# **SIEMENS**

Data sheet 3RT2017-1AQ01



Power contactor, AC-3 12 A, 5.5 kW / 400 V 1 NO, 380 V AC, 50 / 60 Hz 3-pole, Size S00 screw terminal

| product brand name  | SIRIUS                     |
|---|----------------------------|
| product designation   | Power contactor            |
| product type designation  | 3RT2                       |
| General technical data  |                            |
| size of contactor   | S00                        |
| product extension   |                            |
| <ul> <li>function module for communication</li> </ul>   | No                         |
| auxiliary switch  | Yes                        |
| power loss [W] for rated value of the current   |                            |
| <ul> <li>at AC in hot operating state</li> </ul>  | 1.5 W                      |
| <ul> <li>at AC in hot operating state per pole</li> </ul>   | 0.5 W                      |
| <ul> <li>without load current share typical</li> </ul>  | 5.7 W                      |
| insulation voltage  |                            |
| <ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>                                  | 690 V                      |
| <ul> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>                             | 690 V                      |
| surge voltage resistance  |                            |
| <ul> <li>of main circuit rated value</li> </ul>   | 6 kV                       |
| <ul> <li>of auxiliary circuit rated value</li> </ul>  | 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   | 7,3g / 5 ms, 4,7g / 10 ms  |
| shock resistance with sine pulse  |                            |
| • at AC   | 11,4g / 5 ms, 7,3g / 10 ms |
| mechanical service life (switching cycles)  |                            |
| <ul> <li>of contactor typical</li> </ul>  | 30 000 000                 |
| <ul> <li>of the contactor with added electronically optimized<br/>auxiliary switch block typical</li> </ul> | 5 000 000                  |
| <ul> <li>of the contactor with added auxiliary switch block<br/>typical</li> </ul>                          | 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   |                            |
| <ul> <li>during operation</li> </ul>  | -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  | 22 A              |
| • at AC-1  |                   |
| <ul> <li>up to 690 V at ambient temperature 40 °C rated value</li> </ul>   | 22 A              |
| — up to 690 V at ambient temperature 60 $^{\circ}\text{C}$ rated value   | 20 A              |
| • at AC-3  |                   |
| — at 400 V rated value   | 12 A              |
| — at 500 V rated value   | 9.2 A             |
| — at 690 V rated value   | 6.7 A             |
| • at AC-3e   |                   |
| — at 400 V rated value   | 12 A              |
| — at 500 V rated value   | 9.2 A             |
| — at 690 V rated value   | 6.7 A             |
| • at AC-4 at 400 V rated value   | 8.5 A             |
| <ul> <li>at AC-5a up to 690 V rated value</li> </ul>   | 19.4 A            |
| • at AC-5b up to 400 V rated value   | 9.9 A             |
| • at AC-6a   |                   |
| up to 230 V for current peak value n=20 rated value  | 7.2 A             |
| <ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>  | 7.2 A             |
| <ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>  | 7.2 A             |
| — up to 690 V for current peak value n=20 rated value  value   | 6.7 A             |
| <ul> <li>at AC-6a</li> <li>up to 230 V for current peak value n=30 rated value</li> </ul>                          | 4.8 A             |
| — up to 400 V for current peak value n=30 rated value  | 4.8 A             |
| <ul> <li>up to 500 V for current peak value n=30 rated value</li> </ul>  | 4.8 A             |
| — up to 690 V for current peak value n=30 rated value  | 4.8 A             |
| minimum cross-section in main circuit at maximum AC-1 rated value operational current for approx. 200000 operating | 4 mm <sup>2</sup> |
| cycles at AC-4   |                   |
| at 400 V rated value   | 4.1 A             |
| at 690 V rated value   | 3.3 A             |
| operational current  |                   |
| • at 1 current path at DC-1  |                   |
| — at 24 V rated value  | 20 A              |
| — at 110 V rated value   | 2.1 A             |
| — at 220 V rated value   | 0.8 A             |
| — at 440 V rated value   | 0.6 A             |
| — at 600 V rated value   | 0.6 A             |
|  | 0.0 A             |
| with 2 current paths in series at DC-1     at 24 V rated value.  | 20.4              |
| — at 24 V rated value  | 20 A              |
| — at 110 V rated value   | 12 A              |
| — at 220 V rated value   | 1.6 A             |
| — at 440 V rated value   | 0.8 A             |
| — at 600 V rated value   | 0.7 A             |
| <ul> <li>with 3 current paths in series at DC-1</li> </ul>   |                   |

