SIEMENS

Data sheet

3RT2016-1AP02



power contactor, AC-3e/AC-3, 9 A, 4 kW / 400 V, 3-pole, 230 V AC, 50/60 Hz, auxiliary contacts: 1 NC, screw terminal, size: S00

| product brand name | SIRIUS |
|---|----------------------------|
| product designation | Power contactor |
| product type designation | 3RT2 |
| General technical data | |
| size of contactor | S00 |
| 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 | 0.9 W |
| at AC in hot operating state per pole | 0.3 W |
| without load current share typical | 1.1 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 | 6,7g / 5 ms, 4,2g / 10 ms |
| shock resistance with sine pulse | |
| • at AC | 10,5g / 5 ms, 6,6g / 10 ms |
| mechanical service life (operating cycles) | |
| of contactor typical | 30 000 000 |
| 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 | 0.23 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 | 39.6 kg |
| global warming potential [CO2 eq] during manufacturing | 1.18 kg |
| global warming potential [CO2 eq] during operation | 38.5 kg |
| global warming potential [CO2 eq] after end of life | -0.155 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 | 22 A |
| up to 690 V at ambient temperature 40 °C rated value | 22 A |
| — up to 690 V at ambient temperature 60 °C rated value | 20 A |
| • at AC-3 | |
| — at 400 V rated value | 9 A |
| — at 500 V rated value | 7.7 A |
| — at 690 V rated value | 6.7 A |
| • at AC-3e | |
| — at 400 V rated value | 9 A |
| — at 500 V rated value | 7.7 A |
| - at 690 V rated value | 6.7 A |
| at AC-4 at 400 V rated value at AC 5a up to 690 V rated value | 8.5 A 19.4 A |
| at AC-5a up to 690 V rated value at AC-5b up to 400 V rated value | 19.4 A 7.4 A |
| at AC-6a | |
| up to 230 V for current peak value n=20 rated value | 5.3 A |
| — up to 400 V for current peak value n=20 rated value | 5.3 A |
| — up to 500 V for current peak value n=20 rated value | 5.3 A |
| — up to 690 V for current peak value n=20 rated value | 5 A |
| ● at AC-6a | |
| — up to 230 V for current peak value n=30 rated value | 3.5 A |
| — up to 400 V for current peak value n=30 rated value | 3.5 A |
| — up to 500 V for current peak value n=30 rated value | 3.6 A |
| — up to 690 V for current peak value n=30 rated value | 3.3 A |
| minimum cross-section in main circuit at maximum AC-1 rated value | 4 mm ² |
| operational current for approx. 200000 operating cycles at AC-4 | |
| at 400 V rated value at 690 V rated value | 4.1 A 3.3 A |
| operational current | |
| • at 1 current path at DC-1 | |
| - at 24 V rated value | 20 A |
| — at 60 V rated value | 20 A |
| — at 110 V rated value | 2.1 A |
| — at 220 V rated value | 0.8 A |
| — at 440 V rated value | 0.6 A |
| — at 600 V rated value | 0.6 A |
| with 2 current paths in series at DC-1 | |
| — at 24 V rated value | 20 A |
| — at 60 V rated value | 20 A |
| — at 110 V rated value | 12 A |
| — at 220 V rated value | 1.6 A |
| — at 440 V rated value | 0.8 A |
| — at 600 V rated value | 0.7 A |

| with 3 current paths in series at DC-1 | 20.4 |
|--|---|
| — at 24 V rated value | 20 A |
| — at 60 V rated value | 20 A |
| — at 110 V rated value | 20 A |
| — at 220 V rated value | 20 A |
| — at 440 V rated value | 1.3 A |
| — at 600 V rated value | 1 A |
| • at 1 current path at DC-3 at DC-5 | |
| — at 24 V rated value | 20 A |
| — at 60 V rated value | 0.5 A |
| — at 110 V rated value | 0.15 A |
| • with 2 current paths in series at DC-3 at DC-5 | |
| — at 24 V rated value | 20 A |
| — at 60 V rated value | 5 A |
| — at 110 V rated value | 0.35 A |
| with 3 current paths in series at DC-3 at DC-5 | |
| — at 24 V rated value | 20 A |
| — at 60 V rated value | 20 A |
| — at 110 V rated value | 20 A |
| — at 220 V rated value | 1.5 A |
| — at 440 V rated value | 0.2 A |
| — at 600 V rated value | 0.2 A |
| operating power | |
| • at AC-3 | |
| — at 230 V rated value | 2.2 kW |
| — at 400 V rated value | 4 kW |
| — at 500 V rated value | 4 kW |
| — at 690 V rated value | 5.5 kW |
| • at AC-3e | |
| — at 230 V rated value | 2.2 kW |
| — at 400 V rated value | 4 kW |
| — at 500 V rated value | 4 kW |
| — at 690 V rated value | 5.5 kW |
| operating power for approx. 200000 operating cycles at AC- | |
| 4 | 0.1444 |
| at 400 V rated value | 2 kW |
| • at 690 V rated value | 2.5 kW |
| operating apparent power at AC-6a | 0.11/4 |
| • up to 230 V for current peak value n=20 rated value | 2 kVA |
| up to 400 V for current peak value n=20 rated value | 3.6 kVA |
| • up to 500 V for current peak value n=20 rated value | 4.6 kVA |
