SIEMENS

Data sheet 3RT2028-2BF40



Power contactor, AC-3 38 A, 18.5 kW / 400 V 1 NO + 1 NC, 110 V DC 3-pole, size S0 Spring-type terminals

| 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 | 11.4 W |
| per pole | 3.8 W |
| power loss [W] for rated value of the current without load current share typical | 5.9 W |
| 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 acc. to EN 60947-1 | 400 V |
| shock resistance at rectangular impulse | |
| • at DC | 10g / 5 ms, 7,5g / 10 ms |
| shock resistance with sine pulse | |
| • at DC | 15g / 5 ms, 10g / 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 acc. to IEC 81346-2 | Q |
| Substance Prohibitance (Date) | 01.10.2009 00:00:00 |
| Ambient conditions | |
| installation altitude at height above sea level maximum | 2 000 m |
| ambient temperature during operation | -25 +60 °C |
| ambient temperature during storage | -55 +80 °C |
| 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 |

| operational current | |
|---|--------------|
| at AC-1 at 400 V at ambient temperature 40 °C rated value | 50 A |
| • at AC-1 | |
| — up to 690 V at ambient temperature 40 °C | 50 A |
| rated value | |
| — up to 690 V at ambient temperature 60 °C | 42 A |
| rated value | |
| • at AC-3 | 20.4 |
| — at 400 V rated value — at 500 V rated value | 38 A 32 A |
| — at 690 V rated value — 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 | 31.5 A |
| • at AC-6a | 01.071 |
| — up to 230 V for current peak value n=20 rated | 30.8 A |
| value | |
| — 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 | 30.8 A |
| — up to 690 V for current peak value n=20 rated value • at AC-6a | 21 A |
| — up to 230 V for current peak value n=30 rated | 20.5 A |
| value — up to 400 V for current peak value n=30 rated — up to 400 V for current peak value n=30 rated | 20.5 A |
| value | 20.071 |
| up to 500 V for current peak value n=30 rated value | 21.4 A |
| up to 690 V for current peak value n=30 rated value | 21 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 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 | 25.4 |
| — at 24 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 | 2F A |
| — at 24 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 |
| operational current | |
| • at 1 current path at DC-3 at DC-5 | 20.Δ |
| — at 24 V rated value | 20 A |

| — at 110 V rated value | 2.5 A |
|---|--|
| — at 220 V rated value | 1 A |
| — 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 | |
| — at 24 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 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-2 at 400 V rated value | 18.5 kW |
| • at AC-3 | |
| — at 230 V rated value | 11 kW |
| — at 400 V rated value | 18.5 kW |
| — at 500 V rated value | 18.5 kW |
| — at 690 V rated value | 18.5 kW |
| operating power for approx. 200000 operating cycles | |
| at AC-4 | |
| 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 kV·A |
| up to 400 V for current peak value n=20 rated value | 21.3 kV·A |
| up to 500 V for current peak value n=20 rated value | 26.6 kV·A |
| up to 690 V for current peak value n=20 rated value | 25 kV·A |
| operating apparent power at AC-6a | |
| up to 230 V for current peak value n=30 rated value | 8.1 kV·A |
| up to 400 V for current peak value n=30 rated value | 14.2 kV·A |
| up to 500 V for current peak value n=30 rated value | 18.5 kV·A |
| up to 690 V for current peak value n=30 rated value | 25 kV·A |
| short-time withstand current in cold operating state up to 40 °C | |
| Iimited to 1 s switching at zero current maximum | 593 A: Use minimum cross-section acc. to AC-1 rated value |
| _ | 395 A; Use minimum cross-section acc. to AC-1 rated value |
| limited to 5 s switching at zero current maximum limited to 10 s switching at zero current maximum | 260 A; Use minimum cross-section acc. to AC-1 rated value |
| Ilmited to 10 s switching at zero current maximum Imited to 30 s switching at zero current maximum | 186 A; Use minimum cross-section acc. to AC-1 rated value |
| Ilmitted to 30 s switching at zero current maximum Ilmitted to 60 s switching at zero current maximum | 152 A; Use minimum cross-section acc. to AC-1 rated value |
| no-load switching frequency | 102 A, 030 Hilliman 0.033-360tion doc. to Ao-1 fateu value |
| • at DC | 1 500 1/h |
| operating frequency | 1 000 1/11 |
| • at AC-1 maximum | 1 000 1/h |
| • at AC-2 maximum | 750 1/h |
| • at AC-3 maximum | 750 1/h |
| • at AC-4 maximum | 250 1/h |
| Control circuit/ Control | |
| type of voltage of the control supply voltage | DC |
| control supply voltage at DC | |
| • rated value | 110 V |
| operating range factor control supply voltage rated value of magnet coil at DC | |
| • initial value | 0.8 |
| • full-scale value | 1.1 |
| | |

