SIEMENS

Data sheet 3RT2024-1AV60



power contactor, AC-3 12 A, 5.5 kW / 400 V 1 NO + 1 NC, 480 V AC, 60 Hz 3-pole, Size S0 screw terminal

| 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 | 0.9 W |
| at AC in hot operating state per pole | 0.3 W |
| without load current share typical | 7.2 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 | 7,5g / 5 ms, 4,7g / 10 ms |
| shock resistance with sine pulse | |
| • at AC | 11,8g / 5 ms, 7,4g / 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) | 10/01/2009 |
| 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 | 40 A |
| • at AC-1 | |
| up to 690 V at ambient temperature 40 °C rated value | 40 A |
| — up to 690 V at ambient temperature 60 $^{\circ}\text{C}$ rated value | 35 A |
| • at AC-3 | |
| — at 400 V rated value | 12 A |
| — at 500 V rated value | 12 A |
| — at 690 V rated value | 9 A |
| • at AC-3e | |
| — at 400 V rated value | 12 A |
| — at 500 V rated value | 12 A |
| — at 690 V rated value | 9 A |
| at AC-4 at 400 V rated value | 12.5 A |
| • at AC-5a up to 690 V rated value | 35.2 A |
| at AC-5b up to 400 V rated value | 9.9 A |
| • at AC-6a | 0.071 |
| up to 230 V for current peak value n=20 rated value | 11.4 A |
| — up to 400 V for current peak value n=20 rated value | 11.4 A |
| — up to 500 V for current peak value n=20 rated value | 11.3 A |
| — up to 690 V for current peak value n=20 rated value | 9 A |
| at AC-6a up to 230 V for current peak value n=30 rated value | 7.6 A |
| — up to 400 V for current peak value n=30 rated value | 7.6 A |
| up to 500 V for current peak value n=30 rated value | 7.6 A |
| — up to 690 V for current peak value n=30 rated value | 7.6 A |
| minimum cross-section in main circuit at maximum AC-1 rated value operational current for approx. 200000 operating | 10 mm ² |
| cycles at AC-4 | |
| at 400 V rated value | 5.5 A |
| • at 690 V rated value | 5.5 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 | |
| — at 24 V rated value | 35 A |
| — at 24 V rated value — at 110 V rated value | 35 A |
| — at 110 V rated value — at 220 V rated value | 5 A |
| | |
| — at 440 V rated value | 1 A |
| — at 600 V rated value | 0.8 A |
| with 3 current paths in series at DC-1 | |

| — at 24 V rated value | 35 A |
|---|---|
| — at 110 V rated value | 35 A |
| — at 220 V rated value | 35 A |
| — at 440 V rated value | 2.9 A |
| — at 600 V rated value | 1.4 A |
| at 1 current path at DC-3 at DC-5 | |
| — 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 | 5.5 kW |
| • at AC-3 | |
| — at 230 V rated value | 3 kW |
| — at 400 V rated value | 5.5 kW |
| — at 500 V rated value | 5.5 kW |
| — at 690 V rated value | 7.5 kW |
| • at AC-3e | |
| — at 230 V rated value | 3 kW |
| — at 400 V rated value | 5.5 kW |
| — at 500 V rated value | 5.5 kW |
| — at 690 V rated value | 7.5 kW |
| operating power for approx. 200000 operating cycles at AC-4 | |
| • at 400 V rated value | 2.6 kW |
| • at 690 V rated value | 4.6 kW |
| operating apparent power at AC-6a | |
| • up to 230 V for current peak value n=20 rated value | 4.5 kVA |
| • up to 400 V for current peak value n=20 rated value | 7.8 kVA |
| • up to 500 V for current peak value n=20 rated value | 9.8 kVA |
| • up to 690 V for current peak value n=20 rated value | 10.7 kVA |
| operating apparent power at AC-6a | |
| up to 230 V for current peak value n=30 rated value | 3 kVA |
| • up to 400 V for current peak value n=30 rated value | 5.2 kVA |
| • up to 500 V for current peak value n=30 rated value | 6.5 kVA |
| • up to 690 V for current peak value n=30 rated value | 9 kVA |
| short-time withstand current in cold operating state | |
| up to 40 °C | |
| limited to 1 s switching at zero current maximum | 210 A; Use minimum cross-section acc. to AC-1 rated value |
| limited to 5 s switching at zero current maximum | 210 A; Use minimum cross-section acc. to AC-1 rated value |
| limited to 10 s switching at zero current maximum | 162 A; Use minimum cross-section acc. to AC-1 rated value |
| limited to 30 s switching at zero current maximum | 103 A; Use minimum cross-section acc. to AC-1 rated value |
| limited to 60 s switching at zero current maximum | 88 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 | 1 000 1/h |
| • at AC-2 maximum | 1 000 1/h |
| | |