| — at 24 V rated value  | 20 A  |
|--|---|
| — at 110 V rated value   | 20 A  |
| — at 220 V rated value   | 20 A  |
| — at 440 V rated value   | 1.3 A   |
| — at 600 V rated value   | 1 A   |
| <ul> <li>at 1 current path at DC-3 at DC-5</li> </ul>  |   |
| — at 24 V rated value  | 20 A  |
| — at 110 V rated value   | 0.1 A   |
| <ul> <li>with 2 current paths in series at DC-3 at DC-5</li> </ul>   |   |
| — at 24 V rated value  | 20 A  |
| — at 110 V rated value   | 0.35 A  |
| <ul> <li>with 3 current paths in series at DC-3 at DC-5</li> </ul>   |   |
| — at 24 V rated value  | 20 A  |
| — at 110 V rated value   | 20 A  |
| — at 220 V rated value   | 1.5 A   |
| — at 440 V rated value   | 0.2 A   |
| — at 600 V rated value   | 0.2 A   |
| operating power  |   |
| • at AC-2 at 400 V rated value   | 5.5 kW  |
| • at AC-3  |   |
| — at 230 V rated value   | 3 kW  |
| — at 230 V rated value  — at 400 V rated value   | 5.5 kW  |
| — at 400 V rated value  — at 500 V rated value   |   |
|  | 5.5 kW  |
| — at 690 V rated value   | 5.5 kW  |
| • at AC-3e   | 0.1114  |
| — 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   | 5.5 kW  |
| operating power for approx. 200000 operating cycles at AC-4  |   |
| at 400 V rated value   | 2 kW  |
| ● at 690 V rated value   | 2.5 kW  |
| operating apparent power at AC-6a  |   |
| <ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>  | 2.8 kVA   |
| <ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>  | 4.9 kVA   |
| <ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>  | 6.2 kVA   |
| <ul> <li>up to 690 V for current peak value n=20 rated value</li> </ul>  | 8 kVA   |
| operating apparent power at AC-6a  |   |
| • up to 230 V for current peak value n=30 rated value  | 1.9 kVA   |
| • up to 400 V for current peak value n=30 rated value  | 3.3 kVA   |
| up to 500 V for current peak value n=30 rated value  | 4.1 kVA   |
| <ul> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> </ul> | 5.7 kVA   |
| short-time withstand current in cold operating state   |   |
| up to 40 °C  |   |
| <ul> <li>limited to 1 s switching at zero current maximum</li> </ul>   | 200 A; Use minimum cross-section acc. to AC-1 rated value |
| <ul> <li>limited to 5 s switching at zero current maximum</li> </ul>   | 123 A; Use minimum cross-section acc. to AC-1 rated value |
| <ul> <li>limited to 10 s switching at zero current maximum</li> </ul>  | 96 A; Use minimum cross-section acc. to AC-1 rated value  |
| <ul> <li>limited to 30 s switching at zero current maximum</li> </ul>  | 74 A; Use minimum cross-section acc. to AC-1 rated value  |
| limited to 60 s switching at zero current maximum  | 61 A; Use minimum cross-section acc. to AC-1 rated value  |
| no-load switching frequency  |   |
| • at AC  | 10 000 1/h  |
| operating frequency  |   |
| • at AC-1 maximum  | 1 000 1/h   |
| • at AC-2 maximum  | 750 1/h   |
| • at AC-3 maximum  | 750 1/h   |
| • at AC-3e maximum   | 750 1/h   |
| • at AC-4 maximum  | 250 1/h   |
| Control circuit/ Control   |   |
| type of voltage of the control supply voltage  | AC  |
| type of voltage of the control supply voltage  | / NO  |