| notiding power of magnet coil at DC closing delay | closing power of magnet coil at DC | 5.9 W |
|--|---|---|
| closing delay | | |
| ## CDC 50 170 ms | | |
| opening delay * at DC * at DC * at DC arcing time control version of the switch operating mechanism Standard A1 - A2 Assistance of NC contacts for auxiliary contacts instantaneous contact rumber of NC contacts for auxiliary contacts instantaneous contact operational current at AC-15 maximum operational current at AC-16 maximum operational current at AC-18 maximum operational current at AC-19 maximum operational current at AC-10 maximum operational current at AC-12 maximum operational current at AC-12 maximum operational current at AC-12 maximum at 48 V rated value at 100 V rated value at 200 V rated value at 500 V rated value at 200 V rated value at 500 V rated value at 200 V rated value at 500 V rate | | 50 170 ms |
| a cring time control version of the switch operating mechanism Auxiliary circuit Immeder of NC contacts for auxiliary contacts instantaneous contact Instantaneous contact Instantaneous contact Operational current at AC-12 maximum Operational current at AC-18 • al 230 V rated value • at 600 V rated value • at 125 V rated value • at 125 V rated value • at 600 V rated value • at 60 V rated value • at 600 V ra | | |
| acriting time | | 15 17 5 ms |
| Abxillary circuit | | |
| Auxillary 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 oporational current at AC-12 maximum 10 A operational current at AC-15 at 230 V rated value at 400 V rated value at 690 V rated value be at 690 V rated value at 48 V rated value at 48 V rated value at 60 V rated value at 600 V rated value be at 600 V rated value at 600 V rated v | - | |
| Immber of NC contacts for auxiliary contacts Instantaneous contact Instantaneous | | Canadiani |
| instantaneous contact number of No contacts for auxiliary contacts instantaneous contact operational current at AC-15 • at 230 V rated value • at 580 V rated value • at 680 V rated value • at 68 V rated value • at 152 V rated value • at 152 V rated value • at 220 V rated value • at 68 V rated value • at 680 V rated value | | 1 |
| instantaneous contact operational current at AC-15 * at 230 V rated value * at 690 V rated value * at 110 V rated value * at 125 V rated value * at 125 V rated value * at 120 V rated value * at 600 V rated value * at 600 V rated value * at 48 V rated value * at 140 V rated value * at 140 V rated value * at 48 V rated value * at 140 V rated value * at 48 V rated value * at 110 V rated value * at 125 V rated value * at 125 V rated value * at 125 V rated value * at 120 V rated value * at 120 V rated value * at 600 V rated value | instantaneous contact | |
| Sectional current at AC-15 | | |
| • at 230 V rated value • at 400 V rated value • at 690 V rated value • at 800 V rated value • at 80 V rated value • at 8 V rated value • at 8 V rated value • at 60 V rated value • at 125 V rated value • at 125 V rated value • at 220 V rated value • at 220 V rated value • at 60 V rated value • at 20 V rated value • at 150 V rated value • at 150 V rated value • at 150 V rated value • at 120 V rated value • at 200 V rated value • at 200 V rated value • at 600 V rated value • at 200 V rated value • at 600 V rated | operational current at AC-12 maximum | 10 A |
| • at 400 V rated value 2 A 2 A 2 A 2 A 2 A 2 A 2 A 2 A 2 A 2 | operational current at AC-15 | |
| • at 500 V rated value | at 230 V rated value | 10 A |
| • at 690 V rated value 10 A | at 400 V rated value | 3 A |
| 0 | at 500 V rated value | 2 A |
| • at 24 V rated value 6 A 6 A 6 A 6 A 6 A 6 A 6 A 6 A 6 A 6 | at 690 V rated value | 1 A |
| • at 48 V rated value 6 A 6 A 6 A 6 A 6 A 6 A 6 A 6 A 6 A 6 | 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 • at 80 V rated value • at 60 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 120 V rated value • at 220 V rated value • at 600 V rated value yielded mechanical performance [hp] • for single-phase AC motor • at 100120 V rated value • for 3-phase AC motor • at 2007280 V rated value • for 3-phase AC motor • at 2007280 V rated value • for 3-phase AC motor • at 2007280 V rated value • for 3-phase AC motor • at 2007200 V rated value • for 3-phase AC motor • at 2007200 V rated value • for 3-phase AC motor • at 2007200 V rated value • for 3-phase AC motor • at 2007200 V rated value • for 3-phase AC motor • at 2007200 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated va | at 24 V rated value | 10 A |
| • 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 24 V rated value • at 24 V rated value • at 24 V rated value • at 25 V rated value • at 26 V rated value • at 48 V rated value • at 10 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 220 V rated value • at 250 V rated value • at 600 V rated value • at 7 A yielded mechanical performance [hp] • for single-phase AC motor • at 110/120 V rated value • at 220/230 V rated value • for 3-phase AC motor • at 200/208 V rated value • at 480/480 V rated value • at 480/480 V rated value • at 480/480 V rated value • 5 hp • at 480/480 V rated value • 25 hp • at 575/600 V rated value • 25 hp • contact rating of auxiliary contacts according to UL About Potou design of the fuse link • for short-circuit protection of the main circuit • with type of assignment 2 required • for short-circuit protection of the auxiliary switch | at 48 V rated value | 6 A |
| • at 125 V rated value 1 A 1A | at 60 V rated value | 6 A |