| | a at AC 2 maying up | 1 000 1/b |
|--|---|---|
| | • at AC-3 maximum | 1 000 1/h |
| AC AC AC AC AC AC AC AC | | |
| type of voltage of the control supply voltage control supply voltage at AC at 60 Hz rated value apparent pick-up power of magnet coil at AC at 60 Hz colling delay at AC a | | 300 1/h |
| Control supply voltage at AC | | 10 |
| ■ at 80 Hz rated value operating range factor control supply voltage rated value of magnet coil at AC ■ at 80 Hz apparent pick-up power of magnet coil at AC ■ at 80 Hz o.78 □ at 80 Hz o.88 1.1 o.89 □ at 80 Hz o.80 opening delay □ at 80 Hz o.90 □ at 80 Hz opening delay □ at 80 Hz or at 80 Hz opening delay □ at 80 Hz or at 80 Hz opening delay □ at 80 Hz opening delay □ at 80 Hz opening delay □ at 80 Hz or at 80 Hz opening delay □ at 80 Hz or a | | AC |
| operating range factor control supply voltage rated value of magnet coil at AC a # 60 Hz apparent plck-up power of magnet coil at AC a # 60 Hz apparent holding power of magnet coil at AC a # 60 Hz apparent holding power of magnet coil at AC a # 60 Hz apparent holding power of magnet coil at AC a # 60 Hz apparent holding power of magnet coil at AC a # 60 Hz closing delay a # 60 Hz closing delay a # AC arcing time control version 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 at # 4300 V rated value a # 4300 V rated value a # 4500 V rated value a # 460 V rated value a # 470 V rated value | | |
| val 60 H2 0.85 1.1 apparent pick-up power of magnet coil at AC at 60 H2 at 60 H2 73 VA inductive power factor with closing power of the coil 0.76 apparent holding power of magnet coil at AC 4 at 60 H2 at 60 H2 7.2 VA inductive power factor with the holding power of the coil 4 at 60 H2 closing delay 4 at AC at AC 4 and ms opening delay 4 at AC at AC 4 and ms arcing time 10 and ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 1 mumber of NC contacts for auxiliary contacts instantaneous contact 1 instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact 1 instantaneous contact 1 instantaneous contact operational current at AC-12 maximum 10 A 1 instantaneous contact operational current at AC-12 maximum 10 A 1 instantaneous contact operational current at D-12 1 instantaneous contact 1 instantaneous contact at 150 V rated value 1 A 1 instantaneous contact | | 480 V |
| | | |
| apparent pick-up power of magnet coil at AC at 60 Hz inductive power factor with closing power of the coil at 60 Hz apparent holding power of magnet coil at AC at 60 Hz inductive power factor with the holding power of the coil at 60 Hz closing delay at AC a | _ | 0.05 4.4 |
| a at 60 Hz | | U.00 I.I |
| Inductive power factor with closing power of the coil at 160 Hz at 60 Hz total power factor with the holding power of the coil at 60 Hz closing delay at 160 Hz control were factor with the holding power of the coil at 160 Hz control were factor with the holding power of the coil at 160 Hz control were factor with the holding power of the coil at 160 Hz control were factor with the holding power of the coil at 160 Hz control were factor with the holding power of the coil at 160 Hz control were factor with the holding power of the coil at 160 Hz control were factor with the holding power of the coil at 160 Hz control were factor with the holding power of the coil at 160 Hz control were factor with the holding power of the coil at 160 Hz at 160 Hz control were factor with the holding power of the coil at 160 Hz control were factor with the holding power of the coil at 160 Hz control were factor with the holding power of the coil at 160 Hz control were factor with the holding power of the coil at 160 Hz control were factor with the holding power of the coil at 160 Hz control were factor with the holding power of the coil at 160 Hz control were factor with the holding power of the coil at 160 Hz control were factor with the holding power of the coil at 160 Hz control were factor with the holding power of the coil at 160 Hz control were factor with the holding power of the coil at 160 Hz control were factor with the holding power of the coil at 160 Hz control were factor with at 16 Hz by at 160 Hz control were factor with at 16 Hz by at 160 Hz control were factor with at 16 Hz by at 160 Hz control were factor with at 16 Hz by at 160 Hz control were factor with at 16 Hz control were fact | | 72.1/4 |
| a at 60 Hz apparent holding power of magnet coil at AC at 60 Hz inductive power factor with the holding power of the coil at 60 Hz closing delay at 60 Hz coling delay at AC arcing time control version of the switch operating mechanism Auxillary 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 number of NC contacts for auxiliary contacts instantaneous contact 1 number of NC contacts for auxiliary contacts instantaneous contact 1 number of NC contacts for auxiliary contacts instantaneous contact 1 number of NC contacts for auxiliary contacts 1 number of NC contact value 2 at 800 V rated value 3 A 4 at 900 V rated value 4 at 80 V rated value 5 A 4 at 900 V rated value 6 A 5 A 5 A 5 A 5 A 5 A 6 A 6 A 6 A 6 A 6 A 7 A 7 A 7 A 7 A 7 A 7 A 7 A 7 A 7 A 7 | | 13 VA |
| apparent holding power of magnet coil at AC • at 60 Hz inductive power factor with the holding power of the coil • at 60 Hz closing delay • at AC • at AC opening delay • at AC • at AC opening delay • at AC • at AC 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 operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 60 V rated value • at 125 V rated value • at 100 V rated value • at 400 V rated value • at 600 V rated value • at | | 0.76 |
| * at 60 Hz | | 0.70 |
| inductive power factor with the holding power of the coll at 460 Hz closing delay at AC pening 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 penetional current at AC-12 maximum operational current at AC-15 at 230 V rated value at 400 V rated value at 600 V rated value at 48 V rated value at 125 V rated value | | 7.2.1/4 |
