



power contactor, AC-3e/AC-3, 80 A, 37 kW / 400 V, 3-pole, 230 V AC, 50/60 Hz, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S3

|                                                                                                              |                             |
|--------------------------------------------------------------------------------------------------------------|-----------------------------|
| product brand name                                                                                           | SIRIUS                      |
| product designation                                                                                          | Power contactor             |
| product type designation                                                                                     | 3RT2                        |
| <b>General technical data</b>                                                                                |                             |
| size of contactor                                                                                            | S3                          |
| 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                                                                               | 15.9 W                      |
| • at AC in hot operating state per pole                                                                      | 5.3 W                       |
| • without load current share typical                                                                         | 25 W                        |
| type of calculation of power loss depending on pole                                                          | quadratic                   |
| insulation voltage                                                                                           |                             |
| • of main circuit with degree of pollution 3 rated value                                                     | 1 000 V                     |
| • of auxiliary circuit with degree of pollution 3 rated value                                                | 690 V                       |
| surge voltage resistance                                                                                     |                             |
| • of main circuit rated value                                                                                | 8 kV                        |
| • of auxiliary circuit rated value                                                                           | 6 kV                        |
| maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 | 690 V                       |
| shock resistance at rectangular impulse                                                                      |                             |
| • at AC                                                                                                      | 10.3g / 5 ms, 6. g / 10 ms  |
| shock resistance with sine pulse                                                                             |                             |
| • at AC                                                                                                      | 16.3g / 5 ms, 10. g / 10 ms |
| mechanical service life (operating 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 Prohibitation (Date)                                                                               | 03/01/2017                  |
| Weight                                                                                                       | 1.723 kg                    |
| <b>Ambient conditions</b>                                                                                    |                             |
| installation altitude at height above sea level maximum                                                      | 2 000 m                     |
| ambient temperature                                                                                          |                             |
| • during operation                                                                                           | -25 ... +60 °C              |
| • during storage                                                                                             | -55 ... +80 °C              |
| relative humidity minimum                                                                                    | 10 %                        |
| relative humidity at 55 °C according to IEC 60068-2-30 maximum                                               | 95 %                        |

| Environmental footprint                                           |                    |
|-------------------------------------------------------------------|--------------------|
| Environmental Product Declaration(EPD)                            | Yes                |
| global warming potential [CO2 eq] total                           | 405 kg             |
| global warming potential [CO2 eq] during manufacturing            | 7.66 kg            |
| global warming potential [CO2 eq] during operation                | 399 kg             |
| global warming potential [CO2 eq] after end of life               | -1.19 kg           |
| Main circuit                                                      |                    |
| number of poles for main current circuit                          | 3                  |
| number of NO contacts for main contacts                           | 3                  |
| operating voltage                                                 |                    |
| • at AC-3 rated value maximum                                     | 1 000 V            |
| • at AC-3e rated value maximum                                    | 1 000 V            |
| operational current                                               |                    |
| • at AC-1 at 400 V at ambient temperature 40 °C rated value       | 125 A              |
| • at AC-1                                                         |                    |
| — up to 690 V at ambient temperature 40 °C rated value            | 125 A              |
| — up to 690 V at ambient temperature 60 °C rated value            | 105 A              |
| • at AC-3                                                         |                    |
| — at 400 V rated value                                            | 80 A               |
| — at 500 V rated value                                            | 80 A               |
| — at 690 V rated value                                            | 58 A               |
| — at 1000 V rated value                                           | 30 A               |
| • at AC-3e                                                        |                    |
| — at 400 V rated value                                            | 80 A               |
| — at 500 V rated value                                            | 80 A               |
| — at 690 V rated value                                            | 58 A               |
| — at 1000 V rated value                                           | 30 A               |
| • at AC-4 at 400 V rated value                                    | 66 A               |
| • at AC-5a up to 690 V rated value                                | 110 A              |
| • at AC-5b up to 400 V rated value                                | 80 A               |
| • at AC-6a                                                        |                    |
| — up to 230 V for current peak value n=20 rated value             | 80 A               |
| — up to 400 V for current peak value n=20 rated value             | 80 A               |
| — up to 500 V for current peak value n=20 rated value             | 80 A               |
| — up to 690 V for current peak value n=20 rated value             | 58 A               |
| • at AC-6a                                                        |                    |
| — up to 230 V for current peak value n=30 rated value             | 54 A               |
| — up to 400 V for current peak value n=30 rated value             | 54 A               |
| — up to 500 V for current peak value n=30 rated value             | 54 A               |
| — up to 690 V for current peak value n=30 rated value             | 54 A               |
| minimum cross-section in main circuit at maximum AC-1 rated value | 50 mm <sup>2</sup> |
| operational current for approx. 200000 operating cycles at AC-4   |                    |
| • at 400 V rated value                                            | 34 A               |
| • at 690 V rated value                                            | 24 A               |
| operational current                                               |                    |
| • at 1 current path at DC-1                                       |                    |
| — at 24 V rated value                                             | 100 A              |
| — at 60 V rated value                                             | 60 A               |
| — at 110 V rated value                                            | 9 A                |
| — at 220 V rated value                                            | 2 A                |
| — at 440 V rated value                                            | 0.6 A              |
| — at 600 V rated value                                            | 0.4 A              |
| • with 2 current paths in series at DC-1                          |                    |
| — at 24 V rated value                                             | 100 A              |
| — at 60 V rated value                                             | 100 A              |
| — at 110 V rated value                                            | 100 A              |
| — at 220 V rated value                                            | 10 A               |