| • at 220 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 48 V rated value • at 60 V rated value • at 10 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 480 V rated value • at 480 V rated value • at 600 V rated value • 5 hp • for single-phase AC motor • at 230 V rated value • for 3-phase AC motor • at 200/208 V rated value • for 3-phase AC motor • at 200/230 V rated value • for 3-phase AC motor • at 200/230 V rated value • for 3-phase AC motor • at 200/230 V rated value • 5 hp • for 3-phase AC motor • at 460/480 V rated value • 25 hp • at 675/600 V rated value • 25 hp • at 675/600 V rated value • 25 hp • contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit • with type of coordination 1 required • for short-circuit protection of the main circuit • with type of assignment 2 required • for short-circuit protection of the auxiliary switch | at 110 V rated value | 3 A |
| • at 220 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 48 V rated value • at 60 V rated value • at 10 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 480 V rated value • at 480 V rated value • at 600 V rated value • 5 hp • for single-phase AC motor • at 230 V rated value • for 3-phase AC motor • at 200/208 V rated value • for 3-phase AC motor • at 200/230 V rated value • for 3-phase AC motor • at 200/230 V rated value • for 3-phase AC motor • at 200/230 V rated value • 5 hp • for 3-phase AC motor • at 460/480 V rated value • 25 hp • at 675/600 V rated value • 25 hp • at 675/600 V rated value • 25 hp • contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit • with type of coordination 1 required • for short-circuit protection of the main circuit • with type of assignment 2 required • for short-circuit protection of the auxiliary switch | | |
| • 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 110 V rated value at 110 V rated value at 125 V rated value at 200 V rated value at 200 V rated value at 600 V rated value bfor single-phase AC motor at 110/120 V rated value at 27 A yielded mechanical performance [hp] for single-phase AC motor at 110/120 V rated value for 3-phase AC motor at 200/208 V rated value for 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 4-brow 4-b | at 220 V rated value | 1 A |
| or at 24 V rated value or at 48 V rated value or at 10 V rated value or at 110 V rated value or at 125 V rated value or at 220 V rated value or at 220 V rated value or at 600 V rated value or at 480 V rated value or at 480 V rated value or at 480 V rated value or at 600 V rated value or at 600 V rated value or at 600 V rated value or at 220 V rated value or at 230 V rated value or at 200/208 V rated value or at 200/208 V rated value or at 200/208 V rated value or at 480/480 V rated value or at 480/480 V rated value or at 575/600 V rated value or at 575/600 V rated value or at 575/600 V rated value or at 600 V rated value or at 600 V rated value or at 575/600 V rated value or at 600 V rated value or at 600/480 V rated va | | |
| 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 480 V rated value at 600 V rated value at 7 A for single-phase AC motor at 110/120 V rated value for 3-phase AC motor at 220/230 V rated value for 3-phase AC motor at 200/208 V rated value for 3-phase AC motor at 200/208 V rated value for 3-phase AC motor at 200/208 V rated value for 3-phase AC motor at 200/208 V rated value for 3-phase AC motor at 200/208 V rated value for 5-for5/600 V rated value 25 hp contact rating of auxiliary contacts according to UL 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) of or short-circuit protection of the auxiliary switch gG: 10 A (600 V, 1 kA) | | |
| • 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 • at 80 V rated value • at 600 V rated value • at 800 V rated value • at 600 V rated value • at 600 V rated value • at 600 V rated value • at 230 V rated value • at 230 V rated value • for 3-phase AC motor - at 230 V rated value • for 3-phase AC motor - at 220/208 V rated value • for 3-phase AC motor - at 220/230 V rated value • 10 hp - at 460/480 V rated value 25 hp - at 575/600 V rated value 25 hp contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit - with type of coordination 1 required with type of assignment 2 required gG: 50A (690V,100kA), aM: 50A (690V, 100kA), BS88: 50A (415V, 80kA) • for short-circuit protection of the auxiliary switch | • | 10 A |
| at 60 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 800 V rated value at 600 V rated value at 480 V rated value at 480 V rated value at 600 V rated value at 600 V rated value at 7 A 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 for 3-phase AC motor at 230 V rated value for 3-phase AC motor at 220/230 V rated value for 3-phase AC motor at 220/230 V rated value 10 hp at 460/480 V rated value 25 hp contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link for short-circuit protection of the main circuit with type of assignment 2 required gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 50A (415V,80kA) for short-circuit protection of the auxiliary switch gG: 10 A (500 V, 1 kA) | | |
| at 110 V rated value at 125 V rated value at 220 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 at 7 A so r single-phase AC motor at 110/120 V rated value for 3-phase AC motor at 230 V rated value for 3-phase AC motor at 220/230 V rated value at 220/230 V rated value at 460/480 V rated value at 460/480 V rated value 25 hp contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link for short-circuit protection of the main circuit with type of assignment 2 required gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA) for short-circuit protection of the auxiliary switch gG: 10 A (500 V, 1 kA) | | |
| at 125 V rated value at 220 V rated value at 600 V rated value at 480 V rated value at 600 V rated value at 7 A yielded mechanical performance [hp] for single-phase AC motor at 110/120 V rated value for 3-phase AC motor at 230 V rated value for 3-phase AC motor at 200/208 V rated value for 3-phase AC motor at 460/480 V rated value at 460/480 V rated value at 460/480 V rated value by 6 contact rating of auxiliary contacts according to UL 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) for short-circuit protection of the auxiliary switch gG: 10 A (500 V, 1 kA) | | |
