SIEMENS

Data sheet 3RT2038-1AF00



Contactor, AC-3, 37 kW / 400 V, 1 NO + 1 NC, 110 V AC, 50 Hz, 3-pole, Size S2, screw terminal

| product brand name | SIRIUS |
|---|-----------------------------|
| product designation | Power contactor |
| product type designation | 3RT2 |
| General technical data | |
| size of contactor | S2 |
| 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 | 17.1 W |
| at AC in hot operating state per pole | 5.7 W |
| without load current share typical | 16 W |
| 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 safe isolation between coil and main contacts according to EN 60947-1 | 400 V |
| shock resistance at rectangular impulse | |
| at AC | 11.8g / 5 ms, 7.4g / 10 ms |
| shock resistance with sine pulse | |
| • at AC | 18.5g / 5 ms, 11.6g / 10 ms |
| mechanical service life (switching 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) | 10/01/2014 |
| 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 % |

| 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 | 90 A |
| • at AC-1 | |
| up to 690 V at ambient temperature 40 °C rated value | 90 A |
| up to 690 V at ambient temperature 60 °C rated value | 80 A |
| • at AC-3 | |
| — at 400 V rated value | 80 A |
| — at 500 V rated value | 80 A |
| — at 690 V rated value | 58 A |
| • at AC-3e | |
| — at 400 V rated value | 80 A |
| — at 500 V rated value | 80 A |
| — at 690 V rated value | 58 A |
| at AC-4 at 400 V rated value | 55 A |
| • at AC-5a up to 690 V rated value | 79.2 A |
| at AC-5b up to 400 V rated value | 66.4 A |
| • at AC-6a | 00.17 |
| up to 230 V for current peak value n=20 rated value | 70 A |
| — up to 400 V for current peak value n=20 rated value | 70 A |
| up to 500 V for current peak value n=20 rated value | 70 A |
| — up to 690 V for current peak value n=20 rated value | 58 A |
| at AC-6a up to 230 V for current peak value n=30 rated value | 46.7 A |
| — up to 400 V for current peak value n=30 rated value | 46.7 A |
| up to 500 V for current peak value n=30 rated value | 46.7 A |
| — up to 690 V for current peak value n=30 rated value | 46.7 A |
| minimum cross-section in main circuit at maximum AC-1 rated value operational current for approx. 200000 operating | 35 mm ² |
| cycles at AC-4 | |
| at 400 V rated value | 30 A |
| • at 690 V rated value | 24 A |
| operational current | |
| • at 1 current path at DC-1 | |
| — at 24 V rated value | 55 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 | 0.207, |
| — at 24 V rated value | 55 A |
| — at 24 V rated value — at 110 V rated value | 45 A |
| | 5 A |
| — at 220 V rated value | |
| — 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 | 55 A |
|---|---|
| — at 110 V rated value | 55 A |
| — at 220 V rated value | 45 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 | |
| — at 24 V rated value | 35 A |
| — at 110 V rated value | 2.5 A |
| | |
| — at 220 V rated value | 1 A |
| — at 440 V rated value | 0.1 A |
| — at 600 V rated value | 0.06 A |
| with 2 current paths in series at DC-3 at DC-5 | |
| — at 24 V rated value | 55 A |
| — at 110 V rated value | 25 A |
| — at 220 V rated value | 5 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 | 55 A |
| — at 110 V rated value | 55 A |
| — at 220 V rated value | 25 A |
| — at 440 V rated value | 0.6 A |
| — at 600 V rated value | 0.35 A |
| operating power | 0.00 A |
| | 07 1344 |
| at AC-2 at 400 V rated value | 37 kW |
| • at AC-3 | 00.111 |
| — at 230 V rated value | 22 kW |
| — at 400 V rated value | 37 kW |
| — at 500 V rated value | 37 kW |
| — at 690 V rated value | 45 kW |
| • at AC-3e | |
| — at 230 V rated value | 22 kW |
| — at 400 V rated value | 37 kW |
| — at 500 V rated value | 37 kW |
| — at 690 V rated value | 45 kW |
| operating power for approx. 200000 operating cycles at AC-4 | |
| • at 400 V rated value | 15.8 kW |
| • at 690 V rated value | 21.8 kW |
| operating apparent power at AC-6a | |
| • up to 230 V for current peak value n=20 rated value | 27.8 kVA |
| • up to 400 V for current peak value n=20 rated value | 48.4 kVA |
| • up to 500 V for current peak value n=20 rated value | 60.6 kVA |
| • up to 690 V for current peak value n=20 rated value | 69.3 kVA |
| operating apparent power at AC-6a | , |
| • up to 230 V for current peak value n=30 rated value | 18.6 kVA |
| up to 250 V for current peak value ii=50 rated value up to 400 V for current peak value n=30 rated value | 32.3 kVA |
| · | |
| • up to 500 V for current peak value n=30 rated value | 40.4 kVA |
| up to 690 V for current peak value n=30 rated value about time withstand surrent in cold energting state. | 55.8 kVA |
| short-time withstand current in cold operating state up to 40 °C | |
| limited to 1 s switching at zero current maximum | 1 298 A; Use minimum cross-section acc. to AC-1 rated value |
| limited to 1's switching at zero current maximum limited to 5's switching at zero current maximum | 898 A; Use minimum cross-section acc. to AC-1 rated value |
| | |
| Ilmited to 10 s switching at zero current maximum Ilmited to 20 s switching at zero current maximum | 640 A; Use minimum cross-section acc. to AC-1 rated value |
| Iimited to 30 s switching at zero current maximum | 414 A; Use minimum cross-section acc. to AC-1 rated value |
| Iimited to 60 s switching at zero current maximum | 333 A; Use minimum cross-section acc. to AC-1 rated value |
| no-load switching frequency | |
| • at AC | 5 000 1/h |
| operating frequency | |
| at AC-1 maximum | 700 1/h |
| • at AC-2 maximum | 350 1/h |
| | |

