated value 0.9 A • at 220 V rated value 0.3 A • at 600 V rated value 0.1 A | operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value | 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A |
| at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value | operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value | 10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A |
| at 48 V rated value at 60 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 600 V rated value at 600 V rated value | operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 600 V rated value | 10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A |
| at 60 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value 0.3 A at 600 V rated value 0.1 A | operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 600 V rated value • at 600 V rated value | 10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A |
| at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value 0.1 A | operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 600 V rated value • at 600 V rated value | 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 2 A 1 A 0.15 A |
| at 125 V rated value at 220 V rated value at 600 V rated value 0.3 A 0.1 A | operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 220 V rated value • at 220 V rated value • at 600 V rated value • at 600 V rated value • at 24 V rated value | 10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A 10 A 2 A 1 A 0.15 A |
| at 220 V rated value at 600 V rated value 0.3 A 0.1 A | operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 220 V rated value • at 24 V rated value • at 600 V rated value • at 48 V rated value • at 48 V rated value | 10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A 10 A 2 A 1 A 0.15 A |
| • at 600 V rated value 0.1 A | operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 48 V rated value • at 48 V rated value • at 48 V rated value • at 600 V rated value | 10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A 10 A 2 A 1 A 0.15 A |
| | operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 600 V rated value • at 600 V rated value operational current at DC-13 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 100 V rated value • at 410 V rated value | 10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A 0.15 A 10 A 2 A 2 A 1 A 0.9 A |
| contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA) | operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 110 V rated value • at 125 V rated value | 10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A 0.15 A 10 A 2 A 2 A 1 A 0.9 A |
| | operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 125 V rated value | 10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A 0.15 A 10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A |

| UL/CSA ratings | |
|--|--|
| full-load current (FLA) for 3-phase AC motor | |
| • at 480 V rated value | 27 A |
| at 400 V rated value at 600 V rated value | 27 A |
| | ZIA |
| yielded mechanical performance [hp] | |
| • for single-phase AC motor | 2 hn |
| — at 110/120 V rated value | 2 hp |
| — at 230 V rated value | 5 hp |
| • for 3-phase AC motor | 40 h |
| — at 200/208 V rated value | 10 hp |
| — at 220/230 V rated value | 10 hp |
| — at 460/480 V rated value | 20 hp |
| — at 575/600 V rated value | 25 hp |
| contact rating of auxiliary contacts according to UL | A600 / P600 |
| Short-circuit protection | |
| design of the fuse link | |
| for short-circuit protection of the main circuit | |
| with type of coordination 1 required | gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA) |
| — with type of assignment 2 required | gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA) |
| for short-circuit protection of the auxiliary switch required | gG: 10 A (500 V, 1 kA) |
| Installation/ mounting/ dimensions | |
| mounting position | +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface |
| fastening method side-by-side mounting | Yes |
| fastening method | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 |
| height | 85 mm |
| width | 45 mm |
| depth | 97 mm |
| required spacing | |
| with side-by-side mounting | |
| — forwards | 10 mm |
| — upwards | 10 mm |
| — downwards | 10 mm |
| — at the side | 0 mm |
| for grounded parts | |
| — forwards | 10 mm |
| — upwards | 10 mm |
| — at the side | 6 mm |
| — downwards | 10 mm |
| • for live parts | TO THIN |
| — forwards | 10 mm |
| | 10 mm |
| — upwards | 10 mm |
| — downwards | |
| — at the side | 6 mm |
| Connections/ Terminals | |
| type of electrical connection | |
| for main current circuit | screw-type terminals |
| for auxiliary and control circuit | screw-type terminals |
| at contactor for auxiliary contacts | Screw-type terminals |
| of magnet coil | Ones to the second seco |
| type of connectable conductor cross-sections | Screw-type terminals |
| | Screw-type terminals |
| • for main contacts | |
| | 2x (1 2.5 mm²), 2x (2.5 10 mm²) |
| • for main contacts | |
| for main contacts — solid | 2x (1 2.5 mm²), 2x (2.5 10 mm²) |
| for main contacts — solid — solid or stranded | 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 10 mm²) |
| for main contacts — solid — solid or stranded — finely stranded with core end processing | 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² |
| for main contacts — solid — solid or stranded — finely stranded with core end processing for AWG cables for main contacts | 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² |
| for main contacts — solid — solid or stranded — finely stranded with core end processing • for AWG cables for main contacts connectable conductor cross-section for main contacts | 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8) |
| for main contacts — solid — solid or stranded — finely stranded with core end processing • for AWG cables for main contacts connectable conductor cross-section for main contacts • solid | 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8) 1 10 mm² |