| at 220 V rated value at 600 V rated value at 600 V rated value contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA) IL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value at 10/120 V rated value at 110/120 V rated value at 230 V rated value at 230 V rated value at 200/208 V rated value at 200/208 V rated value at 460/480 V rated value at 460/480 V rated value at 460/480 V rated value at 5 hp contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link a for short-circuit protection of the main circuit — with type of assignment 2 required afores in a fauxiliary switch and a fauxiliary switch ger 50A (690V,100kA), aM: 50A (690V, 100kA), BS88: 50A (415V, 80kA) and a fauxiliary switch ger 50A (690V, 100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA) and a fauxiliary switch ger 50A (690V, 100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA) and a fauxiliary switch ger 50A (690V, 100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA) and a fauxiliary switch ger 50A (690V, 100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA) and a fauxiliary switch ger 50A (690V, 100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA) and a fauxiliary switch ger 50A (690V, 100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA) and a fauxiliary switch ger 50A (690V, 100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA) and a fauxiliary switch ger 50A (690V, 100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA) and a fauxiliary switch and a f | | |
| • at 600 V rated value contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA) JL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value • at 100/120 V rated value — at 110/120 V rated value • for 3-phase AC motor — at 220 V rated value • for 3-phase AC motor — at 220/230 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value — at 575/600 V rated value contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — with type of assignment 2 required • for short-circuit protection of the auxiliary switch | | |
| contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA) JL/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 — at 110/120 V rated value — at 230 V rated value • for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 220/230 V rated value — at 255/600 V rated value — at 575/600 V rated value contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — with type of assignment 2 required • for short-circuit protection of the auxiliary switch • for short-circuit protection of the auxiliary switch • for short-circuit protection of the auxiliary switch gG: 10 A (500 V, 1 kA) | | |
| 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 — at 110/120 V rated value — at 230 V rated value — at 230 V rated value 5 hp • for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value — at 575/600 V rated value 25 hp contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — with type of coordination 1 required • for short-circuit protection of the main circuit — with type of assignment 2 required • for short-circuit protection of the auxiliary switch | | |
| full-load current (FLA) for 3-phase AC motor | | 1 faulty switching per 100 million (17 V, 1 mA) |
| at 480 V rated value at 600 V rated value yielded mechanical performance [hp] for single-phase AC motor — at 110/120 V rated value at 230 V rated value b for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value at 575/600 V rated value b for short-circuit protection design of the fuse link for short-circuit protection of the main circuit with type of assignment 2 required gG: 125A (690V,100kA), aM: 50A (690V, 100kA), BS88: 125A (415V, 80kA) for short-circuit protection of the auxiliary switch gG: 10 A (500 V, 1 kA) | | <u>,</u> |
| at 600 V rated value yielded mechanical performance [hp] for single-phase AC motor — at 110/120 V rated value — at 230 V rated value for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link for short-circuit protection of the main circuit — with type of coordination 1 required with type of assignment 2 required for short-circuit protection of the auxiliary switch for short-circuit protection of the auxiliary switch gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 50A (415V, 80kA) gG: 10 A (500 V, 1 kA) | | |
| yielded mechanical performance [hp] • for single-phase AC motor — at 110/120 V rated value 3 hp — at 230 V rated value 5 hp • for 3-phase AC motor — at 200/208 V rated value 10 hp — at 220/230 V rated value 25 hp — at 460/480 V rated value 25 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 (415V,80kA) — with type of assignment 2 required gG: 10 A (500 V, 100kA), aM: 25A (690V, 100kA), BS88: 50A (415V,80kA) • for short-circuit protection of the auxiliary switch gG: 10 A (500 V, 1 kA) | | |
| for single-phase AC motor — at 110/120 V rated value — at 230 V rated value 5 hp for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 460/480 V rated value — at 575/600 V rated value — at 575/600 V rated value 25 hp contact rating of auxiliary contacts according to UL 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 gG: 10 A (500 V, 1 kA) | | 2/ A |
| - at 110/120 V rated value - at 230 V rated value 5 hp • for 3-phase AC motor - at 200/208 V rated value 10 hp - at 220/230 V rated value 25 hp - at 460/480 V rated value 25 hp - at 575/600 V rated value 25 hp contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit - with type of coordination 1 required with type of assignment 2 required • for short-circuit protection of the auxiliary switch | | |
| - at 230 V rated value • for 3-phase AC motor - at 200/208 V rated value - at 220/230 V rated value - at 460/480 V rated value - at 575/600 V rated value 25 hp contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit - with type of coordination 1 required with type of assignment 2 required • for short-circuit protection of the auxiliary switch | | |