| a at 60 Hz 0.28 | | 1.2 VA |
| ■ at 60 Hz Closing delay | • | |
| closing delay | | 0.28 |
| • at AC opening delay • at AC arcing time control version of the switch operating mechanism Auxillary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 650 V rated value • at 650 V rated value • at 84 V rated value • at 66 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 220 V rated value • at 220 V rated value • at 60 V rated value • at 60 V rated value • at 10 V rated value • at 10 V rated value • at 220 V rated value • at 340 V rated value • at 220 V rated value • at 400 V rated value • at 600 V | | |
| e at AC 4 16 ms arcing time 10 10 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact 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 400 V rated value 2 A • at 690 V rated value 1 A • at 690 V rated value 1 A • at 400 V rated value 1 A • at 40 V rated value 1 A • at 40 V rated value 1 A • at 40 V rated value 1 A • at 50 V rated value 1 A • at 10 V rated value 1 A • at 10 V rated value 1 A • at 10 V rated value 1 A • at 11 V rated value 1 A • at 11 V rated value 1 A • at 125 V rated value 1 A • at 220 V rated value 1 A • at 48 V rated value 1 A • at 48 V rated value 1 A • at 40 V rated value 1 A • at 50 V rated value 1 A • at 10 V rated value 1 A • at 10 V rated value 1 A • at 10 V rated value 1 A • at 20 V rated value 1 A • at 20 V rated value 1 A • at 20 V rated value 1 A • at 60 V rat | | 8 40 ms |
| at AC 4 16 ms arcing time 10 10 ms Standard A1 - A2 | | 5 16 III6 |
| 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 operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 650 V rated value • at 890 V rated value • at 480 V rated value • at 480 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 3A • at 24 V rated value • at 3A • at 25 V rated value • at 110 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 300 V rated value • at 300 V rated value • at 300 V rated value • at 400 V rated value • at 125 V rated value • at 300 V rated value • at 300 V rated value • at 300 V rated value • at 110 V rated value • a | | 4 16 ms |
| 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 operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 400 V rated value • at 500 V rated value • at 480 V rated value • at 600 V rated value • at 600 V rated value • at 600 V rated value • at 110 V rated value • at 125 V rated value • at 125 V rated value • at 220 V rated value • at 348 V rated value • at 350 V rated value • at 48 V rated value • at 500 V rated value • at 600 V rated value • at | | |
| Auxiliary circuit number of NC contacts for auxiliary contacts 1 | | |
| number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value • at 48 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 24 V rated value • at 3A • at 250 V rated value • at 3A • at 110 V rated value • at 3A • at 110 V rated value • at 28 V rated value • at 29 V rated value • at 20 V rated value • at 60 V rated value • at 400 V rated value • at 600 V rated value | | Otalidala AT - AZ |
| number of NO contacts for auxiliary contacts number of NO contacts for auxiliary contacts number of NO contacts for auxiliary contacts nstantaneous contact nstantaneous contact no A no | | 1 |
| Operational current at AC-12 maximum 10 A Operational current at AC-15 | instantaneous contact | |
| operational current at AC-15 | | 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 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 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 24 V rated value at 25 V rated value at 24 V rated value at 25 V rated value at 20 V rated value at 20 V rated value at 600 V rated value at 125 V rated value at 125 V rated value at 600 V rated value at 20 V rated value at 3 A at 20 V rated value at 3 A at 480 V rated value at 600 V | operational current at AC-12 maximum | 10 A |
| at 400 V rated value at 500 V rated value at 690 V rated value 1 A operational current at DC-12 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 125 V rated value at 120 V rated value at 220 V rated value at 600 V rated value at 24 V rated value at 24 V rated value at 24 V rated value at 25 V rated value at 25 V rated value at 10 A at 48 V rated value at 60 V rated value at 10 A at 110 V rated value at 125 V rated value at 25 V rated value at 200 V rated value at 200 V rated value at 480 V rated value at 600 V rated value at 70 June 100 million (17 V, 1 mA) ULICSA ratings full-load current (FLA) for 3-phase AC motor at 600 V rated value at 10 June 100 million (17 V, 1 mA) ULICSA ratings full-load current (FLA) for 3-phase AC motor at 600 V rated value at 11 A at 11 A at 110 June 100 million (17 V, 1 mA) | operational current at AC-15 | |
| • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 600 V rated value • at 200 V rated value • at 200 V rated value • at 200 V rated value • at 600 V rated value • at 600 V rated value • at 600 V rated value • at 7 rated value • at 8 V rated value • at 48 V rated value • at 48 V rated value • at 110 V rated value • at 110 V rated value • at 125 V rated value • at 125 V rated value • at 125 V rated value • at 220 V rated value • at 220 V rated value • at 220 V rated value • at 30 V rated value • at 600 V rated value • at 600 V rated value • at 80 V rated value • at 600 V rated value • at | • at 230 V rated value | 10 A |
| • at 690 V rated value | • at 400 V rated value | 3 A |
| operational current at DC-12 • at 24 V rated value | • at 500 V rated value | 2 A |