|                                                                         |                                                             |
|-------------------------------------------------------------------------|-------------------------------------------------------------|
| — at 440 V rated value                                                  | 1.8 A                                                       |
| — at 600 V rated value                                                  | 1 A                                                         |
| ● <b>with 3 current paths in series at DC-1</b>                         |                                                             |
| — at 24 V rated value                                                   | 100 A                                                       |
| — at 60 V rated value                                                   | 100 A                                                       |
| — at 110 V rated value                                                  | 100 A                                                       |
| — at 220 V rated value                                                  | 80 A                                                        |
| — at 440 V rated value                                                  | 4.5 A                                                       |
| — at 600 V rated value                                                  | 2.6 A                                                       |
| ● <b>at 1 current path at DC-3 at DC-5</b>                              |                                                             |
| — at 24 V rated value                                                   | 40 A                                                        |
| — at 60 V rated value                                                   | 6 A                                                         |
| — at 110 V rated value                                                  | 2.5 A                                                       |
| — at 220 V rated value                                                  | 1 A                                                         |
| — at 440 V rated value                                                  | 0.15 A                                                      |
| — at 600 V rated value                                                  | 0.06 A                                                      |
| ● <b>with 2 current paths in series at DC-3 at DC-5</b>                 |                                                             |
| — at 24 V rated value                                                   | 100 A                                                       |
| — at 60 V rated value                                                   | 100 A                                                       |
| — at 110 V rated value                                                  | 100 A                                                       |
| — at 220 V rated value                                                  | 7 A                                                         |
| — at 440 V rated value                                                  | 0.42 A                                                      |
| — at 600 V rated value                                                  | 0.16 A                                                      |
| ● <b>with 3 current paths in series at DC-3 at DC-5</b>                 |                                                             |
| — at 24 V rated value                                                   | 100 A                                                       |
| — at 60 V rated value                                                   | 100 A                                                       |
| — at 110 V rated value                                                  | 100 A                                                       |
| — at 220 V rated value                                                  | 35 A                                                        |
| — at 440 V rated value                                                  | 0.8 A                                                       |
| — at 600 V rated value                                                  | 0.35 A                                                      |
| <b>operating power</b>                                                  |                                                             |
| ● at AC-2 at 400 V rated value                                          | 37 kW                                                       |
| ● at AC-3                                                               |                                                             |
| — at 230 V rated value                                                  | 22 kW                                                       |
| — at 400 V rated value                                                  | 37 kW                                                       |
| — at 500 V rated value                                                  | 45 kW                                                       |
| — at 690 V rated value                                                  | 55 kW                                                       |
| — at 1000 V rated value                                                 | 37 kW                                                       |
| ● at AC-3e                                                              |                                                             |
| — at 230 V rated value                                                  | 22 kW                                                       |
| — at 400 V rated value                                                  | 37 kW                                                       |
| — at 500 V rated value                                                  | 45 kW                                                       |
| — at 690 V rated value                                                  | 55 kW                                                       |
| — at 1000 V rated value                                                 | 37 kW                                                       |
| <b>operating power for approx. 200000 operating cycles at AC-4</b>      |                                                             |
| ● at 400 V rated value                                                  | 17.9 kW                                                     |
| ● at 690 V rated value                                                  | 21.8 kW                                                     |
| <b>operating apparent power at AC-6a</b>                                |                                                             |
| ● up to 230 V for current peak value n=20 rated value                   | 31 kVA                                                      |
| ● up to 400 V for current peak value n=20 rated value                   | 55 kVA                                                      |
| ● up to 500 V for current peak value n=20 rated value                   | 69 kVA                                                      |
| ● up to 690 V for current peak value n=20 rated value                   | 69 kVA                                                      |
| <b>operating apparent power at AC-6a</b>                                |                                                             |
| ● up to 230 V for current peak value n=30 rated value                   | 21.5 kVA                                                    |
| ● up to 400 V for current peak value n=30 rated value                   | 37.4 kVA                                                    |
| ● up to 500 V for current peak value n=30 rated value                   | 46.7 kVA                                                    |
| ● up to 690 V for current peak value n=30 rated value                   | 64.5 kVA                                                    |
| <b>short-time withstand current in cold operating state up to 40 °C</b> |                                                             |
| ● limited to 1 s switching at zero current maximum                      | 1 500 A; Use minimum cross-section acc. to AC-1 rated value |