| up to 690 V for current peak value n=20 rated value | 5.9 kVA |
| operating apparent power at AC-6a | 4.013/4 |
| up to 230 V for current peak value n=30 rated value | 1.3 kVA |
| up to 400 V for current peak value n=30 rated value | 2.4 kVA |
| up to 500 V for current peak value n=30 rated value | 3.1 kVA |
| up to 690 V for current peak value n=30 rated value | 4 kVA |
| short-time withstand current in cold operating state up to 40 °C | |
| Imited to 1 s switching at zero current maximum | 155 A; Use minimum cross-section acc. to AC-1 rated value |
| Imited to 5 s switching at zero current maximum | 111 A; Use minimum cross-section acc. to AC-1 rated value |
| Imited to 10 s switching at zero current maximum | 86 A; Use minimum cross-section acc. to AC-1 rated value |
| Imited to 30 s switching at zero current maximum | 66 A; Use minimum cross-section acc. to AC-1 rated value |
| Imited to 60 s switching at zero current maximum | 55 A; Use minimum cross-section acc. to AC-1 rated value |
| no-load switching frequency | |
| • at AC | 10 000 1/h |
| operating frequency | |
| • at AC-1 maximum | 1 000 1/h |
| • at AC-2 maximum | 750 1/h |
| • at AC-3 maximum | 750 1/h |
| at AC-3e maximum | 750 1/h |

| Control increase AC bype of voltage of the control supply voltage AC e it 60 Hz med value 200 V e it 60 Hz med value 200 V operating range factor control supply voltage meted value of magnet coil at AC 0.8 1.1 e it 60 Hz 0.75 e it 60 Hz 0.8 0.75 e it 60 Hz 0.8 0.75 e it 60 Hz 0.25 e it 60 Hz 0.1 16 ms control supplicy 0 15 ms e it 60 Hz 0.0 16 ms control supplicy 0.4 15 ms e it 60 V rade value 0 | • at AC-4 maximum | 250 1/h |
|---|---|---|
| Type of vortage of the control supply voltage AC control supply voltage at AC 230 V • if 50 It raide value 230 V • operating range factor control supply voltage rated value of magnet coll at AC 0.8 1.1 • • if 50 It 2 27 VA • • if 50 It 2 23 VA • • if 50 It 2 0.5 • if 50 It 2 0.5 • if 50 It 2 0.25 cloaing delay 0 15 ms • if 60 It 2 0.25 cloaing delay 0 16 ms • if 60 It 2 0.15 ms • if 60 It 2 0.16 ms control varial at AC-12 0.4 opening delay 1 • if 60 It 2 0.4 opening delay 1 • if 60 V rade value 1 | | |
| control supply voltage at AC 230 V • # 16 01 Fr. mide Value 230 V • 0 = 010 Fr. mide Value 230 V operating range factor control supply voltage rated value of magnet coil at AC 0.8 1.1 • 0 = 010 Fr. 0.8 1.1 opport coil at AC 0.8 1.1 • 0 = 010 Fr. 0.8 1.1 opport coil at AC 0.1 15 ms | | AC |
| • at 60 hr mide value230 V• at 60 hr mide value230 V• at 60 hr mide value0• at 60 hr mide value0.8 1.1• at 60 hr0.8 1.1• at 60 hr0.8 1.1• at 60 hr27 VA• at 60 hr27 VA• at 60 hr0.8 1.1• at 60 hr0.8 1.1• at 60 hr27 VA• at 60 hr0.8 1.1• at 60 hr0.75• at 60 hr0.75• at 60 hr0.75• at 60 hr0.75• at 60 hr0.25• at 60 hr0.25• at 60 hr0.25• at 60 hr0.25• at 60 hr0.35 rm• at 60 hr0.35 rm• at 60 hr0.35 rm• at 60 hr0.35 rm• at 60 hr0.4 15 rm• at 60 hr10 A• at 60 hr10 A• operational current at AC-12 maximum10 A• at 60 hr red value10 A <td></td> <td></td> | | |
| International state200 Voperating range factor control supply voltage rated value of entition 4.C.• at 50 Hz0.81.1apparent pick-up power of magnet coil at AC• at 50 Hz27 VA• at 50 Hz0.81.1• at 50 Hz0.25• at 60 Hz0.15 Hs• at 60 Hz10.15 Hs• at 60 Hz10.4• at 72 N Hade Value10.4• at 80 Hz10.4• at 80 Hz10.4 <t< td=""><td></td><td>230 V</td></t<> | | 230 V |
| operating range factor control supply voltage rated value of mannet coll at AC. 0.81.1 • at 60 Hz 0.81.1 • at 60 Hz 27 VA • at 60 Hz 27 VA • at 60 Hz 27 VA • at 60 Hz 0.8 • at 60 Hz 27 VA • at 60 Hz 0.8 • at 60 Hz 0.8 • at 60 Hz 0.75 apparent pickorp ower factor with closing power of the coll 0.8 • at 60 Hz 0.75 apparent bolding power factor with he holding power of the coll 0.8 • at 60 Hz 0.75 apparent bolding power of magnet coll at AC - • at 60 Hz 0.25 colising dalay - • at AC - • at AC </td <td></td> <td></td> | | |
| maps col at AC 0.81.1 • at 00 Hz 0.81.1 apprent plok-up power of magnet coll at AC 27 VA • at 00 Hz 0.81.1 • at 00 Hz 0.8 | | |
| • at 80 Hz 0.85 11 apparent pick-up power factor with closing power of the coll 27 VA • at 80 Hz 24 J VA • at 80 Hz 0.4 J VA • at 80 Hz 0.8 J • at 80 Hz 0.7 J • at 80 Hz 0.7 J • at 80 Hz 0.7 J • at 80 Hz 0.2 J • at 80 Hz 0.3 J A • at 80 V table value 1.0 A | magnet coil at AC | |
| apparent pick-up power of magnet coil at AC 27 VA • at 60 Hz 24.3 VA Inductive power factor with closing power of the coil 0.8 • at 60 Hz 0.75 apparent holding power of magnet coil at AC 0.8 • at 50 Hz 4.2 VA • at 60 Hz 0.8 i at 50 Hz 4.2 VA • at 50 Hz 4.2 VA • at 50 Hz 0.25 • at 60 Hz 0.4 • at 60 Hz 0.4 • at 60 Hz | | |