| for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value 10 hp — at 460/480 V rated value 25 hp — at 575/600 V rated value 25 hp contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link for short-circuit protection of the main circuit — with type of coordination 1 required with type of assignment 2 required for short-circuit protection of the auxiliary switch for short-circuit protection of the auxiliary switch gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA) gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V,80kA) gG: 10 A (500 V, 1 kA) | | |
| - at 200/208 V rated value - at 220/230 V rated value - at 460/480 V rated value - at 575/600 V rated value 25 hp contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit - with type of coordination 1 required with type of assignment 2 required • for short-circuit protection of the auxiliary switch • for short-circuit protection of the auxiliary switch gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA) gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V,80kA) • for short-circuit protection of the auxiliary switch gG: 10 A (500 V, 1 kA) | | 5 hp |
| - at 220/230 V rated value - at 460/480 V rated value 25 hp - at 575/600 V rated value 25 hp contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit - with type of coordination 1 required with type of assignment 2 required • for short-circuit protection of the auxiliary switch • for short-circuit protection of the auxiliary switch 25 hp A600 / P600 A600 / P600 Gesign of the fuse link • for short-circuit protection of the main circuit - with type of coordination 1 required gesign of the fuse link gesign of the fuse link gesign of the fuse link specification of the main circuit - with type of coordination 1 required gesign of the fuse link specification of the main circuit - with type of assignment 2 required gesign of the fuse link gesign of the fuse link specification of the main circuit - with type of coordination 1 required gesign of the fuse link specification of the main circuit - with type of coordination 1 required gesign of the fuse link gesign of the fuse link gesign of the fuse link specification of the main circuit - with type of coordination 1 required gesign of the fuse link gesign of the fuse link specification of the main circuit - with type of coordination 1 required gesign of the fuse link specification of the fuse link gesign of the fuse link specification of the fuse link gesign of the fuse link specification o | for 3-phase AC motor | |
| - at 460/480 V rated value 25 hp contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — with type of coordination 1 required with type of assignment 2 required • for short-circuit protection of the auxiliary switch gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA) gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V,80kA) • for short-circuit protection of the auxiliary switch gG: 10 A (500 V, 1 kA) | at 200/208 V rated value | 10 hp |
| - at 575/600 V rated value contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit - with type of coordination 1 required with type of assignment 2 required • for short-circuit protection of the auxiliary switch gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA) gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V,80kA) gG: 10 A (500 V, 1 kA) | at 220/230 V rated value | 10 hp |
| contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — with type of coordination 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch G: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA) g: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V,80kA) g: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V,80kA) g: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V,80kA) g: 50A (690V,100kA), aM: 25A (690V,100kA), BS88: 50A (415V,80kA) | at 460/480 V rated value | 25 hp |
| design of the fuse link • for short-circuit protection of the main circuit — with type of coordination 1 required — with type of assignment 2 required • for short-circuit protection of the main circuit — with type of coordination 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch • for short-circuit protection of the auxiliary switch • gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA) gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V,80kA) • for short-circuit protection of the auxiliary switch | — at 575/600 V rated value | 25 hp |
| design of the fuse link for short-circuit protection of the main circuit — with type of coordination 1 required — with type of assignment 2 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 gG: 10 A (500 V, 1 kA) | contact rating of auxiliary contacts according to UL | A600 / P600 |
| design of the fuse link for short-circuit protection of the main circuit — with type of coordination 1 required — with type of assignment 2 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 gG: 10 A (500 V, 1 kA) | Short-circuit protection | |
| 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 gG: 10 A (500 V, 1 kA) | | |
| 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 gG: 10 A (500 V, 1 kA) | | |
| (415V,80kA) — with type of assignment 2 required G: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA) • for short-circuit protection of the auxiliary switch (415V,80kA) gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA) gG: 10 A (500 V, 1 kA) | | qG: 125A (690V.100kA), aM: 50A (690V.100kA), BS88: 125A |
| • for short-circuit protection of the auxiliary switch gG: 10 A (500 V, 1 kA) | | (415V,80kA) |
| | | 80kA) |
| required | for short-circuit protection of the auxiliary switch required | gG: 10 A (500 V, 1 kA) |