| control supply voltage at AC  |   |
|---|---|
| <ul> <li>at 50 Hz rated value</li> </ul>  | 380 V   |
| at 60 Hz rated value  | 380 V   |
| operating range factor control supply voltage rated value of magnet coil at AC  |   |
| ● at 50 Hz  | 0.8 1.1   |
| • at 60 Hz  | 0.85 1.1  |
| apparent pick-up power of magnet coil at AC   |   |
| ● at 50 Hz  | 37 VA   |
| • at 60 Hz  | 33 VA   |
| inductive power factor with closing power of the coil   |   |
| ● at 50 Hz  | 0.8   |
| ● at 60 Hz  | 0.75  |
| apparent holding power of magnet coil at AC   |   |
| • at 50 Hz  | 5.7 VA  |
| • at 60 Hz  | 4.4 VA  |
| inductive power factor with the holding power of the coil   |   |
| ● at 50 Hz  | 0.25  |
| ● at 60 Hz  | 0.25  |
| closing delay   |   |
| • at AC   | 9 35 ms   |
| opening delay   |   |
| • at AC   | 7 13 ms   |
| arcing time   | 10 15 ms  |
| control version of the switch operating mechanism   | Standard A1 - A2  |
| Auxiliary circuit   |   |
| number of NO contacts for auxiliary contacts instantaneous contact  | 1   |
| operational current at AC-12 maximum  | 10 A  |
| operational current at AC-15  |   |
| at 230 V rated value  | 10 A  |
| • at 400 V rated value  | 3 A   |
| • at 500 V rated value  | 2 A   |
| • at 690 V rated value  | 1 A   |
| operational current at DC-12  |   |
| • at 24 V rated value   | 10 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   |
| <ul> <li>at 220 V rated value</li> </ul>  | 1 A   |
| at 600 V rated value  | 0.15 A  |
| operational current at DC-13  |   |
| • at 24 V rated value   | 10 A  |
| • at 48 V rated value   | 2 A   |
| • at 60 V rated value   | 2 A   |
| at 110 V rated value  | 1 A   |
| a at 125 V rated value  |   |
| • at 125 V rated value  | 0.9 A   |
| • at 220 V rated value  | 0.3 A   |
| <ul><li>at 220 V rated value</li><li>at 600 V rated value</li></ul>   | 0.3 A<br>0.1 A  |
| at 220 V rated value     at 600 V rated value  contact reliability of auxiliary contacts  | 0.3 A   |
| at 220 V rated value     at 600 V rated value     contact reliability of auxiliary contacts  UL/CSA ratings   | 0.3 A<br>0.1 A  |
| 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  | 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)                   |
| 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  | 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)                   |
| 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  at 600 V rated value   | 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)                   |
| 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  at 600 V rated value  yielded mechanical performance [hp]  | 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)                   |
| 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  at 600 V rated value  yielded mechanical performance [hp]  for single-phase AC motor                           | 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)                   |
| 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  at 600 V rated value  yielded mechanical performance [hp]  for single-phase AC motor  at 110/120 V rated value | 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)  11 A 11 A 0.5 hp |
| 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  at 600 V rated value  yielded mechanical performance [hp]  for single-phase AC motor                           | 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)                   |