| • at 50 Hz 27 VA • at 60 Hz 24 30 VA Inductive power factor with closing power of the coll 0.8 • at 80 Hz 0.8 • at 80 Hz 0.75 apparent holding power of magnet coil at AC 42 VA • at 80 Hz 3.3 VA Inductive power factor with the holding power of the coll 0.25 • at 80 Hz 0.25 • at 80 V Hz 0.25 • at 80 V Hz 0.3 • at 80 V Hz 0.1 • at 80 V Hz 0.1 • at 80 V rade value 1 • at 80 V rade value 1 • at 80 V rade value 1 • at 80 V rade value 1 <t< td=""><td></td><td>0.85 1.1</td></t<> | | 0.85 1.1 |
| • al 60 Hz24.3 VAinductive power factor with closing power of the coll0.8• al 60 Hz0.75apparent holding power of magnet coll at AC4.2 VA• al 60 Hz4.2 VA• al 60 Hz0.25• al 60 Hz0.25closing delay935 ms• al AC935 ms• opening delay0.15 ms• arcing time10.4.2• al AC935 msopening delay10.4.5• al AC935 ms• arcing time1015 msarcing time1015 msoutrot version of the switch operating mechanism10.Aoperational current at AC-1510.A• al 300 V rade value10.Aoperational current at AC-1510.A• al 300 V rade value10.Aoperational current at AC-161• al 300 V rade value10.Aoperational current at AC-1710.A• al 300 V rade value3.A• al 300 V rade value3.A• al 300 V rade value1.Aoperational current at AC-161.A• al 400 V rade value3.A• al 400 V rade value3.A• al 300 V rade value1.Aoperational current at DC-12I.A• al 300 V rade value3.A• al 300 V rade value3.A< | | |
| Inductive power factor with closing power of the coll 0.8 • at 50 Hz 0.75 apparent holding power of magnet coll at AC 4.2 VA • at 50 Hz 4.2 VA • at 60 Hz 0.25 • at AC 9 35 ms • opening delay 0.1 fs ms • at AC 4 15 ms • at AC 9 35 ms • opening delay 10 16 ms • at AC 4 15 ms • at AC 10 16 ms contact 10 | | |
| • at 50 Hz0.8• at 60 Hz0.75• at 50 Hz4.2 VA• at 50 Hz4.2 VA• at 60 Hz33 VAInductive power factor with the holding power of the coll0.25• at 80 Hz0.25closing dolay0.25• at AC935 ms• opening dolay4 15 ms• at AC935 ms• at AC1.5 ms• at AC1.6 ms• at 30 V rated value1.6 ms• at 3 | | 24.3 VA |
| • at 60 Hz 075 apparent holding power of magnet coil at AC 42 VA • at 60 Hz 33 VA Inductive power factor with the holding power of the coil 025 • at 60 Hz 935 ms • at 60 Hz 915 ms control version of the switch operating mechanism 1015 ms control version of the switch operating mechanism 10.A operational current at AC-12 maximum 10 A operational current at AC-12 maximum 10 A • at 600 V rated value 10 A • at 600 V rated value 10 A • at 600 V rated value 6 A • at 60 V rated value 10 A | | |
| apparent holding power of magnet coil at AC 4.2 VA • at 50 Hz 3.3 VA Inductive power factor with the holding power of the coil 0.25 • at 50 Hz 0.25 • at 60 Hz 0.25 • at AC 9 35 ms • opening delay • 15 ms • at AC 4 15 ms arcing time 10 15 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 10 15 ms operational current at AC-15 1 • at 230 V rated value 10 A operational current at AC-15 3 A • at 300 V rated value 2 A • at 600 V rated value 3 A • at 600 V rated value 3 A • at 800 V rated value 6 A • at 800 V rated value 6 A • at 10 V rated value 6 A • at 10 V rated value 0 A • at 600 V rated value 6 A • at 600 V rated value 10 A • at 600 V rated value 6 A <t< td=""><td></td><td></td></t<> | | |
| • at 50 Hz 4.2 VA • at 60 Hz 33 VA inductive power factor with the holding power of the coil 0.25 • at 60 Hz 935 ms opening delay 4 • at AC 415 ms arcing time 1015 ms control version of the switch operating mechanism 1 Autiliary circuit 10 A operational current at AC-12 maximum 10 A operational current at AC-15 1 • at 200 V rated value 3 A • at 600 V rated value 3 A • at 600 V rated value 10 A • at 600 V rated value 6 A • at 600 V rated value 6 A • at 600 V rated value 6 A • at 600 V rated value 1 A • at 600 V rated value 6 A • at 220 V rated value 10 | | 0.75 |
| • at 60 Hz 3.3 VA inductive power factor with the holding power of the coll 0.25 • at 60 Hz 0.25 • at 60 Hz 0.25 • at AC 9 35 ms opening delay 4 15 ms • at AC 4 15 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 10 15 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 10 A operational current at AC-12 maximum 10 A operational current at AC-15 10 A • at 400 V rated value 3 A • at 600 V rated value 3 A • at 600 V rated value 6 A • at 600 V rated value 10 A • at 600 V rated value 6 A • at 600 V rated value 6 A • at 600 V rated value 10 A • at 600 V rated value 10 A • at 600 V rated value 6 A • at 600 V rated value 6 A • at 600 V rated value 10 A • at 600 V rated value 10 A • at 600 V rated value | | 4.2.1/A |