| * AI AG-3 maximum 500 th * AI AG-4 maximum 500 th * AI 50 Hz ratifed value | 4400 | T00 48 |
|--|---|--|
| ■ all AC-4 maximum Solition Control Control | • at AC-3 maximum | 500 1/h |
| Speed voltage of the control supply voltage AC | | |
| ype of voltage of the control supply voltage control supply voltage at AC ■ 16 OF tz rated value operating range factor control supply voltage rated value of magnet coil at AC ■ 15 OF tz ■ 15 OF tz Inductive power factor with closing power of the coil ■ 15 OF tz Inductive power factor with closing power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with the holding power of the coil ■ 15 OF tz Inductive power factor with th | | 150 1/h |
| control supply voltage at AC at 61 91 x rated value operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz apparant pick-up power of magnet coil at AC at 50 Hz inductive power factor with closing power of the coil at 50 Hz apparant holding power of magnet coil at AC at 50 Hz apparant holding power of magnet coil at AC at 50 Hz apparant holding power of magnet coil at AC at 50 Hz apparant holding power of magnet coil at AC at 50 Hz apparant holding power of magnet coil at AC at 50 Hz apparant holding power of magnet coil at AC at 50 Hz apparant holding power of magnet coil at AC at 50 Hz apparant holding power of magnet coil at AC at 50 Hz apparant holding power of magnet coil at AC at 50 Hz apparant holding power of magnet coil at AC at 50 Hz apparant holding power of magnet coil at AC at 60 Hz at AC 10 80 ms poening delay at AC 10 80 ms at AC at an 80 ms at AC at an 80 ms at AC at AC at an 80 ms at AC at an 80 ms at AC at AC at an 80 ms at AC | Control circuit/ Control | |
| a 150 Hz rated value operating range factor control supply voltage rated value of magnet coil at AC a 150 Hz apparent pick-up power of magnet coil at AC a 150 Hz apparent holding power of magnet coil at AC a 150 Hz apparent holding power of magnet coil at AC a 150 Hz apparent holding power of magnet coil at AC a 150 Hz apparent holding power of magnet coil at AC a 150 Hz at S0 Hz at AC operating delay al AC opening delay al AC opening delay al AC opening of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts number of NC contacts for auxiliary contacts number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts perational current at AC-12 maximum operational current at AC-13 maximum operational current at AC-12 maximum operational current at AC-12 maximum operational current at AC-13 maximum operational current at AC-14 maximum operational current at AC-15 maximum operational current at AC-15 maximum operational current at AC-12 maximum operational current at AC-12 maximum operational current at AC-12 maximum operational current at AC-13 maximum operational current at AC-13 maximum operational current at AC-14 maximum operational current at AC-15 maximum operation | type of voltage of the control supply voltage | AC |
| operation angle factor control supply voltage rated value of magnet coil at AC at 50 Hz apparent pick-up power of magnet coil at AC at 50 Hz inductive power factor with closing power of the coil at 50 Hz apparent holding power of magnet coil at AC at 50 Hz apparent holding power of magnet coil at AC at 50 Hz apparent holding power of magnet coil at AC at 50 Hz apparent holding power of magnet coil at AC at 50 Hz apparent holding power of magnet coil at AC at 50 Hz apparent holding power of magnet coil at AC at 50 Hz apparent holding power of the coil at 50 Hz apparent holding power of the coil at 50 Hz apparent holding power of the coil at 50 Hz apparent holding power of the coil at 50 Hz apparent holding power of the coil at 50 Hz apparent holding power of the coil at 50 Hz apparent holding power of the coil at 50 Hz apparent holding power of the coil at 50 Hz apparent holding power of magnet coil at AC at 50 Hz and Coil at 50 Hz apparent holding power of the coil at 60 Hz and Coil at 60 Hz at | control supply voltage at AC | |
| value of magnet coil at AC | at 50 Hz rated value | 110 V |
| | | |
| apparent pick-up power of magnet coil at AC • at 50 Hz Inductive power factor with closing power of the coil • at 50 Hz apparent holding power of magnet coil at AC • at 50 Hz Inductive power factor with the holding power of the coil • at 50 Hz Inductive power factor with the holding power of the coil • at 50 Hz Closing delay • at AC 1080 ms opening delay • at AC 1080 ms opening delay • at AC 1020 ms control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact In | _ | |
| Inductive power factor with closing power of the coil | | 0.8 1.1 |