| at 200/230 V rised value at 460/480 V rated value at 575/000 V rised value with type of coordination 1 required with type of 200 (890V,100KA), alx 20A (890V,100KA), BS88: 35A (415V,80KA) gG: 20A (890V,100KA), alx 20A (690V, 100KA), BS88: 35A (415V,80KA) gG: 20A (890V,100KA), alx 20A (690V,100KA), BS88: 35A (415V,80KA) gG: 20A (890V,100KA), alx 20A (690V,100KA), BS88: 35A (415V,80KA) gG: 20A (890V,100KA), alx 20A (690V,100KA), BS88: 35A (415V,80KA) gG: 20A (890V,100KA), alx 20A (690V,100KA), BS88: 35A (415V,80KA) gG: 20A (890V,100KA), alx 20A (690V,100KA), BS88: 35A (415V,80KA) gG: 20A (890V,100KA), alx 20A (690V,100KA), BS88: 35A (415V,80KA) gG: 20A (890V,100KA), alx 20A (690V,100KA), BS88: 35A (415V,80KA) gG: 20A (890V,100KA), alx 20A (690V,100KA), BS88: 35A (415V,80KA) gG: 20A (890V,100KA), alx 20A (690V,100KA), BS88: 35A (415V,80KA) gG: 20A (890V,100KA), alx 20A (690V,100KA), alx  |   |   |
|--|---|---|
| at 490/480 V related value   |   |   |
|  |   |   |
| contact rating of auxillary contacts according to UL Short-circuit protection  design of the fuse link   |   | ·                                       |
| Short-circuit protection   design of the fuse link   - for short-circuit protection of the main circuit   - with type of coordination 1 required   gis 20A (690V,100kA), alb: 20A (690V,100kA), BS88: 35A (415V,80kA)   gis 20A (690V,100kA), alb: 16A (690V,100kA), BS88: 35A (415V,80kA)   gis 20A (690V,100kA), alb: 16A (690V,100kA), BS88: 35A (415V,80kA)   gis 20A (690V,100kA), alb: 16A (690V,100kA), BS88: 35A (415V,80kA)   gis 20A (690V,100kA), alb: 16A (690V,100kA), BS88: 35A (415V,80kA)   gis 20A (690V,100kA), alb: 16A (690V,100kA), BS88: 35A (415V,80kA)   gis 20A (690V,100kA), alb: 16A (690V,100kA), BS88: 35A (415V,80kA)   gis 20A (690V,100kA), alb: 16A (690V,100kA), BS88: 35A (415V,80kA)   gis 20A (690V,100kA), alb: 16A (690V,100kA), BS88: 35A (415V,80kA)   gis 20A (690V,100kA), alb: 16A (690V,100kA), BS88: 35A (415V,80kA)   gis 20A (690V,100kA), alb: 16A (69             |   | ·                                       |
| design of the fuse link   * for short-circuit protection of the main circuit   |   | A600 / Q600                             |
| • for short-circuit protection of the main circuit     — with type of coordination 1 required     — with type of assignment 2 required     — with type of assignment 2 required     — sfor short-circuit protection of the auxiliary switch     • for short-circuit protection of the auxiliary contacts     • sided or stranded     • for short-circuit contacts                   | Short-circuit protection                          |   |
| with type of coordination 1 required with type of assignment 2 required with type of assignment 2 required for short-circuit protection of the auxiliary switch   | •   |   |
| - with type of assignment 2 required 80kA)  * for short-circuit protection of the auxiliary switch required required mounting position  mounting position  fastening method  * side-by-side mounting  height  * side-by-side mounting  * with side-by-side mounting  - forwards  - upwards  - at the side  - at the side  - downwards  - or formards  - upwards  - or formards  - upwards  - or formards  - upwards  - or forwards  - or forwards  - or forwards  - upwards  - or forwards  - or forwards  - or forwards  - upwards  - or forwards            |   |   |
| For short-circuit protection of the auxiliary switch required   gG: 10 A (500 V, 1 kA)   |   |   |
| required final flation/mounting/ dimensions  mounting position   |   |   |
| mounting position    +i150" rotation possible on vertical mounting surface; can be tilted forward and backward by +i-22.5" on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715   yes   |   | gG: 10 A (500 V, 1 kA)                  |
| forward and backward by 4+ 22.5° on vertical mounting surface side-by-side mounting side-by-side mounting 4  | Installation/ mounting/ dimensions                |   |
| side-by-side mounting  height width depth 73 mm  required spacing  with side-by-side mounting —forwards — upwards — upwards — of more mounting — for grounded parts — for grounded parts — of more mounting — at the side — downwards — upwards — 10 mm — for grounded parts — forwards — upwards — 10 mm — of mine mounting — of mine — of mine mounting — of mine — of or main current circuit — of or auxiliary and control circuit — of or main currents — of main currents — of main currents — solid — solid or stranded — finely stranded with core end processing — at AWG cables for main contacts — solid — solid or stranded — finely stranded with core end processing — solid or stranded — solid or stranded — solid or stranded — s            | mounting position                                 |   |
| height width 45 mm depth 73 mm  required spacing  • with side-by-side mounting  - forwards 10 mm  - downwards 10 mm  - downwards 10 mm  • for grounded parts  - forwards 10 mm  • for grounded parts  - forwards 10 mm  • for grounded parts  - forwards 10 mm  • for grounded parts  - downwards 10 mm  • for live parts  - forwards 10 mm  • for wards 10 mm  • for auxiliary and control circuit soft auxiliary and control circuit soft main contacts  • of magnet coil Screw-type terminals  • screw-type terminals  • type of connectable conductor cross-sections  • for main contacts  - solid 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)  2x (0.5 1.5 mm²), 2x (0.75  | fastening method                                  |   |
| width depth 73 mm  required spacing  with side-by-side mounting  | side-by-side mounting                             | Yes                                     |
| required spacing  • with side-by-side mounting  — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — to mm — for grounded parts — forwards — upwards — upwards — to mm — at the side — downwards — to mm — at the side — downwards — for live parts — forwards — to mm — downwards — to mm — upwards — to mm — upwards — to mm —           | height  | 58 mm                                   |