| Inductive power factor with the holding power of the coll 0.25 e at 60 Hz 0.25 closing delay 0.25 e at AC 935 ms opening delay 415 ms e at AC 935 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 1 number of NC contacts for auxiliary contacts instantaneous contact 1 operational current at AC-12 maximum 10 A operational current at DC-12 1 • at 200 V rated value 1 A operational current at DC-12 0.2 • at 24 V rated value 1 A operational current at DC-12 0.4 • at 40 V rated value 1 A operational current at DC-12 0.4 • at 220 V rated value 1 A operational current at DC-13 0 A • at 60 V rated value 2 A • at 220 V rated value 1 A • at 24 V rated value 1 A • at 220 V rated value 0 A • at 60 V rated value | | |
| • at 50 Hz 0.25 • at 60 Hz 0.25 closing delay 935 ms • at AC 935 ms • at AC 415 ms • at AC 1016 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 10 | | |
| • at 60 Hz0.25closing delay9 35 ms• at AC9 35 msarcing time10 15 msarcing time10 15 mscontrol version of the switch operating mechanismStandard A1 - A2Auxiliary circuit10 15 msnumber of NC contacts for auxiliary contacts instantaneous1operational current at AC-12 maximum10 Aoperational current at AC-151• at 230 V rated value3A• at 400 V rated value3A• at 400 V rated value10 A• at 600 V rated value10 A• at 600 V rated value6A• at 60 V rated value3A• at 60 V rated value3A• at 60 V rated value10 A• at 60 V rated value10 A• at 24 V rated value6A• at 250 V rated value10 A• at 260 V rated value10 A• at 270 V rated value10 A• at 280 V rated value10 A• at 290 V rated value10 A• at 24 V rated value2A• at 250 V rated value10 A• at 260 V rated value10 A• at 270 V rated value10 A• at 280 V rated value10 A• at 290 V rated value0.15 A• at 200 V rated value0.16 A• at 24 V rated value0.16 A• at 24 V rated value0.16 A• at 24 V rated value0.16 A• at 25 V rated value0.16 A• at 26 V rated value0.16 A• at 27 V rated | | 0.25 |
| closing delay at AC 9 35 ms opening delay 4 15 ms arcing time 10 15 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit member of NC contacts for auxiliary contacts instantaneous 1 control operational current at AC-15 1 • at 320 V rated value 10 A at 330 V rated value • at 400 V rated value 3 A at 650 V rated value • at 400 V rated value 1 A operational current at DC-12 • at 400 V rated value • at 430 V rated value 1 A operational current at DC-12 • at 430 V rated value • at 43 V rated value 6 A • at 110 V rated value 3 A • at 125 V rated value 0 A • at 220 V rated value 0 A • at 24 V rated value 0 A • at 110 V rated value 0 A • at 220 V rated value 0 A • at 220 V rated value 0 A • at 220 V rated value 0 A • at 60 V rated value 0 A • at 220 V rated value 0 A • at 220 V rated value 0 A • at 24 V rated value 0 A • at 250 V rated value 0 A • at | | |
| • at AC 935 ms opening delay 415 ms • at AC 415 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 1 number of NC contacts for auxiliary contacts instantaneous 1 operational current at AC-12 maximum 10 A operational current at AC-15 - • at 230 V rated value 10 A • at 400 V rated value 3A • at 630 V rated value 1A operational current at DC-12 - • at 24 V rated value 1A operational current at DC-12 - • at 24 V rated value 10 A • at 24 V rated value 6A • at 24 V rated value 0A • at 24 V rated value 1A operational current at DC-12 - • at 24 V rated value 6A • at 24 V rated value 1A operational current at DC-13 - • at 25 V rated value 2A • at 26 V rated value 1A • at 20 V rated value 1A • at 20 V rated value 2A • at 210 V rated value 2A • at 22 V rated value 2A • at 22 V rated value 2A • | | |
| opening delay 415 ms arcing time 1015 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 1 number of NC contacts for auxiliary contacts instantaneous 1 operational current at AC-12 maximum 10 A operational current at AC-15 10 A • at 230 V rated value 10 A • at 230 V rated value 10 A • at 600 V rated value 3 A • at 600 V rated value 10 A • at 80 V rated value 6 A • at 10 V rated value 6 A • at 10 V rated value 6 A • at 220 V rated value 0.15 A operational current at DC-13 • • at 220 V rated value 0.15 A • at 220 V rated value 0.15 A operational current at DC-13 • • at 24 V rated value 0.4 • at 220 V rated value 0.15 A operational current at DC-13 • • at 24 V rated value 0.16 A • at 24 V rated value 0.15 A operational current at DC-13 • • at 24 V r | | 9 35 ms |