|                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                    |
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| <ul style="list-style-type: none"> <li>• limited to 5 s switching at zero current maximum</li> <li>• limited to 10 s switching at zero current maximum</li> <li>• limited to 30 s switching at zero current maximum</li> <li>• limited to 60 s switching at zero current maximum</li> </ul> | 1 186 A; Use minimum cross-section acc. to AC-1 rated value<br>851 A; Use minimum cross-section acc. to AC-1 rated value<br>538 A; Use minimum cross-section acc. to AC-1 rated value<br>423 A; Use minimum cross-section acc. to AC-1 rated value |
| <b>no-load switching frequency</b>                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• at AC</li> </ul>                                                                                                                                                                                                                                   | 5 000 1/h                                                                                                                                                                                                                                          |
| <b>operating frequency</b>                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• at AC-1 maximum</li> </ul>                                                                                                                                                                                                                         | 900 1/h                                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• at AC-2 maximum</li> </ul>                                                                                                                                                                                                                         | 400 1/h                                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• at AC-3 maximum</li> </ul>                                                                                                                                                                                                                         | 1 000 1/h                                                                                                                                                                                                                                          |
| <ul style="list-style-type: none"> <li>• at AC-3e maximum</li> </ul>                                                                                                                                                                                                                        | 1 000 1/h                                                                                                                                                                                                                                          |
| <ul style="list-style-type: none"> <li>• at AC-4 maximum</li> </ul>                                                                                                                                                                                                                         | 300 1/h                                                                                                                                                                                                                                            |
| <b>Control circuit/ Control</b>                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                    |
| <b>type of voltage of the control supply voltage</b>                                                                                                                                                                                                                                        | AC                                                                                                                                                                                                                                                 |
| <b>control supply voltage at AC</b>                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> </ul>                                                                                                                                                                                                                    | 230 V                                                                                                                                                                                                                                              |
| <ul style="list-style-type: none"> <li>• at 60 Hz rated value</li> </ul>                                                                                                                                                                                                                    | 230 V                                                                                                                                                                                                                                              |
| <b>operating range factor control supply voltage rated value of magnet coil at AC</b>                                                                                                                                                                                                       |                                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>                                                                                                                                                                                                                                | 0.8 ... 1.1                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>                                                                                                                                                                                                                                | 0.85 ... 1.1                                                                                                                                                                                                                                       |
| <b>apparent pick-up power of magnet coil at AC</b>                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>                                                                                                                                                                                                                                | 348 VA                                                                                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>                                                                                                                                                                                                                                | 296 VA                                                                                                                                                                                                                                             |
| <b>inductive power factor with closing power of the coil</b>                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>                                                                                                                                                                                                                                | 0.62                                                                                                                                                                                                                                               |
| <ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>                                                                                                                                                                                                                                | 0.55                                                                                                                                                                                                                                               |
| <b>apparent holding power of magnet coil at AC</b>                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>                                                                                                                                                                                                                                | 25 VA                                                                                                                                                                                                                                              |
| <ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>                                                                                                                                                                                                                                | 18 VA                                                                                                                                                                                                                                              |
| <b>inductive power factor with the holding power of the coil</b>                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>                                                                                                                                                                                                                                | 0.35                                                                                                                                                                                                                                               |
| <ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>                                                                                                                                                                                                                                | 0.41                                                                                                                                                                                                                                               |
| <b>closing delay</b>                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• at AC</li> </ul>                                                                                                                                                                                                                                   | 13 ... 50 ms                                                                                                                                                                                                                                       |
| <b>opening delay</b>                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• at AC</li> </ul>                                                                                                                                                                                                                                   | 10 ... 21 ms                                                                                                                                                                                                                                       |
| <b>arcing time</b>                                                                                                                                                                                                                                                                          | 10 ... 20 ms                                                                                                                                                                                                                                       |
| <b>control version of the switch operating mechanism</b>                                                                                                                                                                                                                                    | Standard A1 - A2                                                                                                                                                                                                                                   |
| <b>Auxiliary circuit</b>                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                    |
| number of NC contacts for auxiliary contacts instantaneous contact                                                                                                                                                                                                                          | 1                                                                                                                                                                                                                                                  |
| number of NO contacts for auxiliary contacts instantaneous contact                                                                                                                                                                                                                          | 1                                                                                                                                                                                                                                                  |
| operational current at AC-12 maximum                                                                                                                                                                                                                                                        | 10 A                                                                                                                                                                                                                                               |
| <b>operational current at AC-15</b>                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• at 230 V rated value</li> </ul>                                                                                                                                                                                                                    | 6 A                                                                                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• at 400 V rated value</li> </ul>                                                                                                                                                                                                                    | 3 A                                                                                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• at 500 V rated value</li> </ul>                                                                                                                                                                                                                    | 2 A                                                                                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• at 690 V rated value</li> </ul>                                                                                                                                                                                                                    | 1 A                                                                                                                                                                                                                                                |
| <b>operational current at DC-12</b>                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• at 24 V rated value</li> </ul>                                                                                                                                                                                                                     | 10 A                                                                                                                                                                                                                                               |
| <ul style="list-style-type: none"> <li>• at 48 V rated value</li> </ul>                                                                                                                                                                                                                     | 6 A                                                                                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• at 60 V rated value</li> </ul>                                                                                                                                                                                                                     | 6 A                                                                                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• at 110 V rated value</li> </ul>                                                                                                                                                                                                                    | 3 A                                                                                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• at 125 V rated value</li> </ul>                                                                                                                                                                                                                    | 2 A                                                                                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• at 220 V rated value</li> </ul>                                                                                                                                                                                                                    | 1 A                                                                                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>                                                                                                                                                                                                                    | 0.15 A                                                                                                                                                                                                                                             |
| <b>operational current at DC-13</b>                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>• at 24 V rated value</li> </ul>                                                                                                                                                                                                                     | 10 A                                                                                                                                                                                                                                               |
| <ul style="list-style-type: none"> <li>• at 48 V rated value</li> </ul>                                                                                                                                                                                                                     | 2 A                                                                                                                                                                                                                                                |