| required spacing  with side-by-side mounting — forwards — upwards — downwards — at the side — for grounded parts — forwards — upwards — 10 mm — upwards — 10 mm — upwards — the side — downwards — 10 mm — upwards — the side — downwards — 10 mm — upwards — forwards — forwards — forwards — forwards — 10 mm — downwards — 10 mm — downwards — upwards — 10 mm — downwards — upwards — 10 mm — downwards — upwards — 10 mm — downwards — to fire parts — forwards — upwards — upwards — to mm — downwards — to mm — at the side  Connections/ Terminals  Type of electrical connection  • for main current circuit • for auxiliary and control circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil  type of connectable conductor cross-sections • for main contacts — solid — solid or stranded — finely stranded with core end processing • at AWG cables for main contacts  • solid • stranded • finely stranded with core end processing   | width   | 45 mm                                   |
| with side-by-side mounting  - forwards - upwards - downwards - at the side of grounded parts - forwards - upwards - at the side of or grounded parts - forwards - upwards - at the side - downwards - at the side - downwards - for live parts - for live parts - for live parts - for live parts - forwards - upwards - upwards - upwards - upwards - upwards - upwards - downwards - downwards - at the side - domnoutions/Terminals  type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts - at contactor for auxiliary contacts - solid - solid or stranded - finely stranded with core end processing • stranded • finely stranded with core end processing  type of connectable conductor cross-section for auxillary contacts • solid or stranded • finely stranded with core end processing  type of connectable conductor cross-sections  | depth   | 73 mm                                   |
| forwards upwards upwards downwards at the side downwards at the side downwards forwards forwards upwards upwards upwards upwards downwards upwards downwards downwards downwards downwards upwards upwards upwards upwards downwards upwards downwards upwards downwards upwards downwards at the side downwards at the side downwards downwards at the side   |   |   |
| - upwards - downwards - 10 mm            |   |   |
| - downwards - at the side • for grounded parts - forwards - upwards - upwards - at the side - downwards - downwards - for live parts - forwards - upwards - forwards - upwards - forwards - upwards - downwards - upwards - downwards - for auxiliary and control circuit - for auxiliary and control circuit - for auxiliary and control circuit - for auxiliary contacts - of magnet coil - solid - solid or stranded - finely stranded with core end processing - stranded            | — forwards  | 10 mm                                   |
| - at the side  • for grounded parts  - forwards  - upwards  - at the side  - downwards  • for live parts  - forwards  - upwards  - forwards  - forwards  - forwards  - forwards  - forwards  - upwards  - upwards  - upwards  - upwards  - downwards  - downwards  - at the side  - formal current circuit  • for anain current circuit  • for anain current circuit  • for anain current circuit  • for main current circuit  • at contactor for auxiliary contacts  • for main contacts  • for main contacts  - solid  - solid or stranded  - finely stranded with core end processing  • at A LWG cables for main contacts  • solid  • stranded  • finely stranded with core end processing  connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  type of connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  type of connectable conductor cross-sections  | ·   |   |
| • for grounded parts   | — downwards                                       | 10 mm                                   |
| - forwards 10 mm 1           |   | 0 mm                                    |
| - upwards - at the side - downwards • for live parts - forwards - upwards - upwards - upwards - upwards - downwards - at the side - downwards - upwards - the side - downwards - at the side  Connections/ Terminals  type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil  type of connectable conductor cross-sections • for main contacts - solid - solid or stranded - finely stranded with core end processing • at AWG cables for main contacts - solid • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing  type of connectable conductor cross-sections   |   |   |
| - at the side  | — forwards  |   |
| - downwards • for live parts - forwards - upwards - upwards - downwards - at the side  Connections/ Terminals  type of electrical connection • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil - solid - solid or stranded - finely stranded with core end processing • forlid or stranded • finely stranded with core end processing • solid or stranded • finely stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing  type of connectable conductor cross-sections  | — upwards   | 10 mm                                   |
| • for live parts  — forwards — upwards — downwards — at the side  Connections/ Terminals  type of electrical connection • for main current circuit • at contactor for auxiliary and control circuit • of magnet coil  type of connectable conductor cross-sections • for main contacts — solid — solid or stranded — finely stranded with core end processing • stranded • finely stranded with core end processing • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid ostranded • finely stranded with core end processing • solid ostranded • finely stranded with core end processing • solid ostranded • finely stranded with core end processing • solid ostranded • finely stranded with core end processing • solid ostranded • finely stranded with core end processing • solid ostranded • finely stranded with core end processing • solid ostranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing  • solid or stranded • finely stranded with core end processing  • solid or stranded • finely stranded with core end processing  • solid or stranded • finely stranded with core end processing  • solid or stranded • finely stranded with core end processing  • solid or stranded • finely stranded with core end processing  • solid or stranded • finely stranded with core end processing  • solid or stranded • finely stranded with core end processing  • solid or stranded • finely stranded with core end processing   | — at the side                                     | 6 mm                                    |