| • at AC 4 15 ms arcing time 10 15 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit Immer of NC contacts for auxiliary contacts instantaneous 1 contract operational current at AC-12 maximum 10 A operational current at AC-15 Immer of NC contacts for auxiliary contacts 1 • at 230 V rated value 10 A 3A • at 600 V rated value 2A 2A • at 600 V rated value 1A operational current at DC-12 Immer of AC • at 40 V rated value 6A • at 40 V rated value 6A • at 40 V rated value 6A • at 40 V rated value 1A operational current at DC-12 Immer of AC • at 410 V rated value 6A • at 42 V rated value 6A • at 42 V rated value 1A • at 60 V rated value 2A< | | |
| arcing time 10 15 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit I number of NC contacts for auxiliary contacts instantaneous contact 1 operational current at AC-12 maximum 10 A operational current at AC-15 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII | | 4 15 ms |
| control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 1 number of NC contacts for auxiliary contacts instantaneous contact 1 operational current at AC-12 maximum 10 A operational current at AC-15 0 • at 230 V rated value 10 A • at 400 V rated value 3 A • at 500 V rated value 10 A • at 400 V rated value 1 A operational current at DC-12 0 • at 24 V rated value 10 A • at 48 V rated value 6 A • at 10 V rated value 2 A • at 10 V rated value 6 A • at 110 V rated value 1 A operational current at DC-12 0 A • at 122 V rated value 1 A • at 125 V rated value 6 A • at 125 V rated value 1 A • at 125 V rated value 2 A • at 125 V rated value 1 A • at 220 V rated value 0 A • at 24 V rated value 1 A • at 24 V rated value 1 A • at 25 V rated value 0 A • at 24 V rated value 1 A • at 24 V rated value 2 A • at 24 V rated value 2 A • at 10 V rated value | | |
| Auxillary circuit 1 number of NC 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 600 V rated value 2 A • at 600 V rated value 10 A operational current at DC-12 0 • at 420 V rated value 6 A • at 420 V rated value 6 A • at 430 V rated value 6 A • at 430 V rated value 6 A • at 440 V rated value 6 A • at 200 V rated value 10 A • at 450 V rated value 6 A • at 450 V rated value 10 A • at 200 V rated value 10 A • at 60 V rated value 10 A • at 200 V rated value 115 A operational current at DC-13 0 • at 60 V rated value 10 A • at 60 V rated value 2 A • at 60 V rated value 2 A • at 60 V rated value 2 A • at 60 V rated value 1 A • at 22 V rated value 0.9 A | | |
| number of NC 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 10 A • at 400 V rated value 2 A • at 690 V rated value 1 A operational current at DC-12 • • at 48 V rated value 6 A • at 48 V rated value 6 A • at 20 V rated value 1 A operational current at DC-12 • • at 48 V rated value 6 A • at 20 V rated value 6 A • at 210 V rated value 6 A • at 220 V rated value 1 A operational current at DC-13 • • at 220 V rated value 0.15 A operational current at DC-13 • • at 48 V rated value 2 A • at 48 V rated value 2 A • at 48 V rated value 0 A • at 220 V rated value 0 A • at 48 V rated value 0 A • at 48 V rated value 0 A • at 48 V rated value 0.3 A • at 100 V rated value 0. | | |
| contact 10 A 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 600 V rated value 10 A • at 60 V rated value 10 A • at 60 V rated value 6 A • at 60 V rated value 6 A • at 22 V rated value 6 A • at 20 V rated value 0 A • at 20 V rated value 10 A • at 20 V rated value 0 A • at 220 V rated value 0 A • at 220 V rated value 0.15 A operational current at DC-13 10 A • at 24 V rated value 2 A • at 25 V rated value 2 A • at 60 V rated value 2 A • at 60 V rated value 2 A • at 80 V rated value 2 A • at 40 V rated value 2 A • at 40 V rated value 2 A • at 40 V rated value 3 A • at 20 V rated value 3 A • at 80 V rated value 3 A • at 60 V rated value 3 A <td></td> <td>1</td> | | 1 |
| operational current at AC-15• at 230 V rated value10 A• at 400 V rated value3 A• at 500 V rated value2 A• at 600 V rated value1 Aoperational current at DC-12•• at 24 V rated value10 A• at 48 V rated value6 A• at 600 V rated value6 A• at 100 V rated value6 A• at 25 V rated value2 A• at 20 V rated value1 A• at 20 V rated value0.15 Aoperational current at DC-1310 A• at 48 V rated value10 A• at 20 V rated value0.15 Aoperational current at DC-1310 A• at 48 V rated value10 A• at 25 V rated value0.15 Aoperational current at DC-1310 A• at 25 V rated value0.15 Aoperational current at DC-130.15 A• at 25 V rated value0.15 Aoperational current at DC-130.15 A• at 25 V rated value0.15 Aoperational current at DC-130.15 A• at 25 V rated value0.2 A• at 48 V rated value0.3 A• at 25 V rated value0.3 A• at 20 V rated value0.1 A• at 60 V rated value0.1 A <td>contact</td> <td></td> | contact | |