| Inductive power factor with closing power of the coil at 50 Hz at 50 Hz at 50 Hz closing delay at AC at AC opaning delay at AC control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contract number of NC contacts for auxiliary contacts instantaneous contract number of NC contacts for auxiliary contacts instantaneous contract number of NC contacts for auxiliary contacts instantaneous contract number of NC contacts for auxiliary contacts instantaneous contract number of NC contacts for auxiliary contacts instantaneous contract number of NC contacts for auxiliary contacts instantaneous contract number of NC ortacted value at 400 V rated value at 400 V rated value at 400 V rated value at 560 V rated value at 48 V rated value at 48 V rated value at 2A at 100 V rated value at 2A at 100 V rated value at 2A at 24 V rated value at 2A at 27 V rated value at 28 V rated value at 29 V rated value at 20 | apparent pick-up power of magnet coil at AC | |
| apparent holding power of magnet coil at AC at 50 Hz inductive power factor with the holding power of the coil at 50 Hz coising delay at AC tolosing delay tolosing delay at AC tolosing delay at AC tolosing delay tolosin | ● at 50 Hz | 190 VA |
| apparent holding power of magnet coil at AC at 50 Hz closing delay beta AC opening delay at AC tolumber of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 at 300 V rated value at 600 V rated value at 600 V rated value at 610 V rated value | inductive power factor with closing power of the coil | |
| at 50 Hz | ● at 50 Hz | 0.72 |
| inductive power factor with the holding power of the coll at 50 Hz closing delay at AC 10 80 ms opening delay at AC 11 80 ms opening delay at AC 10 18 ms arcing time control version of the switch operating mechanism Auxillary deroult number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact instantaneous contact 10 20 ms standard A1 - A2 Auxillary deroult number of NC contacts for auxiliary contacts instantaneous contact 10 A operational current at AC-12 maximum 10 A operational current at AC-15 at 230 V rated value 3 A at 500 V rated value 3 A at 600 V rated value 1 A 0 A at 480 V rated value 6 A at 60 V rated value 6 A at 60 V rated value 6 A at 60 V rated value 1 A at 60 V rat | apparent holding power of magnet coil at AC | |
| at 50 Hz | ● at 50 Hz | 16 VA |
| ● at 50 Hz closing delay ● at AC opening delay ● at AC at AC opening delay ● at AC at AC opening delay ● at AC at AC 10 18 ms arcing time control version of the switch operating mechanism Auxiliary circuit unwher of NC contacts for auxiliary contacts instantaneous contact Instantaneous contact operational current at AC-12 maximum operational current at AC-15 ● at 230 V rated value ● at 4500 V rated value ● at 650 V rated value ● at 4500 V rated value ● at 48 V rated value ● at 48 V rated value ● at 48 V rated value ● at 100 V rated value ● at 450 V rated value ● at 150 V rated value ● at 150 V rated value • at 100 V rated value • at 24 V rated value • at 24 V rated value • at 25 V rated value • at 24 V rated value • at 25 V rated value • at 27 V rated value • at 28 V rated value • at 48 V rated value • at 48 V rated value • at 48 V rated value • at 600 V rated | • | |
| closing delay | | |
| • at AC opening delay • at AC arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact 1 10 A 4 | | 0.37 |
| opening delay | | 4000 |
| arcing time | | 10 80 ms |
| arcing time | | |
| control version of the switch operating mechanism 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 10 A operational current at AC-15 • at 230 V rated value 10 A • at 690 V rated value 1A • at 690 V rated value 1A • at 48 V rated value 6A • at 48 V rated value 6A • at 110 V rated value 1A • at 60 V rated value 1A • at 60 V rated value 1A • at 60 V rated value 1A • at 220 V rated value 1A • at 220 V rated value 1A • at 60 V rated value 2A • at 600 V rated value 2A • at 600 V rated value 2A • at 220 V rated value 3A • at 220 V rated value 1A • at 25 V rated value 2A • at 20 V rated value 3A • at 220 V rated value 3A • at 220 V rated value 3A • at 220 V rated value 3A • at 25 V rated value 3A • at 25 V rated value 3A • at 27 V rated value 3A • at 28 V rated value 3A • at 29 V rated value 3A • at 20 V rated value 3A • at 30 V | | |
| Auxiliary circuit number of NC contacts for auxiliary contacts 1 | | |
| number of NC contacts for auxiliary contacts instantaneous contact 1 | | Standard A1 - A2 |
| instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 690 V rated value • at 690 V rated value • at 440 V rated value • at 440 V rated value • at 440 V rated value • at 4500 V rated value • at 4500 V rated value • at 640 V rated value • at 640 V rated value • at 640 V rated value • at 650 V rated value • at | Auxiliary circuit | |
| instantaneous contact operational current at AC-12 maximum 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 690 V rated value • at 690 V rated value • at 800 V rated value • at 48 V rated value • at 80 V rated value • at 80 V rated value • at 80 V rated value • at 110 V rated value • at 125 V rated value • at 125 V rated value • at 220 V rated value • at 800 V rated value • at 120 V rated value • at 120 V rated value • at 220 V rated value • at 600 V rated value • at 600 V rated value • at 800 V rated value • at 1250 V rated value • at 1500 V rated valu | | 1 |
| 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 24 V rated value • at 48 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 110 V rated value • at 1220 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 220 V rated value • at 600 V rated value • at 24 V rated value • at 600 V rated value • at 48 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 120 V rated value • at 220 V rated value • at 220 V rated value • at 220 V rated value • at 48 V rated value • at 600 V rated value • 500 V rated value • 65 A • at 600 V rated value • 65 A • at 600 V rated value • 65 A • at 600 V rated value • 65 A • at 600 V rated value • 65 A • at 600 V rated value • 65 A • at 600 V rated value • 65 A • at 600 V rated value • 5 hp | | 1 |
| at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value at 690 V rated value 1 A operational current at DC-12 at 24 V rated value at 60 V rated value at 60 V rated value at 110 V rated value at 110 V rated value at 110 V rated value at 220 V rated value at 220 V rated value at 60 V rated value at 220 V rated value at 24 V rated value at 26 V rated value at 27 V rated value at 28 V rated value at 24 V rated value at 25 V rated value at 20 V rated value at 10 V rated value at 10 V rated value at 10 V rated value at 20 V rated value at 3 A at 600 V rated value at 7 A rated value at 600 V rated value at 7 A rated value | operational current at AC-12 maximum | 10 A |
| | operational current at AC-15 | |
| • at 500 V rated value • at 690 V rated value • at 690 V rated value operational current at DC-12 • at 24 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 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 220 V rated value • at 48 V rated value • at 60 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 120 V rated value • at 220 V rated value • at 220 V rated value • at 200 V rated value • at 480 V rated value • at 600 V rated value • at 480 V rated value • at 480 V rated value • at 480 V rated value • at 600 V rated value • 5 A • at 600 V rated value • 5 bp | at 230 V rated value | 10 A |
| • 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 110 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 • at 600 V rated value • at 24 V rated value • at 600 V rated value • at 600 V rated value • at 24 V rated value • at 10 V rated value • at 100 V rated value • at 220 V rated value • at 220 V rated value • at 220 V rated value • at 480 V rated value • at 600 V rated value • 5 pp | at 400 V rated value | 3 A |
| operational current at DC-12 at 24 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 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 1 A at 220 V rated value 0.9 A at 220 V rated value 0.3 A at 220 V rated value 0.1 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 65 A at 480 V rated value 65 A at 480 V rated value 62 A yielded mechanical performance [hp] 67 or single-phase AC motor — at 110/120 V rated value 5 hp | at 500 V rated value | 2 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 600 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 7 rated value at 10 V rated value at 110 V rated value at 125 V rated value at 125 V rated value at 20 V rated value at 400 V rated value at 600 V rated value at 480 V rated value at 480 V rated value at 480 V rated value at 7 ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 65 A at 600 V rated value for single-phase AC motor at 600 V rated value at 600 V rated value for single-phase AC motor at 110/120 V rated value 5 hp | at 690 V rated value | 1 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 24 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 110 V rated value at 125 V rated value at 220 V rated value at 220 V rated value at 600 V rated value at 7 b b | operational current at DC-12 | |