| at 24 V rated value at 48 V rated value at 60 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 25 V rated value at 26 V rated value at 27 V rated value at 28 V rated value at 29 V rated value at 24 V rated value at 24 V rated value at 24 V rated value at 25 V rated value at 10 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 220 V rated value at 20 V rated value at 28 V rated value at 29 V rated value at 480 V rated value at 600 V rated value at 7 I A at 600 V rated value at 600 V rated value at 600 V rated value at 7 I A yielded mechanical performance [hp] for single-phase AC motor at 110/120 V rated value 1 hp | at 690 V rated value | 1 A |
| • at 48 V rated value 6 A • at 60 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 • at 24 V rated value 2 A • at 48 V rated value 2 A • at 60 V rated value 2 A • at 60 V rated value 2 A • at 110 V rated value 2 A • at 110 V rated value 1 A • at 125 V rated value 1 A • at 125 V rated value 0.9 A • at 220 V rated value 0.9 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 • at 480 V rated value 11 A • at 600 V rated value 11 A • at 600 V rated value 11 A yielded mechanical performance [hp] • for single-phase AC motor — at 110/120 V rated value 1 hp | 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 600 V rated value • at 600 V rated value Operational current at DC-13 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 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 220 V rated value • at 600 V rated value • at 480 V rated value • at 480 V rated value • at 600 V rated value | • 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 48 V rated value at 60 V rated value at 110 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 at 600 V rated value at 480 V rated value at 600 V rated value at 10 A yielded mechanical performance [hp] for single-phase AC motor at 10 A at 11 A pielded rechanical performance [hp] for single-phase AC motor at 11 A | • 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 110 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 200 V rated value at 300 V rated value at 480 V rated value at 600 V rated value at 600 V rated value at 600 V rated value at 11 A yielded mechanical performance [hp] for single-phase AC motor at 110/120 V rated value 1 hp | • at 60 V rated value | 6 A |
| at 220 V rated value at 600 V rated value 0.15 A operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 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 480 V rated value at 480 V rated value at 480 V rated value at 600 V rated value at 70 Parameters at 10 Pa | • at 110 V rated value | 3 A |
| at 600 V rated value operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 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 700 V rated value at 11 A at 600 V rated value at 11 A yielded mechanical performance [hp] for single-phase AC motor at 110/120 V rated value 1 hp | at 125 V rated value | 2 A |
| operational current at DC-13 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 220 V rated value • at 600 V rated value • at 600 V rated value • at 600 V rated value 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 • at 480 V rated value 11 A • at 600 V rated value 11 A yielded mechanical performance [hp] • for single-phase AC motor — at 110/120 V rated value 1 hp | • at 220 V rated value | 1 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 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 11 A for single-phase AC motor at 110/120 V rated value 1 hp | at 600 V rated value | 0.15 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 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 at 600 V rated value for single-phase AC motor at 11 A yielded mechanical performance [hp] for single-phase AC motor at 110/120 V rated value 1 hp | operational current at DC-13 | |
| 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 o.3 A 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 11 A yielded mechanical performance [hp] for single-phase AC motor at 110/120 V rated value 1 hp | • at 24 V rated value | 10 A |
| 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 11 A yielded mechanical performance [hp] for single-phase AC motor at 10/120 V rated value 1 hp | • at 48 V rated value | 2 A |
| at 125 V rated value at 220 V rated value 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 full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value 11 A yielded mechanical performance [hp] for single-phase AC motor at 110/120 V rated value 1 hp | at 60 V rated value | 2 A |
| at 220 V rated value 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 full-load current (FLA) for 3-phase AC motor 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 1 hp | at 110 V rated value | 1 A |
| ● 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 11 A yielded mechanical performance [hp] • for single-phase AC motor — at 110/120 V rated value 1 hp | • 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 480 V rated value 11 A • at 600 V rated value 11 A yielded mechanical performance [hp] • for single-phase AC motor — at 110/120 V rated value 1 hp | at 220 V rated value | 0.3 A |
| full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value 11 A yielded mechanical performance [hp] • for single-phase AC motor — at 110/120 V rated value 1 hp | at 600 V rated value | 0.1 A |
| full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value 11 A yielded mechanical performance [hp] • for single-phase AC motor — at 110/120 V rated value 1 hp | contact reliability of auxiliary contacts | 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 1 hp | UL/CSA ratings | |
| ● at 600 V rated value yielded mechanical performance [hp] • for single-phase AC motor — at 110/120 V rated value 11 A 11 A 11 A | | |
| yielded mechanical performance [hp] ● for single-phase AC motor — at 110/120 V rated value 1 hp | | |
| for single-phase AC motor — at 110/120 V rated value 1 hp | | 11 A |
| — at 110/120 V rated value 1 hp | | |
| ' | | |
| — at 230 V rated value2 hp | | |
| | — at 230 V rated value | 2 hp |