| • at 230 V rated value 10 A • 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 | · · · · · · · · · · · · · · · · · · · | 10 A |
| • at 400 V rated value3 A• at 500 V rated value2 A• at 690 V rated value1 Aoperational current at DC-12•• at 24 V rated value10 A• at 48 V rated value6 A• at 48 V rated value6 A• at 10 V rated value3 A• at 10 V rated value2 A• at 10 V rated value2 A• at 220 V rated value0.15 A• at 600 V rated value2 A• at 24 V rated value0.15 A• at 600 V rated value2 A• at 25 V rated value10 A• at 20 V rated value0.15 A• at 20 V rated value0.15 A• at 20 V rated value0.15 A• at 20 V rated value0.16 A• at 20 V rated value0.10 A• at 60 V rated value0.10 A• at 125 V rated value0.10 A• at 220 V rated value0.10 A• at 600 V rated value0.10 A< | - | |
| • at 500 V rated value2 A• at 690 V rated value1 Aoperational current at DC-12-• at 24 V rated value10 A• at 48 V rated value6 A• at 60 V rated value6 A• at 60 V rated value3 A• at 10 V rated value2 A• at 125 V rated value1 A• at 220 V rated value0.15 Aoperational current at DC-13-• at 24 V rated value2 A• at 60 V rated value2 A• at 24 V rated value0.15 Aoperational current at DC-13-• at 24 V rated value2 A• at 24 V rated value0.0 A• at 25 V rated value0.15 Aoperational current at DC-13-• at 24 V rated value0.0 A• at 25 V rated value0.0 A• at 26 V rated value0.0 A• at 60 V rated value0.0 A• at 60 V rated value0.0 A• at 220 V rated value0.0 A• at 220 V rated value0.0 A• at 600 V rated value0.0 A• at 220 V rated value0.0 A• at 220 V rated value0.0 A• at 600 V rated value0.1 A• cortact reliability of auxiliary contacts1 faulty switching per 100 million (17 V, 1 mA)UL/CSA ratings-full-load current (FLA) for 3-phase AC motor- | | |
| • at 690 V rated value1 Aoperational current at DC-120• at 24 V rated value10 A• at 48 V rated value6 A• at 60 V rated value6 A• at 10 V rated value3 A• at 125 V rated value2 A• at 220 V rated value0.15 A• at 600 V rated value10 A• at 600 V rated value0.15 A• at 24 V rated value2 A• at 600 V rated value10 A• at 25 V rated value0.15 A• at 600 V rated value10 A• at 25 V rated value0.15 A• at 24 V rated value10 A• at 25 V rated value0.15 A• at 24 V rated value0.15 A• at 25 V rated value0.16 A• at 60 V rated value2 A• at 60 V rated value0.1 A• at 100 V rated value0.3 A• at 600 V rated value0.1 A• | | |
| operational current at DC-1210 A• at 24 V rated value10 A• at 48 V rated value6 A• at 60 V rated value6 A• at 110 V rated value3 A• at 125 V rated value2 A• at 220 V rated value1 A• at 600 V rated value0.15 Aoperational current at DC-1310 A• at 24 V rated value10 A• at 60 V rated value2 A• at 24 V rated value10 A• at 25 V rated value10 A• at 24 V rated value10 A• at 25 V rated value2 A• at 26 V rated value10 A• at 26 V rated value2 A• at 60 V rated value10 A• at 60 V rated value2 A• at 60 V rated value0.9 A• at 125 V rated value0.3 A• at 600 V rated value0.1 A• at 6 | | |
| at 24 V rated value10 Aat 48 V rated value6 Aat 60 V rated value6 Aat 110 V rated value3 Aat 125 V rated value2 Aat 220 V rated value1 Aat 600 V rated value0.15 Aoperational current at DC-132 Aat 24 V rated value2 Aat 60 V rated value10 Aat 60 V rated value2 Aat 24 V rated value2 Aat 24 V rated value2 Aat 24 V rated value2 Aat 25 V rated value2 Aat 26 0 V rated value2 Aat 60 V rated value3 Aat 60 V rated value0.9 Aat 110 V rated value0.3 Aat 220 V rated value0.1 Aat 600 V rated value0.1 Aat 600 V rated value0.1 Acontact reliability of auxiliary contacts1 faulty switching per 100 million (17 V, 1 mA)UL/CSA ratingsJul-Joad current (FLA) for 3-phase AC motor | | IA |
| • at 48 V rated value6 A• at 60 V rated value6 A• at 10 V rated value3 A• at 125 V rated value2 A• at 220 V rated value1 A• at 600 V rated value0.15 Aoperational current at DC-1310 A• at 24 V rated value2 A• at 24 V rated value2 A• at 600 V rated value2 A• at 24 V rated value10 A• at 48 V rated value2 A• at 60 V rated value2 A• at 60 V rated value2 A• at 25 V rated value0.9 A• at 125 V rated value0.3 A• at 600 V rated value0.1 A• at 600 V rated value0.1 A• at 600 V rated value1 faulty switching per 100 million (17 V, 1 mA)UL/CSA ratingsI faulty switching per 100 million (17 V, 1 mA) | - | 10.0 |
| • at 60 V rated value6 A• at 110 V rated value3 A• at 125 V rated value2 A• at 220 V rated value1 A• at 600 V rated value0.15 Aoperational current at DC-130• at 24 V rated value10 A• at 60 V rated value2 A• at 60 V rated value0.15 A• at 24 V rated value0.15 A• at 24 V rated value0.16 A• at 24 V rated value0.16 A• at 25 V rated value0.16 A• at 60 V rated value0.16 A• at 60 V rated value0.16 A• at 125 V rated value0.9 A• at 220 V rated value0.3 A• at 600 V rated value0.1 A• at 600 V rated V rates1 faulty switching per 100 million (17 V, 1 mA)UL/CSA ratings• A• UL/CSA ratings• A• A• A• A• A• A• A• A• A< | | |