| 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 1 A at 600 V rated value 0.15 A operational current at DC-13 at 24 V rated value at 48 V rated value at 48 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 200 V rated value at 300 V rated value at 300 V rated value at 600 V rated value at 600 V rated value 65 A at 600 V rated value at 600 V rated value at 70 Phase AC motor at 480 V rated value at 60 A at 600 V rated value at 60 V rated value 5 hp | at 24 V rated value | 10 A |
| at 110 V rated value at 125 V rated value 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 at 80 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 200 V rated value at 600 V rated value full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value at 7 Explosion of 10 million (17 V, 1 mA) | at 48 V rated value | 6 A |
| at 125 V rated value 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 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 220 V rated value at 600 V rated value at 480 V rated value at 600 V rated value at 110/120 V rated value 5 hp | at 60 V rated value | 6 A |
| at 125 V rated value 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 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 220 V rated value at 600 V rated value at 480 V rated value at 600 V rated value at 110/120 V rated value 5 hp | | |
| • 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 220 V rated value • at 600 V rated value contact reliability of auxiliary contacts UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • 65 A • at 600 V rated value • 65 A • at 600 V rated value • 65 A • at 600 V rated value • 65 A • at 600 V rated value • 65 A • at 600 V rated value • 65 A • at 100 V rated value • 65 A • at 100 V rated value • 65 A • at 100 V rated value • 5 hp | | |
| • 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 125 V rated value • at 220 V rated value • at 600 V rated value Contact reliability of auxiliary contacts I 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 • at 600 V rated value • 5 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 220 V rated value at 600 V rated value ontact 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 at 600 V rated value 5 hp | | |
| at 48 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 600 V rated value 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 at 600 V rated value at 110/120 V rated value 5 hp | • | 10 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 at 600 V rated value at 600 V rated value at at 220 V rated value at 480 V rated value at 480 V rated value at 480 V rated value at 600 V rated value at 110/120 V rated value 5 hp | | |
| at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value 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 at 600 V rated value at 600 V rated value for single-phase AC motor af of single-phase AC motor af 110/120 V rated value 5 hp | | |
| at 125 V rated value at 220 V rated value at 600 V rated value 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 at 600 V rated value for single-phase AC motor at 110/120 V rated value 5 hp | | |
| at 220 V rated value at 600 V rated value 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 at 600 V rated value 65 A at 600 V rated value for single-phase AC motor at 110/120 V rated value 5 hp | | |
| at 600 V rated value 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 at 600 V rated value for single-phase AC motor at 110/120 V rated value 5 hp | | |
| 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 • at 600 V rated value for single-phase AC motor — at 110/120 V rated value 5 hp | | |
| UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value 65 A • at 600 V rated value 62 A yielded mechanical performance [hp] • for single-phase AC motor — at 110/120 V rated value 5 hp | | |
| full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value for single-phase AC motor — at 110/120 V rated value • 5 hp | | - Taking Switching per 100 million (17 V, 1 miz) |
| at 480 V rated value at 600 V rated value 65 A yielded mechanical performance [hp] for single-phase AC motor at 110/120 V rated value 5 hp | · · | |
| ● at 600 V rated value yielded mechanical performance [hp] ● for single-phase AC motor — at 110/120 V rated value 5 hp | | CF A |
| yielded mechanical performance [hp] ● for single-phase AC motor — at 110/120 V rated value 5 hp | | |
| ◆ for single-phase AC motor — at 110/120 V rated value 5 hp | | 02 A |
| — at 110/120 V rated value 5 hp | | |
| · | | |
| — at 230 V rated value 15 hp | | |
| | — at 230 V rated value | 15 hp |