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| <ul style="list-style-type: none"> <li>• at 60 V rated value</li> <li>• at 110 V rated value</li> <li>• at 125 V rated value</li> <li>• at 220 V rated value</li> <li>• at 600 V rated value</li> </ul>                                                                                                                                                                                                                                                                                                                       | 2 A<br>1 A<br>0.9 A<br>0.3 A<br>0.1 A                                                                                                |
| <b>contact reliability of auxiliary contacts</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1 faulty switching per 100 million (17 V, 1 mA)                                                                                      |
| <b>UL/CSA ratings</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                      |
| <b>full-load current (FLA) for 3-phase AC motor</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• at 480 V rated value</li> <li>• at 600 V rated value</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                      | 77 A<br>62 A                                                                                                                         |
| <b>yielded mechanical performance [hp]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• for single-phase AC motor <ul style="list-style-type: none"> <li>— at 110/120 V rated value</li> <li>— at 230 V rated value</li> </ul> </li> <li>• for 3-phase AC motor <ul style="list-style-type: none"> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> <li>— at 460/480 V rated value</li> <li>— at 575/600 V rated value</li> </ul> </li> </ul>                                                                                                         | 7.5 hp<br>15 hp<br><br>25 hp<br>30 hp<br>60 hp<br>60 hp                                                                              |
| <b>contact rating of auxiliary contacts according to UL</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | A600 / P600                                                                                                                          |
| <b>Short-circuit protection</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                      |
| design of the miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V                                                                                                                                                                                                                                                                                                                                                                                                                     | C characteristic: 10 A; 0.4 kA                                                                                                       |
| <b>design of the fuse link</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• for short-circuit protection of the main circuit <ul style="list-style-type: none"> <li>— with type of coordination 1 required</li> </ul> </li> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>                                                                                                                                                                                                                                                       | gG: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, 80 kA)<br>gG: 10 A (500 V, 1 kA)                           |
| <b>Installation/ mounting/ dimensions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                      |
| <b>mounting position</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface |
| fastening method side-by-side mounting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Yes                                                                                                                                  |
| <b>fastening method</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715                                                             |
| <b>height</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 140 mm                                                                                                                               |
| <b>width</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 70 mm                                                                                                                                |
| <b>depth</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 152 mm                                                                                                                               |
| <b>required spacing</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— upwards</li> <li>— at the side</li> <li>— downwards</li> </ul> </li> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul> | 20 mm<br>10 mm<br>10 mm<br>0 mm<br><br>20 mm<br>10 mm<br>10 mm<br>10 mm<br><br>20 mm<br>10 mm<br>10 mm<br>10 mm                      |
| <b>Connections/ Terminals</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                      |
| <b>type of electrical connection</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control circuit</li> <li>• at contactor for auxiliary contacts</li> <li>• of magnet coil</li> </ul>                                                                                                                                                                                                                                                                                                                            | screw-type terminals<br>screw-type terminals<br>Screw-type terminals<br>Screw-type terminals                                         |
| <b>type of connectable conductor cross-sections</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                           | 2x (2.5 ... 35 mm²), 1x (2.5 ... 50 mm²)                                                                                             |