| - polid ou otropodod | 0.5 2.5 mm² |
|--|--|
| solid or stranded | |
| finely stranded with core end processing | 0.5 2.5 mm² |
| type of connectable conductor cross-sections | |
| for auxiliary contacts | |
| — solid or stranded | 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) |
| finely stranded with core end processing | 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) |
| for AWG cables for auxiliary contacts | 2x (20 16), 2x (18 14) |
| AWG number as coded connectable conductor cross section | |
| • for main contacts | 16 8 |
| for auxiliary contacts | 20 14 |
| Safety related data | |
| product function | |
| mirror contact according to IEC 60947-4-1 | Yes |
| positively driven operation according to IEC 60947-5-1 | No |
| suitable for safety function | Yes |
| suitability for use safety-related switching OFF | Yes |
| service life maximum | 20 a |
| test wear-related service life necessary | Yes |
| proportion of dangerous failures | |
| with low demand rate according to SN 31920 | 40 % |
| with high demand rate according to SN 31920 | 73 % |
| B10 value with high demand rate according to SN 31920 | 1 000 000 |
| failure rate [FIT] with low demand rate according to SN 31920 | 100 FIT |
| ISO 13849 | |
| device type according to ISO 13849-1 | 3 |
| overdimensioning according to ISO 13849-2 necessary | Yes |
| IEC 61508 | |
| safety device type according to IEC 61508-2 | Type A |
| Electrical Safety | |
| protection class IP on the front according to IEC 60529 | IP20 |
| touch protection on the front according to IEC 60529 | finger-safe, for vertical contact from the front |
| | |

General Product Approval









Confirmation



General Product Approval EMV Test Certificates Marine / Shipping

<u>KC</u>





Special Test Certificate

Type Test Certificates/Test Report



Marine / Shipping other



Confirmation



Confirmation



Special Test Certific-

<u>ate</u>





Miscellaneous

other Railway Environment



Environmental Confirmations

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

Information- and Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2027-1AN20

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2027-1AN20

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

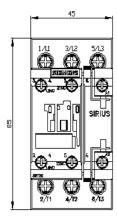
https://support.industry.siemens.com/cs/ww/en/ps/3RT2027-1AN20

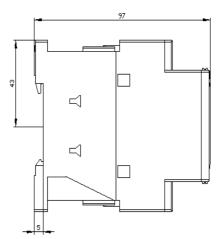
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2027-1AN20&lang=en

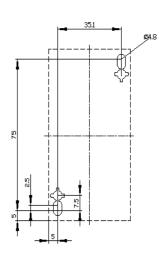
Characteristic: Tripping characteristics, I2t, Let-through current

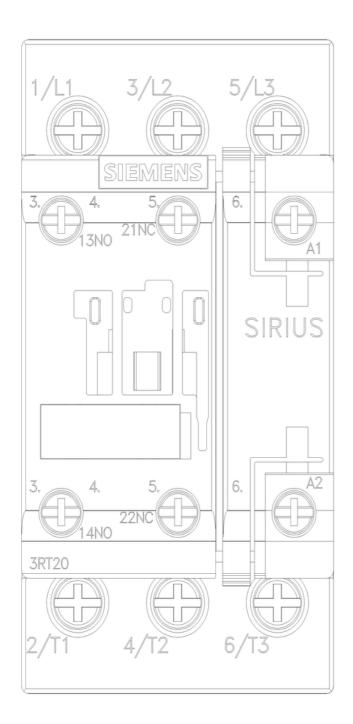
https://support.industry.siemens.com/cs/ww/en/ps/3RT2027-1AN20/char

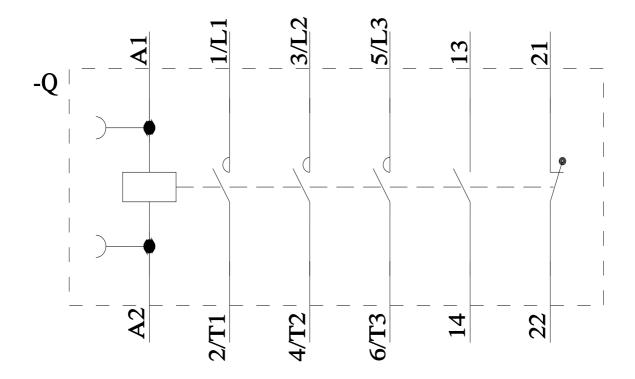
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2027-1AN20&objecttype=14&gridview=view1











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