| nstallation/ 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 | 102 mm |
| width | 45 mm |
| depth | 107 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 | 40 |
| — forwards | 10 mm |
| — upwards | 10 mm |
| — downwards | 10 mm |
| — at the side | 6 mm |
| onnections/ Terminals | |
| type of electrical connection | and a land day of the second |
| for main current circuit | spring-loaded terminals |
| for auxiliary and control circuit | spring-loaded terminals |
| at contactor for auxiliary contacts of magnet coil. | Spring-type terminals |
| of magnet coil type of connectable conductor cross-sections | Spring-type terminals |
| • for main contacts | |
| — solid | 2x (1 10 mm²) |
| solid solid or stranded | 2x (1 10 mm²) |
| — finely stranded with core end processing | 2x (1 6 mm²) |
| — finely stranded with core end processing — finely stranded without core end processing | 2x (1 6 mm²) |
| at AWG cables for main contacts | 2x (18 8) |
| connectable conductor cross-section for main | ZX (10 0) |
| contacts | |
| • solid | 1 10 mm² |
| • stranded | 1 10 mm² |
| finely stranded with core end processing | 1 6 mm² |
| finely stranded without core end processing | 1 6 mm² |
| connectable conductor cross-section for auxiliary contacts | |
| solid or stranded | 0.5 2.5 mm² |
| finely stranded with core end processing | 0.5 1.5 mm ² |
| finely stranded without core end processing | 0.5 2.5 mm² |
| type of connectable conductor cross-sections | |
| for auxiliary contacts | |
| — solid or stranded | 2x (0.5 2.5 mm²) |
| finely stranded with core end processing | 2x (0.5 1.5 mm²) |
| finely stranded without core end processing | 2x (0.5 2.5 mm²) |
| at AWG cables for auxiliary contacts | 2x (20 14) |
| AWG number as coded connectable conductor cross section for main contacts | 18 8 |
| AWG number as coded connectable conductor cross section for auxiliary contacts | 20 14 |