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|-------------------------------------------------------------------|-----------------------------------------------------------------------|
| • for AWG cables for main contacts                                | 2x (10 ... 1/0), 1x (10 ... 2)                                        |
| <b>connectable conductor cross-section for main contacts</b>      |                                                                       |
| • solid                                                           | 2.5 ... 16 mm <sup>2</sup>                                            |
| • stranded                                                        | 6 ... 70 mm <sup>2</sup>                                              |
| • finely stranded with core end processing                        | 2.5 ... 50 mm <sup>2</sup>                                            |
| <b>connectable conductor cross-section for auxiliary contacts</b> |                                                                       |
| • solid or stranded                                               | 0.5 ... 2.5 mm <sup>2</sup>                                           |
| • finely stranded with core end processing                        | 0.5 ... 2.5 mm <sup>2</sup>                                           |
| <b>type of connectable conductor cross-sections</b>               |                                                                       |
| • for auxiliary contacts                                          |                                                                       |
| — solid or stranded                                               | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) |
| — finely stranded with core end processing                        | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) |
| • for AWG cables for auxiliary contacts                           | 2x (20 ... 16), 2x (18 ... 14)                                        |
| <b>AWG number as coded connectable conductor cross section</b>    |                                                                       |
| • for main contacts                                               | 10 ... 2                                                              |
| • for auxiliary contacts                                          | 20 ... 14                                                             |

