



power contactor, AC-3e/AC-3, 80 A, 37 kW / 400 V, 3-pole, 42 V AC, 50/60 Hz, auxiliary contacts: 2 NO + 2 NC, screw terminal, size: S3, removable auxiliary switch

|                                                                                                              |                               |
|--------------------------------------------------------------------------------------------------------------|-------------------------------|
| 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 current-dependent                                                          | 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                                                                                                      | 10.3 g / 5 ms, 6.7 g / 10 ms  |
| shock resistance with sine pulse                                                                             |                               |
| • at AC                                                                                                      | 16.3 g / 5 ms, 10.5 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 Prohibitance (day/month/year)                                                                      | 03/01/2017                    |
| Net Weight                                                                                                   | 1.675 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                                                       | 95 %                          |

|                                                                   |                    |
|-------------------------------------------------------------------|--------------------|
| maximum                                                           |                    |
| <b>Main circuit</b>                                               |                    |
| number of poles for main current circuit                          | 3                  |
| number of NO contacts for main contacts                           | 3                  |
| number of NC contacts for main contacts                           | 0                  |
| 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                |

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>● <b>with 3 current paths in series at DC-1</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> <li>● <b>at 1 current path at DC-3 at DC-5</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> <li>● <b>with 2 current paths in series at DC-3 at DC-5</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> <li>● <b>with 3 current paths in series at DC-3 at DC-5</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> </ul> | 100 A                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 100 A                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 100 A                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 80 A                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 4.5 A                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2.6 A                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 40 A                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 6 A                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2.5 A                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1 A                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.15 A                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.06 A                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 100 A                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 100 A                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 100 A                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 7 A                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.42 A                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.16 A                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 100 A                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 100 A                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 100 A                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 35 A                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.8 A                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 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 |

|                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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</li> <li>— 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>                                                                                                                                                                                                                    | 42 V                                                                                                                                                                                                                                               |
| <ul style="list-style-type: none"> <li>• at 60 Hz rated value</li> </ul>                                                                                                                                                                                                                    | 42 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 V·A                                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>                                                                                                                                                                                                                                | 296 V·A                                                                                                                                                                                                                                            |
| <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 V·A                                                                                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>                                                                                                                                                                                                                                | 18 V·A                                                                                                                                                                                                                                             |
| <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                                                                                                                                                                                                                          | 2                                                                                                                                                                                                                                                  |
| number of NO contacts for auxiliary contacts instantaneous contact                                                                                                                                                                                                                          | 2                                                                                                                                                                                                                                                  |
| 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> <li>• at 48 V rated value</li> <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>                                                                                                                                                                                                                                                         | 6 A<br>2 A<br>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> <li>— with type of coordination 2 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: 160 A (690 V, 100 kA), aM: 80 A (690 V, 100 kA), BS88: 125 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 195 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> </ul>                                                                                                                                                                                                                                                                                                                                                                                                     | screw-type terminals<br>screw-type terminals                                                                                                                                                  |

|                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at contactor for auxiliary contacts</li> <li>• of magnet coil</li> </ul>                                                                                                                                                                                          | Screw-type terminals<br>screw terminal                                                                                                                                           |
| <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> <li>• for AWG cables for main contacts</li> </ul>                                        | 2x (2.5 ... 35 mm <sup>2</sup> ), 1x (2.5 ... 50 mm <sup>2</sup> )<br>2x (10 ... 1/0), 1x (10 ... 2/0)                                                                           |
| <b>connectable conductor cross-section for main contacts</b> <ul style="list-style-type: none"> <li>• solid</li> <li>• stranded</li> <li>• finely stranded with core end processing</li> </ul>                                                                                                             | 2.5 ... 16 mm <sup>2</sup><br>6 ... 70 mm <sup>2</sup><br>2.5 ... 50 mm <sup>2</sup>                                                                                             |
| <b>connectable conductor cross-section for auxiliary contacts</b> <ul style="list-style-type: none"> <li>• solid or stranded</li> <li>• finely stranded with core end processing</li> </ul>                                                                                                                | 0.5 ... 2.5 mm <sup>2</sup><br>0.5 ... 2.5 mm <sup>2</sup>                                                                                                                       |
| <b>type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• for AWG cables for auxiliary contacts</li> </ul> | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )<br>2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )<br>2x (20 ... 16), 2x (18 ... 14) |
| <b>AWG number extended as coded connectable conductor cross section for main contacts</b>                                                                                                                                                                                                                  | 10 ... 2/0                                                                                                                                                                       |
| <b>AWG number as coded connectable conductor cross section for auxiliary contacts</b>                                                                                                                                                                                                                      | 20 ... 14                                                                                                                                                                        |

#### Safety related data

|                                                                                                                                                                                                         |                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| <b>product function</b>                                                                                                                                                                                 |                                                  |
| <ul style="list-style-type: none"> <li>• mirror contact according to IEC 60947-4-1</li> <li>• positively driven operation according to IEC 60947-5-1</li> <li>• suitable for safety function</li> </ul> | Yes<br>No<br>Yes                                 |
| <b>suitability for use safety-related switching OFF</b>                                                                                                                                                 | Yes                                              |
| <b>service life maximum</b>                                                                                                                                                                             | 20 a                                             |
| <b>test wear-related service life necessary</b>                                                                                                                                                         | Yes                                              |
| <b>proportion of dangerous failures</b>                                                                                                                                                                 |                                                  |
| <ul style="list-style-type: none"> <li>• with low demand rate according to SN 31920</li> <li>• with high demand rate according to SN 31920</li> </ul>                                                   | 40 %<br>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                                          |
| <b>ISO 13849</b>                                                                                                                                                                                        |                                                  |
| <b>device type according to ISO 13849-1</b>                                                                                                                                                             | 3                                                |
| <b>overdimensioning according to ISO 13849-2 necessary</b>                                                                                                                                              | Yes                                              |
| <b>IEC 61508</b>                                                                                                                                                                                        |                                                  |
| <b>safety device type according to IEC 61508-2</b>                                                                                                                                                      | Type A                                           |
| <b>Electrical Safety</b>                                                                                                                                                                                |                                                  |
| <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

|                                                                                                                                                                                                                                                                                                    |                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| <b>Environmental Product Declaration</b>                                                                                                                                                                                                                                                           |                                         |
| <ul style="list-style-type: none"> <li>• global warming potential [CO2 eq] / during manufacturing</li> <li>• global warming potential [CO2 eq] / during operation</li> <li>• global warming potential [CO2 eq] / after end of life</li> <li>• global warming potential [CO2 eq] / total</li> </ul> | 7.66 kg<br>399 kg<br>-1.19 kg<br>405 kg |
| <b>Environment</b>                                                                                                                                                                                                                                                                                 | <b>General Product Approval</b>         |

[Environmental Conformations](#)



|                          |     |                   |                      |
|--------------------------|-----|-------------------|----------------------|
| General Product Approval | EMV | Test Certificates | Maritime application |
|--------------------------|-----|-------------------|----------------------|



[Special Test Certificate](#)



#### Maritime application



[Miscellaneous](#)

[Confirmation](#)

#### other

#### Railway

#### Dangerous goods



[Special Test Certificate](#)

[Transport Information](#)

#### Further information

##### Information on the packaging

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

##### Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

##### 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=3RT2045-1AD24>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2045-1AD24>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2045-1AD24&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2045-1AD24&lang=en)

##### Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2045-1AD24>

##### Kennlinien

<https://curves.simaris.siemens.com/curves/3RT2045-1AD24>