| - forwards - upwards - upwards - downwards - at the side  Connections/ Terminals  type of electrical connection  • for main current circuit • for auxillary and control circuit • for auxillary and control circuit • for main current circuit • for main contacts • of magnet coil  type of connectable conductor cross-sections • for main contacts - solid - solid or stranded - finely stranded with core end processing • stranded • finely stranded with core end processing • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid o.5 4 mm² • finely stranded with core end processing • solid o.5 2.5 mm²  connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded   |   | 10 mm                                   |
| - upwards - downwards - at the side  Connections/ Terminals  type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil  type of connectable conductor cross-sections • for main contacts - solid - solid or stranded - finely stranded with core end processing • stranded • finely stranded with core end processing • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid of stranded • finely stranded with core end processing • solid of stranded • finely stranded with core end processing • solid of stranded • finely stranded with core end processing • solid of stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing  type of connectable conductor cross-sections   | •   |   |
| - downwards - at the side  Connections/ Terminals  type of electrical connection  • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil  type of connectable conductor cross-sections • for main contacts - solid - solid ostranded - finely stranded with core end processing • stranded • stranded • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts  • solid ostranded - solid            |   |   |
| Type of electrical connection  of or main current circuit of or auxiliary and control circuit of magnet coil type of connectable conductor cross-sections  of main contacts  o           |   |   |
| type of electrical connection  • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of main contacts • for main contacts • for main contacts • of main contacts • rolid - solid - solid - solid - solid or stranded - finely stranded with core end processing • stranded • stranded • stranded • stranded • stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing  type of connectable conductor cross-sections   |   |   |
| type of electrical connection  • for main current circuit  • for auxiliary and control circuit  • at contactor for auxiliary contacts  • of magnet coil  type of connectable conductor cross-sections  • for main contacts  — solid  — solid or stranded — finely stranded with core end processing  • stranded • stranded • stranded • stranded • finely stranded with core end processing • solid or stranded • stranded • stranded • stranded • finely stranded with core end processing • solid • solid • solid • stranded with core end processing • solid • stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing  |   | 6 mm                                    |
| • for main current circuit     • for auxiliary and control circuit     • at contactor for auxiliary contacts     • of magnet coil  type of connectable conductor cross-sections     • for main contacts     — solid     — solid or stranded     — finely stranded with core end processing     • stranded     • stranded     • stranded     • finely stranded with core end processing     • solid     • stranded     • finely stranded with core end processing     • solid     • stranded     • finely stranded with core end processing     • stranded     • finely stranded with core end processing     • finely stranded with core end processing     • solid or stranded     • finely stranded with core end processing     • solid or stranded     • finely stranded with core end processing     • solid or stranded     • finely stranded with core end processing     • solid or stranded     • finely stranded with core end processing     • solid or stranded     • finely stranded with core end processing     • solid or stranded     • finely stranded with core end processing     • solid or stranded     • finely stranded with core end processing     • solid or stranded     • finely stranded with core end processing     • solid or stranded     • finely stranded with core end processing     • solid or stranded     • finely stranded with core end processing     • solid or stranded                    |   |   |
| • for auxiliary and control circuit     • at contactor for auxiliary contacts     • of magnet coil      type of connectable conductor cross-sections     • for main contacts     — solid     — solid or stranded     — finely stranded with core end processing     • stranded     • finely stranded with core end processing     • solid     • stranded     • finely stranded with core end processing     • solid or stranded     • finely stranded with core end processing     • solid or stranded     • finely stranded with core end processing     • solid or stranded     • finely stranded with core end processing     • solid or stranded     • finely stranded with core end processing     • solid or stranded     • finely stranded with core end processing     • solid or stranded     • finely stranded with core end processing     • solid or stranded     • finely stranded with core end processing     type of connectable conductor cross-sections   |   |   |
| <ul> <li>at contactor for auxiliary contacts</li> <li>of magnet coil</li> <li>type of connectable conductor cross-sections</li> <li>for main contacts</li> <li>— solid</li> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>at AWG cables for main contacts</li> <li>— solid</li> <li>— finely stranded with core end processing</li> <li>at AWG cables for main contacts</li> <li>at AWG cables for main contacts</li> <li>at a finely stranded with core end processing</li> <li>at AWG cables for main contacts</li> <li>at AWG cables for main co</li></ul> |   | **                                      |