#### Safety related data

|                                                                      |                                                  |
|----------------------------------------------------------------------|--------------------------------------------------|
| <b>product function</b>                                              |                                                  |
| • mirror contact according to IEC 60947-4-1                          | Yes                                              |
| • positively driven operation according to IEC 60947-5-1             | No                                               |
| • suitable for safety function                                       | Yes                                              |
| suitability for use safety-related switching OFF                     | Yes                                              |
| <b>service life maximum</b>                                          | 20 a                                             |
| <b>test wear-related service life necessary</b>                      | Yes                                              |
| <b>proportion of dangerous failures</b>                              |                                                  |
| • with low demand rate according to SN 31920                         | 40 %                                             |
| • with high demand rate according to SN 31920                        | 73 %                                             |
| <b>B10 value with high demand rate according to SN 31920</b>         | 1 000 000                                        |
| <b>failure rate [FIT] with low demand rate according to SN 31920</b> | 100 FIT                                          |
| ISO 13849                                                            |                                                  |
| <b>device type according to ISO 13849-1</b>                          | 3                                                |
| <b>overdimensioning according to ISO 13849-2 necessary</b>           | Yes                                              |
| IEC 61508                                                            |                                                  |
| <b>safety device type according to IEC 61508-2</b>                   | Type A                                           |
| Electrical Safety                                                    |                                                  |
| <b>protection class IP on the front according to IEC 60529</b>       | IP20                                             |
| <b>touch protection on the front according to IEC 60529</b>          | finger-safe, for vertical contact from the front |

#### Approvals Certificates

|                          |
|--------------------------|
| General Product Approval |
|--------------------------|



[KC](#)



| EMV | Test Certificates                                  | Marine / Shipping |
|-----|----------------------------------------------------|-------------------|
|     | <a href="#">Type Test Certificates/Test Report</a> |                   |
|     | <a href="#">Special Test Certificate</a>           |                   |
|     |                                                    |                   |

| Marine / Shipping | other | Railway | Dangerous goods                          |
|-------------------|-------|---------|------------------------------------------|
|                   |       |         | <a href="#">Confirmation</a>             |
|                   |       |         | <a href="#">Special Test Certificate</a> |
|                   |       |         | <a href="#">Transport Information</a>    |



## Further information

## Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

## 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=3RT2045-1AL20>

## Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2045-1AL20>

## Service&amp;Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2045-1AL20>

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

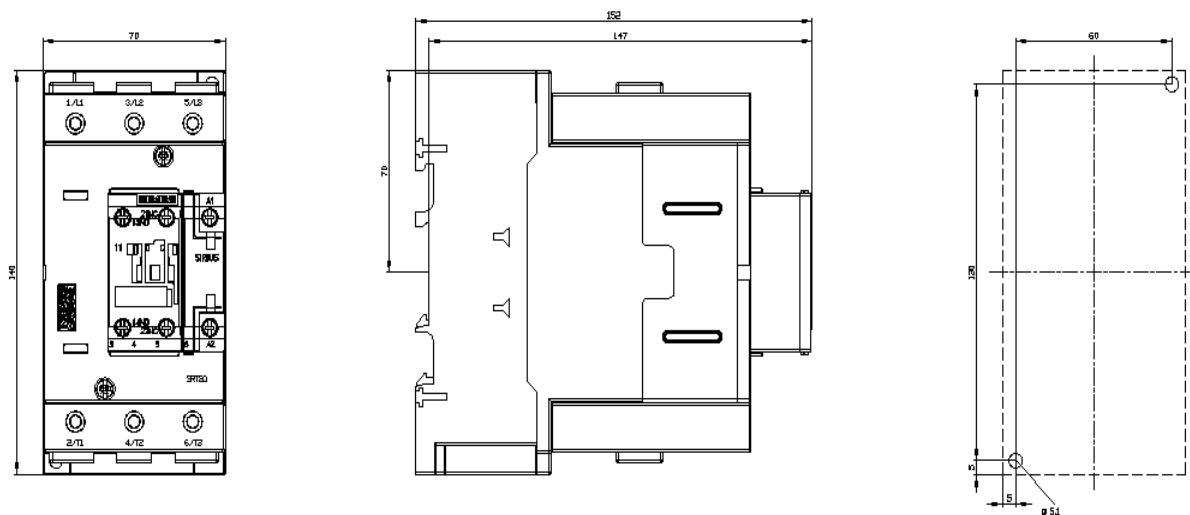
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2045-1AL20&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2045-1AL20&lang=en)