| Safety related data | |
|--|--|
| B10 value with high demand rate acc. to SN 31920 | 1 000 000 |
| proportion of dangerous failures | |
| with low demand rate acc. to SN 31920 | 40 % |
| with high demand rate acc. to SN 31920 | 73 % |
| failure rate [FIT] with low demand rate acc. to SN 31920 | 100 FIT |
| product function | |
| mirror contact acc. to IEC 60947-4-1 | Yes |
| T1 value for proof test interval or service life acc. to IEC 61508 | 20 y |
| protection class IP on the front acc. to IEC 60529 | IP20 |
| touch protection on the front acc. to IEC 60529 | finger-safe, for vertical contact from the front |
| suitability for use safety-related switching OFF | Yes |
| | |

Certificates/ approvals

General Product Approval

EMC













Declaration of Conformity

Test Certificates

Marine / Shipping



Miscellaneous

Type Test Certificates/Test Report Special Test Certificate





Marine / Shipping











Confirmation

other

other



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=3RT2028-2BF40

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2028-2BF40

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-2BF40

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

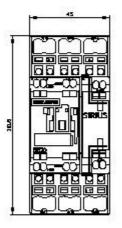
 $\underline{\text{http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2028-2BF40\&lang=en}}$

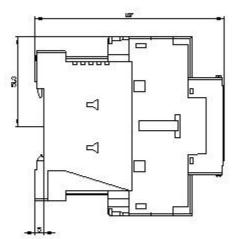
Characteristic: Tripping characteristics, I2t, Let-through current

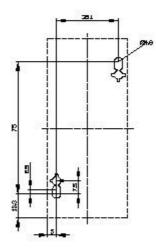
https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-2BF40/char

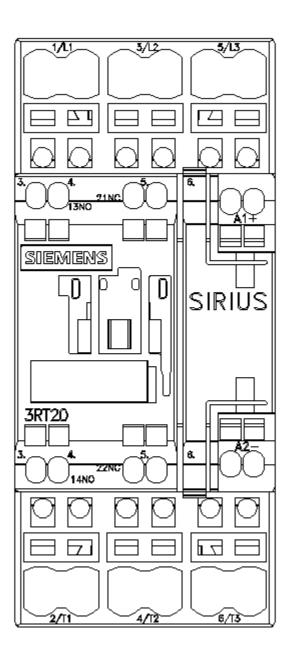
Further characteristics (e.g. electrical endurance, switching frequency)

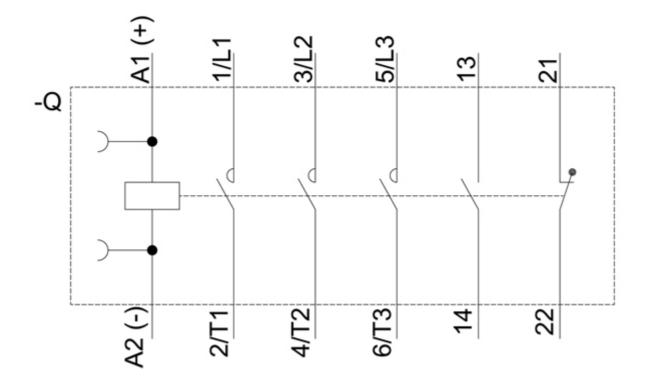
 $\underline{\text{http://www.automation.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RT2028-2BF40\&objecttype=14\&gridview=view1}$











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