| • of magnet coil  type of connectable conductor cross-sections  • for main contacts  — solid — solid or stranded — finely stranded with core end processing • at AWG cables for main contacts  • solid • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing  • solid or stranded • finely stranded with core end processing  • solid or stranded • finely stranded with core end processing  • solid or stranded • finely stranded with core end processing  • solid or stranded • finely stranded with core end processing  • solid or stranded • finely stranded with core end processing  type of connectable conductor cross-sections   |   | **                                      |
| type of connectable conductor cross-sections  • for main contacts  — solid  — solid  — solid or stranded  — finely stranded with core end processing  • at AWG cables for main contacts  • solid  • stranded  • stranded  • stranded  • stranded  • stranded  • sinely stranded with core end processing  • solid  • stranded  • finely stranded with core end processing  • solid  • stranded  • finely stranded with core end processing  connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  type of connectable conductor cross-sections   | •   |   |
| <ul> <li>for main contacts</li> <li>— solid</li> <li>— solid or stranded</li> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>at AWG cables for main contacts</li> <li>at AWG cables for main contacts</li> <li>solid</li> <li>stranded</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>2x (20 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²</li> <li>2x (20 1.5 mm²), 2x (0.75 2.5 mm²)</li> <li>2x (20 16), 2x (18 14), 2x 12</li> </ul> connectable conductor cross-section for main contacts <ul> <li>solid</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>connectable conductor cross-section for auxiliary contacts</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded conductor cross-sections</li> </ul>  |   | Screw-type terminals                    |
| <ul> <li>— solid</li> <li>— solid or stranded</li> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>• at AWG cables for main contacts</li> <li>• solid</li> <li>• stranded</li> <li>• stranded</li> <li>• finely stranded with core end processing</li> <li>• stranded</li> <li>• finely stranded with core end processing</li> <li>• finely stranded with core end processing</li> <li>• solid or stranded</li> <li>• finely stranded with core end processing</li> <li>• solid or stranded</li> <li>• solid or stran</li></ul> |   |   |
| <ul> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>• at AWG cables for main contacts</li> <li>• solid</li> <li>• stranded</li> <li>• stranded</li> <li>• finely stranded with core end processing</li> <li>• solid</li> <li>• stranded</li> <li>• finely stranded with core end processing</li> <li>• solid or stranded with core end processing</li> <li>• finely stranded with core end processing</li> <li>• solid or stranded</li> <li>• solid or stranded with core end processing</li> <li>• solid or stranded on stranded on</li></ul> |   | Ov (0.5 4.5 mm²) Ov (0.75 0.5 mm²) Ov ( |
| <ul> <li>— finely stranded with core end processing</li> <li>♦ at AWG cables for main contacts</li> <li>Connectable conductor cross-section for main contacts</li> <li>♦ solid</li> <li>♦ stranded</li> <li>♦ finely stranded with core end processing</li> <li>Connectable conductor cross-section for auxiliary contacts</li> <li>♦ solid or stranded</li> <li>♦ solid or stranded</li> <li>♦ finely stranded with core end processing</li> <li>O.5 4 mm²</li> <li>O.5 2.5 mm²</li> <li>O.5 4 mm²</li> <li>O.5 2.5 mm²</li> </ul>  |   |   |
| <ul> <li>at AWG cables for main contacts</li> <li>connectable conductor cross-section for main contacts</li> <li>solid</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>connectable conductor cross-section for auxiliary contacts</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>0.5 4 mm²</li> <li>connectable conductor cross-section for auxiliary contacts</li> <li>finely stranded with core end processing</li> <li>0.5 4 mm²</li> <li>finely stranded with core end processing</li> <li>0.5 2.5 mm²</li> </ul>  |   |   |
| connectable conductor cross-section for main contacts  • solid • stranded • stranded • finely stranded with core end processing  connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing  0.5 4 mm²  0.5 4 mm²  connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing  type of connectable conductor cross-sections  |   |   |
| ontacts  output stranded output stranded with core end processing output connectable conductor cross-section for auxiliary contacts output stranded output st            |   | ZX (ZU 16), ZX (18 14), ZX 1Z           |
| stranded     finely stranded with core end processing     connectable conductor cross-section for auxiliary contacts     solid or stranded     finely stranded with core end processing     type of connectable conductor cross-sections      0.5 4 mm²     0.5 4 mm²     0.5 2.5 mm²      type of connectable conductor cross-sections  | contacts  |   |
| • finely stranded with core end processing      connectable conductor cross-section for auxiliary contacts     • solid or stranded     • finely stranded with core end processing      type of connectable conductor cross-sections      0.5 2.5 mm²      0.5 2.5 mm²  |   |   |
| connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  type of connectable conductor cross-sections  0.5 4 mm²  0.5 2.5 mm²  |   |   |
| <ul> <li>◆ solid or stranded</li> <li>◆ finely stranded with core end processing</li> <li>type of connectable conductor cross-sections</li> </ul>  | connectable conductor cross-section for auxiliary |   |
| ● finely stranded with core end processing  type of connectable conductor cross-sections  0.5 2.5 mm²  |   | 0.5 4 mm <sup>2</sup>                   |
| type of connectable conductor cross-sections   |   |   |
|  |   | 0.5 2.5 IIIIIF                          |
|  | for auxiliary contacts                            |   |