| at 110 V rated value3 A• at 110 V rated value3 A• at 125 V rated value2 A• at 220 V rated value0.15 A• at 600 V rated value0.15 Aoperational current at DC-13 | | |
| • at 125 V rated value2 A• at 220 V rated value1 A• at 600 V rated value0.15 Aoperational current at DC-13 | | |
| • at 220 V rated value1 A• at 600 V rated value0.15 Aoperational current at DC-1310 A• at 24 V rated value10 A• at 48 V rated value2 A• at 60 V rated value2 A• at 60 V rated value1 A• at 10 V rated value0.9 A• at 220 V rated value0.3 A• at 600 V rated value0.1 A• at 600 V rated value0.1 A• at 100 V rated value0.1 A• at 220 V rated value0.1 A• at 600 V rated value0.1 A <td></td> <td></td> | | |
| • at 600 V rated value0.15 Aoperational current at DC-13I• at 24 V rated value10 A• at 48 V rated value2 A• at 60 V rated value2 A• at 10 V rated value1 A• at 110 V rated value0.9 A• at 220 V rated value0.3 A• at 600 V rated value0.1 A• contact reliability of auxiliary contacts1 faulty switching per 100 million (17 V, 1 mA)UL/CSA ratingsfull-load current (FLA) for 3-phase AC motorI | | |
| operational current at DC-1310 A• at 24 V rated value10 A• at 48 V rated value2 A• at 60 V rated value2 A• at 110 V rated value1 A• at 125 V rated value0.9 A• at 220 V rated value0.3 A• at 600 V rated value0.1 A• contact reliability of auxiliary contacts1 faulty switching per 100 million (17 V, 1 mA)UL/CSA ratingsfull-load current (FLA) for 3-phase AC motor | | |
| • at 24 V rated value10 A• at 24 V rated value2 A• at 60 V rated value2 A• at 10 V rated value1 A• at 125 V rated value0.9 A• at 220 V rated value0.3 A• at 600 V rated value0.1 A• contact reliability of auxiliary contacts1 faulty switching per 100 million (17 V, 1 mA)UL/CSA ratingsI | | |
| • at 48 V rated value2 A• at 60 V rated value2 A• at 110 V rated value1 A• at 125 V rated value0.9 A• at 220 V rated value0.3 A• at 600 V rated value0.1 A• contact reliability of auxiliary contacts1 faulty switching per 100 million (17 V, 1 mA)UL/CSA ratings | - | 10 A |
| • at 60 V rated value2 A• at 10 V rated value1 A• at 125 V rated value0.9 A• at 220 V rated value0.3 A• at 600 V rated value0.1 A• contact reliability of auxiliary contacts1 faulty switching per 100 million (17 V, 1 mA)UL/CSA ratingsfull-load current (FLA) for 3-phase AC motor | | |
| | | |
| • at 220 V rated value 0.3 A • at 600 V rated value 0.1 A contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA) UL/CSA ratings 1 full-load current (FLA) for 3-phase AC motor 1 | | |
| • at 600 V rated value 0.1 A contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA) UL/CSA ratings Image: Contact reliability of 3-phase AC motor | • at 125 V rated value | 0.9 A |
| contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA) UL/CSA ratings full-load current (FLA) for 3-phase AC motor | • at 220 V rated value | 0.3 A |
| UL/CSA ratings full-load current (FLA) for 3-phase AC motor | • at 600 V rated value | 0.1 A |
| full-load current (FLA) for 3-phase AC motor | contact reliability of auxiliary contacts | 1 faulty switching per 100 million (17 V, 1 mA) |
| | UL/CSA ratings | |
| | full-load current (FLA) for 3-phase AC motor | |
| at 480 V rated value 7.6 A | • at 480 V rated value | 7.6 A |
| • at 600 V rated value 9 A | • at 600 V rated value | 9 A |
| yielded mechanical performance [hp] | yielded mechanical performance [hp] | |
| for single-phase AC motor | for single-phase AC motor | |
| — at 110/120 V rated value 0.33 hp | — at 110/120 V rated value | 0.33 hp |

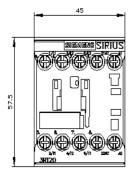
| — at 230 V rated value | 1 hp |
|---|--|
| • for 3-phase AC motor | |
| — at 200/208 V rated value | 2 hp |
| — at 220/230 V rated value | 3 hp |
| — at 460/480 V rated value | 5 hp |
| — at 575/600 V rated value | 7.5 hp |
| contact rating of auxiliary contacts according to UL | A600 / Q600 |
| Short-circuit protection | |
| design of the miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V | C characteristic: 10 A; 0.4 kA |
| design of the fuse link | |
| 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 | 58 mm |
| width | 45 mm |
| depth | 73 mm |
| required spacing | |
| with side-by-side mounting | |
| with side-by-side mounting — forwards | 10 mm |
| | 10 mm |
| — upwards | |
| — 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 | |
| — forwards | 10 mm |