| for 3-phase AC motor | |
|---|--|
| — at 200/208 V rated value | 20 hp |
| at 220/230 V rated value | 25 hp |
| at 460/480 V rated value | 50 hp |
| — at 575/600 V rated value | 60 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: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A |
| 71 | (415 V, 80 kA) |
| — with type of assignment 2 required | gG: 160A (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (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 | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 |
| side-by-side mounting | Yes |
| height | 114 mm |
| width | 55 mm |
| depth | 130 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 | |
| — 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 Screw-type terminals |
| of magnet coil | Screw-type terminals Screw-type terminals |
| type of connectable conductor cross-sections | Octow-type terminals |
| for main contacts | |
| | 2v (1 25 mm²) 1v (1 F0 mm²) |
| — solid or stranded | 2x (1 35 mm²), 1x (1 50 mm²) |
| finely stranded with core end processing at AWG cables for main contacts | 2x (1 25 mm²), 1x (1 35 mm²) |
| | 2x (18 2), 1x (18 1) |
| connectable conductor cross-section for main contacts | 4 05 2 |
| finely stranded with core end processing | 1 35 mm² |
| connectable conductor cross-section for auxiliary | |
| contacts | 0.5 2.5 mm² |
| solid or stranded finally attracted with core and processing. | 0.5 2.5 mm ² |
| • finely stranded with core end processing | 0.5 2.5 mm² |
| type of connectable conductor cross-sections | |
| for auxiliary contacts | Ov. (0.5 |
| — 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) |
|---|--|
| at AWG cables for auxiliary contacts | 2x (20 16), 2x (18 14) |
| AWG number as coded connectable conductor cross section | |
| for main contacts | 18 1 |
| 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 |
| B10 value with high demand rate according to SN 31920 | 1 000 000 |
| proportion of dangerous failures | |
| with low demand rate according to SN 31920 | 40 % |
| with high demand rate according to SN 31920 | 73 % |
| failure rate [FIT] with low demand rate according to SN 31920 | 100 FIT |
| T1 value for proof test interval or service life according to IEC 61508 | 20 y |
| 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 |
| suitability for use | |
| safety-related switching OFF | Yes |
| Certificates/ approvals | |

Certificates/ approvals

General Product Approval





Confirmation



<u>KC</u>



Functional
EMC Safety/Safety of Declaration of Conformity Test Certificates
Machinery



Type Examination Certificate



Special Test Certificate

Type Test Certificates/Test Report

Marine / Shipping













Marine / Shipping other Railway Dangerous Good



Confirmation

Confirmation

Vibration and Shock

<u>Transport Information</u>

Further information

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=3RT2038-1AF00

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2038-1AF00

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2038-1AF00

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2038-1AF00&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RT2038-1AF00/char

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2038-1AF00&objecttype=14&gridview=view1

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