| <ul><li>— solid or stranded</li></ul>                                   | 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²    |
|---|--|
| <ul> <li>finely stranded with core end processing</li> </ul>            | 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)              |
| <ul> <li>at AWG cables for auxiliary contacts</li> </ul>                | 2x (20 16), 2x (18 14), 2x 12                    |
| AWG number as coded connectable conductor cross section                 |  |
| <ul> <li>for main contacts</li> </ul>                                   | 20 12  |
| <ul> <li>for auxiliary contacts</li> </ul>                              | 20 12  |
| Safety related data   |  |
| product function  |  |
| <ul> <li>mirror contact according to IEC 60947-4-1</li> </ul>           | Yes; with 3RH29                                  |
| B10 value with high demand rate according to SN 31920                   | 1 000 000  |
| proportion of dangerous failures  |  |
| <ul> <li>with low demand rate according to SN 31920</li> </ul>          | 40 %   |
| <ul> <li>with high demand rate according to SN 31920</li> </ul>         | 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   |  |
| <ul> <li>safety-related switching OFF</li> </ul>                        | Yes  |
|   |  |

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



Confirmation



Confirmation

#### urther 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=3RT2017-1AQ01

#### Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2017-1AQ01

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

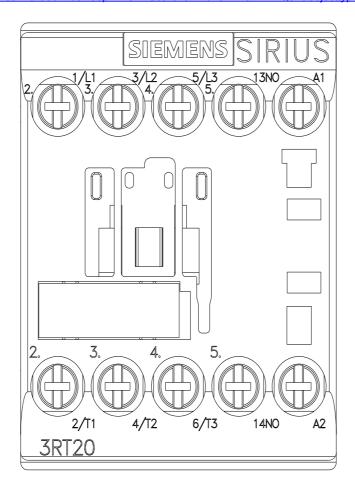
https://support.industry.siemens.com/cs/ww/en/ps/3RT2017-1AQ01

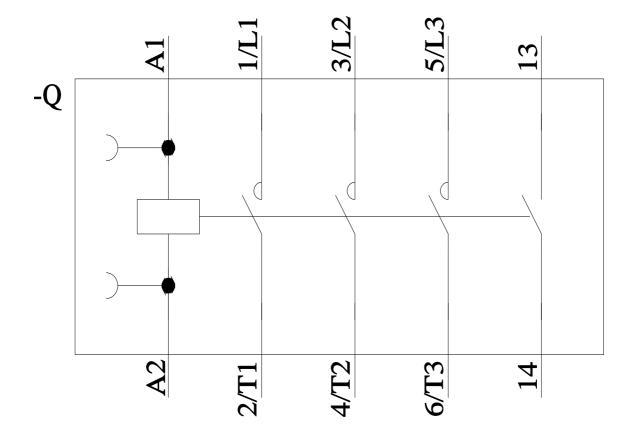
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2017-1AQ01&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RT2017-1AQ01/char

Further characteristics (e.g. electrical endurance, switching frequency)
<a href="http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2017-1AQ01&objecttype=14&gridview=view1">http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2017-1AQ01&objecttype=14&gridview=view1</a>





last modified: 6/2/2022 🖸