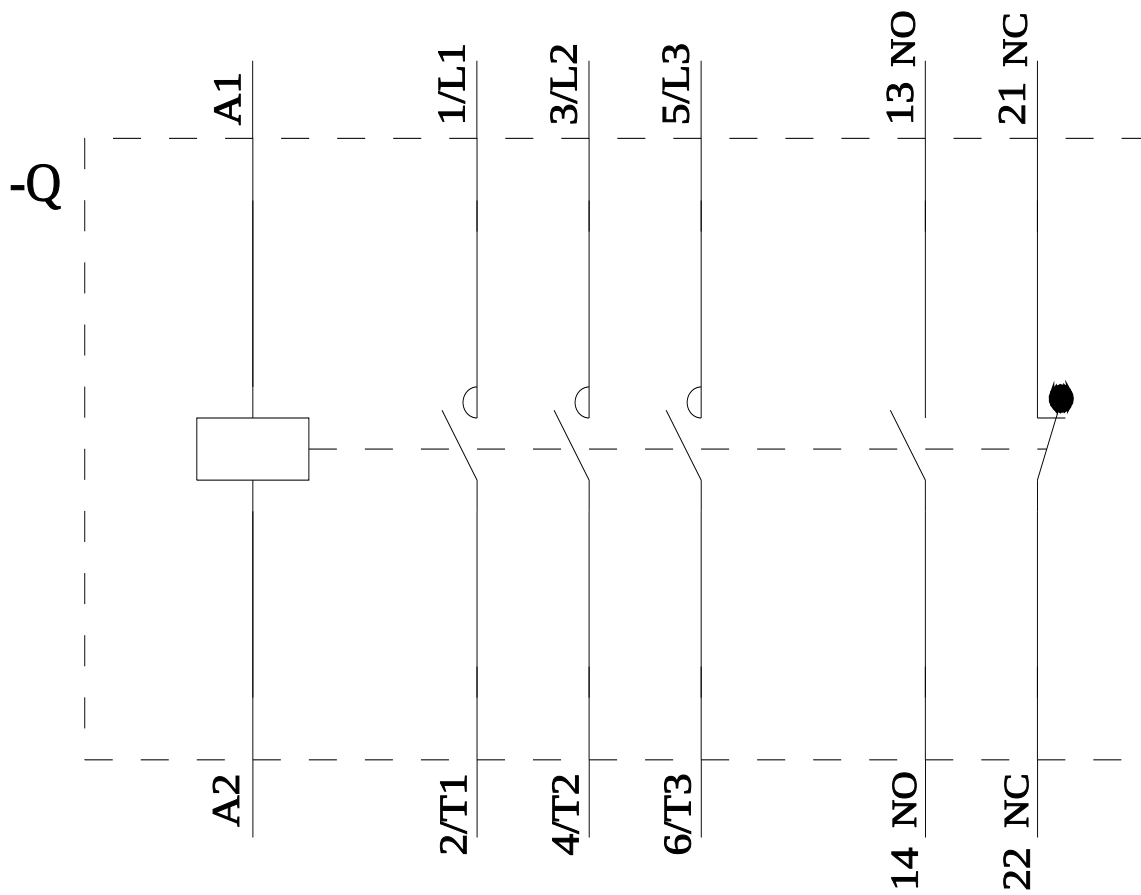
Characteristic: Tripping characteristics,  $I^2t$ , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2045-1AL20/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2045-1AL20&objecttype=14&gridview=view1>





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