| for 3-phase AC motor | |
|---|--|
| — at 200/208 V rated value | 3 hp |
| at 220/230 V rated value | 3 hp |
| — at 460/480 V rated value | 7.5 hp |
| — at 575/600 V rated value | 10 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: 63A (690V,100kA), aM: 32A (690V,100kA), BS88: 63A (415V,80kA) |
| — with type of assignment 2 required | gG: 25A (690V,100kA), aM: 20A (690V,100kA), BS88: 25A (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 | 85 mm |
| width | 45 mm |
| depth | 97 mm |
| required spacing | |
| with side-by-side mounting | |
| — forwards | 10 mm |
| — upwards | 10 mm |
| — downwards | 10 mm |
| — at the side | 0 mm |
| for grounded parts | |
| — forwards | 10 mm |
| — upwards | 10 mm |
| — at the side | 6 mm |
| — downwards | 10 mm |
| for live parts | |
| — 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 Screw-type terminals |
| type of connectable conductor cross-sections | Co. C. Operation |
| • for main contacts | |
| — solid | 2x (1 2.5 mm²), 2x (2.5 10 mm²) |
| — solid or stranded | 2x (1 2.5 mm²), 2x (2.5 10 mm²) |
| finely stranded with core end processing | 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² |
| at AWG cables for main contacts | 2x (16 12), 2x (14 8) |
| connectable conductor cross-section for main contacts | |
| • solid | 1 10 mm² |
| | 1 10 mm² |
| • stranded | 1 10 mm² |
| | 1 10 1111117 |
| finely stranded with core end processing connectable conductor cross-section for auxiliary contacts | |
| connectable conductor cross-section for auxiliary contacts | 0.5 2.5 mm² |
| connectable conductor cross-section for auxiliary contacts • solid or stranded | 0.5 2.5 mm ² |
| connectable conductor cross-section for auxiliary contacts | 0.5 2.5 mm² 0.5 2.5 mm² |