| — upwards | 10 mm |
| — downwards | 10 mm |
| — 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 | Screw-type terminals |
| type of connectable conductor cross-sections | |
| for main contacts | |
| — solid | 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm² |
| — solid or stranded | 2x (0,5 1,5 mm ²), 2x (0,75 2,5 mm ²), 2x 4 mm ² |
| — finely stranded with core end processing | 2x (0.5 1.5 mm ²), 2x (0.75 2.5 mm ²) |
| for AWG cables for main contacts | 2x (20 16), 2x (18 14), 2x 12 |
| connectable conductor cross-section for main contacts | |
| solid | 0.5 4 mm² |
| stranded | 0.5 4 mm ² |
| | 0.5 4 mm ² |
| finely stranded with core end processing | 0.0 2.0 [[[[]] |
| connectable conductor cross-section for auxiliary contacts | $0.5 4 \text{ mm}^2$ |
| solid or stranded | 0.5 4 mm ² |
| 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), 2x 4 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 AWG number as coded connectable conductor cross | |

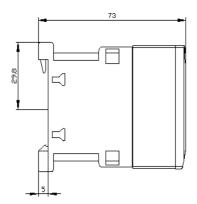
| section | | | | | |
|--|---|--|----------------------------------|--------------------------|----------------------|
| for main contact | · • | 2 | 0 12 | | |
| for auxiliary cont | | | 0 12 | | |
| • | lacis | 2 | 0 12 | | |
| Safety related data | | _ | | | _ |
| product function | | | , | | |
| | ccording to IEC 60947-4-1 | | és | | |
| | operation according to IE | | lo | | |
| suitable for safe | <i>y</i> | | es | | |
| | y-related switching OFF | | 'es | | |
| service life maximum | | | 0 a | | |
| test wear-related serv | - | Y | 'es | | |
| proportion of danger | | | | | |
| | d rate according to SN 31 | | 0 % | | |
| | nd rate according to SN 31 | | 3 % | | |
| | lemand rate according t | | 000 000 | | |
| failure rate [FIT] with 31920 | low demand rate accord | ding to SN 1 | 00 FIT | | |
| ISO 13849 | | | | | |
| device type according | a to ISO 13849-1 | 3 | | | |
| | cording to ISO 13849-2 | | /es | | |
| IEC 61508 | | | | | |
| | cording to IEC 61508-2 | т | ype A | | |
| Electrical Safety | | | JP077 | | |
| | n the front according to | IEC 60529 | >20 | | |
| - | he front according to IE | | nger-safe, for vertical contac | t from the front | |
| Approvals Certificates | - | 0 00323 | | | |
| | EG-Konf. | UK CA | Ŵ | | t ML |
| | EG-Konf. | ČÀ | Ŵ | | LHL |
| EMV | EG-Konf. Test Certificates | ČÀ | Marine / Shipping | | LHL |
| | | Type Test Certific ates/Test Report | | | EHL JÅ |
| | Test Certificates Special Test Certific- | Type Test Certific | | BUREAU VERITAS | EHL Jů Div |
| EMV RCM | Test Certificates Special Test Certific- | Type Test Certific | | | C onfirmation |
| EMV EMV RCM Marine / Shipping | Test Certificates Special Test Certific- | Type Test Certific | | other | C onfirmation |
| EMV EMV RCM Marine / Shipping Lis | Test Certificates Special Test Certific- ate | Type Test Certific ates/Test Report | | other | Confirmation |
| EMV EMV Confirmation | Test Certificates Special Test Certificates ate Image: special Test Certificates Railway Special Test Certificates | Type Test Certific ates/Test Report | BENVIRONMENTAL Con- | other | L. Confirmation |
| EMV EMV EMV EXECT Confirmation Exerct information Exerct informati Exerct information Exerct information Exerct infor | Test Certificates Special Test Certificates ate Image: special Test Certificates Railway Special Test Certificates ate | Type Test Certific ates/Test Report Image: Construction of the second | BENVIRONMENTAL Con- | other | Confirmation |
| EMV EMV KCM Marine / Shipping KCS tother Confirmation urther information Information on the pa https://www.siemens.co Industry Mall (Online | Test Certificates Special Test Certificates ate Image: Special Test Certificates Railway Special Test Certificates Special Test Certificates ackaging siemens.com/cs/ww/en/Avioloadcenter (Catalogs, om/ic10) | Environment Environment Environment | Environmental Con- firmations | other | LELL Confirmation |

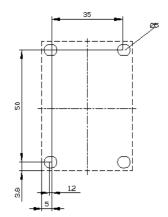
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2016-1AP02 Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-1AP02 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2016-1AP02&lang=en Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-1AP02/char

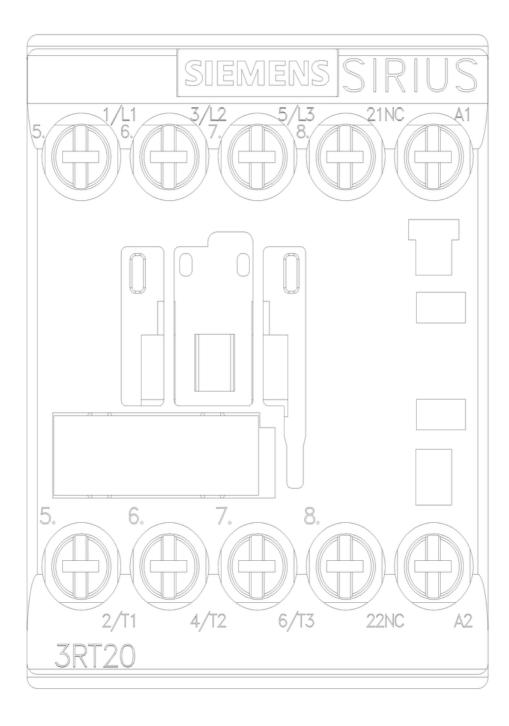
Further characteristics (e.g. electrical endurance, switching frequency)

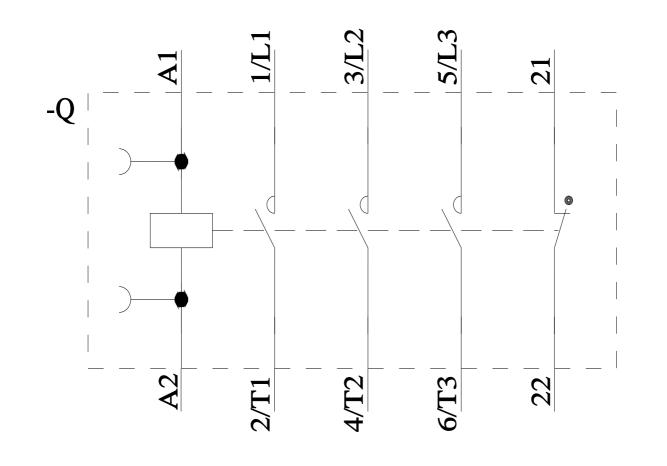
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2016-1AP02&objecttype=14&gridview=view1











last modified:

4/17/2025 🖸