| — 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 | 16 8 |
| for auxiliary contacts | 20 14 |
| Safety related data | |
| product function | |
| mirror contact according to IEC 60947-4-1 | Yes |
| B10 value with high demand rate according to SN 31920 | 450 000 |
| 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 |
| 0.00 | |

Certificates/ approvals

General Product Approval



Confirmation





<u>KC</u>



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



Type Examination Certificate





Type Test Certificates/Test Report

Special Test Certificate

Marine / Shipping













other

Confirmation



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=3RT2024-1AV60

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2024-1AV60

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

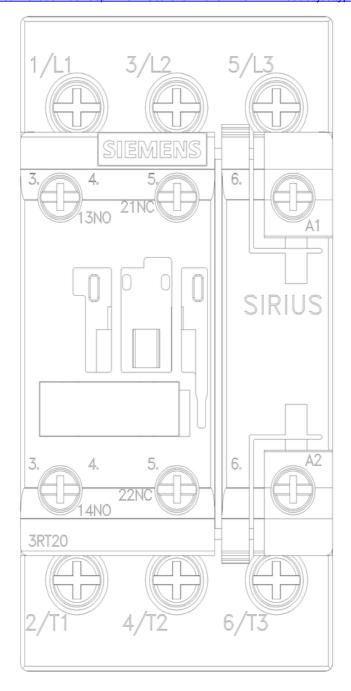
https://support.industry.siemens.com/cs/ww/en/ps/3RT2024-1AV60

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2024-1AV60&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RT2024-1AV60/char

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2024-1AV60&objecttype=14&gridview=view1



6/2/2022 last modified: