



power contactor, AC-3e/AC-3, 12 A, 5.5 kW / 400 V, 3-pole, 230 V AC, 50/60 Hz, auxiliary contacts: 1 NO + 1 NC, spring-loaded terminal, size: S0

|                                                                                                              |                            |
|--------------------------------------------------------------------------------------------------------------|----------------------------|
| product brand name                                                                                           | SIRIUS                     |
| product designation                                                                                          | Power contactor            |
| product type designation                                                                                     | 3RT2                       |
| General technical data                                                                                       |                            |
| size of contactor                                                                                            | S0                         |
| product extension                                                                                            |                            |
| • function module for communication                                                                          | No                         |
| • auxiliary switch                                                                                           | Yes                        |
| power loss [W] for rated value of the current                                                                |                            |
| • at AC in hot operating state                                                                               | 0.9 W                      |
| • at AC in hot operating state per pole                                                                      | 0.3 W                      |
| • without load current share typical                                                                         | 2 W                        |
| type of calculation of power loss depending on pole                                                          | quadratic                  |
| insulation voltage                                                                                           |                            |
| • of main circuit with degree of pollution 3 rated value                                                     | 690 V                      |
| • of auxiliary circuit with degree of pollution 3 rated value                                                | 690 V                      |
| surge voltage resistance                                                                                     |                            |
| • of main circuit rated value                                                                                | 6 kV                       |
| • of auxiliary circuit rated value                                                                           | 6 kV                       |
| maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 | 400 V                      |
| shock resistance at rectangular impulse                                                                      |                            |
| • at AC                                                                                                      | 7,5g / 5 ms, 4,7g / 10 ms  |
| shock resistance with sine pulse                                                                             |                            |
| • at AC                                                                                                      | 11,8g / 5 ms, 7,4g / 10 ms |
| mechanical service life (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 (Date)                                                                                |                            |
| Weight                                                                                                       | 0.444 kg                   |
| Ambient conditions                                                                                           |                            |
| installation altitude at height above sea level maximum                                                      | 2 000 m                    |
| ambient temperature                                                                                          |                            |
| • during operation                                                                                           | -25 ... +60 °C             |
| • during storage                                                                                             | -55 ... +80 °C             |
| relative humidity minimum                                                                                    | 10 %                       |
| relative humidity at 55 °C according to IEC 60068-2-30 maximum                                               | 95 %                       |

| Environmental footprint                                           |                    |
|-------------------------------------------------------------------|--------------------|
| Environmental Product Declaration(EPD)                            | Yes                |
| Global Warming Potential [CO2 eq] total                           | 74.2 kg            |
| Global Warming Potential [CO2 eq] during manufacturing            | 1.9 kg             |
| Global Warming Potential [CO2 eq] during operation                | 72.4 kg            |
| Global Warming Potential [CO2 eq] after end of life               | -0.117 kg          |
| Main circuit                                                      |                    |
| number of poles for main current circuit                          | 3                  |
| number of NO contacts for main contacts                           | 3                  |
| operating voltage                                                 |                    |
| • at AC-3 rated value maximum                                     | 690 V              |
| • at AC-3e rated value maximum                                    | 690 V              |
| operational current                                               |                    |
| • at AC-1 at 400 V at ambient temperature 40 °C rated value       | 40 A               |
| • at AC-1                                                         |                    |
| — up to 690 V at ambient temperature 40 °C rated value            | 40 A               |
| — up to 690 V at ambient temperature 60 °C rated value            | 35 A               |
| • at AC-3                                                         |                    |
| — at 400 V rated value                                            | 12 A               |
| — at 500 V rated value                                            | 12 A               |
| — at 690 V rated value                                            | 9 A                |
| • at AC-3e                                                        |                    |
| — at 400 V rated value                                            | 12 A               |
| — at 500 V rated value                                            | 12 A               |
| — at 690 V rated value                                            | 9 A                |
| • at AC-4 at 400 V rated value                                    | 12.5 A             |
| • at AC-5a up to 690 V rated value                                | 35.2 A             |
| • at AC-5b up to 400 V rated value                                | 9.9 A              |
| • at AC-6a                                                        |                    |
| — up to 230 V for current peak value n=20 rated value             | 11.4 A             |
| — up to 400 V for current peak value n=20 rated value             | 11.4 A             |
| — up to 500 V for current peak value n=20 rated value             | 11.3 A             |
| — up to 690 V for current peak value n=20 rated value             | 9 A                |
| • at AC-6a                                                        |                    |
| — up to 230 V for current peak value n=30 rated value             | 7.6 A              |
| — up to 400 V for current peak value n=30 rated value             | 7.6 A              |
| — up to 500 V for current peak value n=30 rated value             | 7.6 A              |
| — up to 690 V for current peak value n=30 rated value             | 7.6 A              |
| minimum cross-section in main circuit at maximum AC-1 rated value | 10 mm <sup>2</sup> |
| operational current for approx. 200000 operating cycles at AC-4   |                    |
| • at 400 V rated value                                            | 5.5 A              |
| • at 690 V rated value                                            | 5.5 A              |
| operational current                                               |                    |
| • at 1 current path at DC-1                                       |                    |
| — at 24 V rated value                                             | 35 A               |
| — at 60 V rated value                                             | 20 A               |
| — at 110 V rated value                                            | 4.5 A              |
| — at 220 V rated value                                            | 1 A                |
| — at 440 V rated value                                            | 0.4 A              |
| — at 600 V rated value                                            | 0.25 A             |
| • with 2 current paths in series at DC-1                          |                    |
| — at 24 V rated value                                             | 35 A               |
| — at 60 V rated value                                             | 35 A               |
| — at 110 V rated value                                            | 35 A               |
| — at 220 V rated value                                            | 5 A                |
| — at 440 V rated value                                            | 1 A                |
| — at 600 V rated value                                            | 0.8 A              |

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• with 3 current paths in series at DC-1 <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>• at 1 current path at DC-3 at DC-5 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 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>• with 2 current paths in series at DC-3 at DC-5 <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>• with 3 current paths in series at DC-3 at DC-5 <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> | 35 A                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 35 A                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 35 A                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 35 A                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2.9 A                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1.4 A                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 20 A                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5 A                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1 A                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.09 A                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.06 A                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 35 A                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 35 A                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 15 A                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3 A                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.27 A                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.16 A                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 35 A                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 35 A                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 35 A                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 10 A                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.6 A                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.6 A                                                     |
| operating power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                           |
| • at AC-3 <ul style="list-style-type: none"> <li>— at 230 V rated value</li> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3 kW                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5.5 kW                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5.5 kW                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 7.5 kW                                                    |
| • at AC-3e <ul style="list-style-type: none"> <li>— at 230 V rated value</li> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 3 kW                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5.5 kW                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5.5 kW                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 7.5 kW                                                    |
| operating power for approx. 200000 operating cycles at AC-4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                           |
| • at 400 V rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 2.6 kW                                                    |
| • at 690 V rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 4.6 kW                                                    |
| operating apparent power at AC-6a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                           |
| • up to 230 V for current peak value n=20 rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 4.5 kVA                                                   |
| • up to 400 V for current peak value n=20 rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 7.8 kVA                                                   |
| • up to 500 V for current peak value n=20 rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 9.8 kVA                                                   |
| • up to 690 V for current peak value n=20 rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10.7 kVA                                                  |
| operating apparent power at AC-6a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                           |
| • up to 230 V for current peak value n=30 rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 3 kVA                                                     |
| • up to 400 V for current peak value n=30 rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5.2 kVA                                                   |
| • up to 500 V for current peak value n=30 rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 6.5 kVA                                                   |
| • up to 690 V for current peak value n=30 rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 9 kVA                                                     |
| short-time withstand current in cold operating state up to 40 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                           |
| • limited to 1 s switching at zero current maximum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 210 A; Use minimum cross-section acc. to AC-1 rated value |
| • limited to 5 s switching at zero current maximum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 210 A; Use minimum cross-section acc. to AC-1 rated value |
| • limited to 10 s switching at zero current maximum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 170 A; Use minimum cross-section acc. to AC-1 rated value |
| • limited to 30 s switching at zero current maximum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 126 A; Use minimum cross-section acc. to AC-1 rated value |
| • limited to 60 s switching at zero current maximum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 105 A; Use minimum cross-section acc. to AC-1 rated value |
| no-load switching frequency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                           |
| • at AC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 5 000 1/h                                                 |

|                                                                                       |                                                 |
|---------------------------------------------------------------------------------------|-------------------------------------------------|
| <b>operating frequency</b>                                                            |                                                 |
| • at AC-1 maximum                                                                     | 1 000 1/h                                       |
| • at AC-2 maximum                                                                     | 1 000 1/h                                       |
| • at AC-3 maximum                                                                     | 1 000 1/h                                       |
| • at AC-3e maximum                                                                    | 1 000 1/h                                       |
| • at AC-4 maximum                                                                     | 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>                                                   |                                                 |
| • at 50 Hz rated value                                                                | 230 V                                           |
| • at 60 Hz rated value                                                                | 230 V                                           |
| <b>operating range factor control supply voltage rated value of magnet coil at AC</b> |                                                 |
| • at 50 Hz                                                                            | 0.8 ... 1.1                                     |
| • at 60 Hz                                                                            | 0.85 ... 1.1                                    |
| <b>apparent pick-up power of magnet coil at AC</b>                                    |                                                 |
| • at 50 Hz                                                                            | 68 VA                                           |
| • at 60 Hz                                                                            | 67 VA                                           |
| <b>inductive power factor with closing power of the coil</b>                          |                                                 |
| • at 50 Hz                                                                            | 0.72                                            |
| • at 60 Hz                                                                            | 0.74                                            |
| <b>apparent holding power of magnet coil at AC</b>                                    |                                                 |
| • at 50 Hz                                                                            | 7.9 VA                                          |
| • at 60 Hz                                                                            | 6.5 VA                                          |
| <b>inductive power factor with the holding power of the coil</b>                      |                                                 |
| • at 50 Hz                                                                            | 0.25                                            |
| • at 60 Hz                                                                            | 0.28                                            |
| <b>closing delay</b>                                                                  |                                                 |
| • at AC                                                                               | 8 ... 40 ms                                     |
| <b>opening delay</b>                                                                  |                                                 |
| • at AC                                                                               | 4 ... 16 ms                                     |
| <b>arcing time</b>                                                                    | 10 ... 10 ms                                    |
| <b>control version of the switch operating mechanism</b>                              | Standard A1 - A2                                |
| <b>Auxiliary circuit</b>                                                              |                                                 |
| number of NC contacts for auxiliary contacts instantaneous contact                    | 1                                               |
| number of NO contacts for auxiliary contacts instantaneous contact                    | 1                                               |
| operational current at AC-12 maximum                                                  | 10 A                                            |
| <b>operational current at AC-15</b>                                                   |                                                 |
| • at 230 V rated value                                                                | 10 A                                            |
| • at 400 V rated value                                                                | 3 A                                             |
| • at 500 V rated value                                                                | 2 A                                             |
| • at 690 V rated value                                                                | 1 A                                             |
| <b>operational current at DC-12</b>                                                   |                                                 |
| • at 24 V rated value                                                                 | 10 A                                            |
| • at 48 V rated value                                                                 | 6 A                                             |
| • at 60 V rated value                                                                 | 6 A                                             |
| • at 110 V rated value                                                                | 3 A                                             |
| • at 125 V rated value                                                                | 2 A                                             |
| • at 220 V rated value                                                                | 1 A                                             |
| • at 600 V rated value                                                                | 0.15 A                                          |
| <b>operational current at DC-13</b>                                                   |                                                 |
| • at 24 V rated value                                                                 | 10 A                                            |
| • at 48 V rated value                                                                 | 2 A                                             |
| • at 60 V rated value                                                                 | 2 A                                             |
| • at 110 V rated value                                                                | 1 A                                             |
| • at 125 V rated value                                                                | 0.9 A                                           |
| • at 220 V rated value                                                                | 0.3 A                                           |
| • at 600 V rated value                                                                | 0.1 A                                           |
| <b>contact reliability of auxiliary contacts</b>                                      | 1 faulty switching per 100 million (17 V, 1 mA) |

| UL/CSA ratings                                                  |                                                                                                                                      |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>full-load current (FLA) for 3-phase AC motor</b>             |                                                                                                                                      |
| • at 480 V rated value                                          | 11 A                                                                                                                                 |
| • at 600 V rated value                                          | 11 A                                                                                                                                 |
| <b>yielded mechanical performance [hp]</b>                      |                                                                                                                                      |
| • for single-phase AC motor                                     |                                                                                                                                      |
| — at 110/120 V rated value                                      | 1 hp                                                                                                                                 |
| — at 230 V rated value                                          | 2 hp                                                                                                                                 |
| • for 3-phase AC motor                                          |                                                                                                                                      |
| — at 200/208 V rated value                                      | 3 hp                                                                                                                                 |
| — at 220/230 V rated value                                      | 3 hp                                                                                                                                 |
| — at 460/480 V rated value                                      | 7.5 hp                                                                                                                               |
| — at 575/600 V rated value                                      | 10 hp                                                                                                                                |
| <b>contact rating of auxiliary contacts according to UL</b>     | A600 / P600                                                                                                                          |
| Short-circuit protection                                        |                                                                                                                                      |
| <b>design of the fuse link</b>                                  |                                                                                                                                      |
| • for short-circuit protection of the main circuit              |                                                                                                                                      |
| — with type of coordination 1 required                          | gG: 63A (690V,100kA), aM: 32A (690V,100kA), BS88: 63A (415V,80kA)                                                                    |
| — with type of assignment 2 required                            | gG: 25A (690V,100kA), aM: 20A (690V,100kA), BS88: 25A (415V,80kA)                                                                    |
| • for short-circuit protection of the auxiliary switch required | gG: 10 A (500 V, 1 kA)                                                                                                               |
| Installation/ mounting/ dimensions                              |                                                                                                                                      |
| <b>mounting position</b>                                        | +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface |
| <b>fastening method</b>                                         | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715                                                             |
| <b>height</b>                                                   | 102 mm                                                                                                                               |
| <b>width</b>                                                    | 45 mm                                                                                                                                |
| <b>depth</b>                                                    | 97 mm                                                                                                                                |
| <b>required spacing</b>                                         |                                                                                                                                      |
| • with side-by-side mounting                                    |                                                                                                                                      |
| — forwards                                                      | 10 mm                                                                                                                                |
| — upwards                                                       | 10 mm                                                                                                                                |
| — downwards                                                     | 10 mm                                                                                                                                |
| — at the side                                                   | 0 mm                                                                                                                                 |
| • for grounded parts                                            |                                                                                                                                      |
| — forwards                                                      | 10 mm                                                                                                                                |
| — upwards                                                       | 10 mm                                                                                                                                |
| — at the side                                                   | 6 mm                                                                                                                                 |
| — downwards                                                     | 10 mm                                                                                                                                |
| • for live parts                                                |                                                                                                                                      |
| — forwards                                                      | 10 mm                                                                                                                                |
| — upwards                                                       | 10 mm                                                                                                                                |
| — downwards                                                     | 10 mm                                                                                                                                |
| — at the side                                                   | 6 mm                                                                                                                                 |
| Connections/ Terminals                                          |                                                                                                                                      |
| <b>type of electrical connection</b>                            |                                                                                                                                      |
| • for main current circuit                                      | spring-loaded terminals                                                                                                              |
| • for auxiliary and control circuit                             | spring-loaded terminals                                                                                                              |
| • at contactor for auxiliary contacts                           | Spring-type terminals                                                                                                                |
| • of magnet coil                                                | Spring-type terminals                                                                                                                |
| <b>type of connectable conductor cross-sections</b>             |                                                                                                                                      |
| • for main contacts                                             |                                                                                                                                      |
| — solid                                                         | 2x (1 ... 10 mm²)                                                                                                                    |
| — solid or stranded                                             | 2x (1 ... 10 mm²)                                                                                                                    |
| — finely stranded with core end processing                      | 2x (1 ... 6 mm²)                                                                                                                     |
| — finely stranded without core end processing                   | 2x (1 ... 6 mm²)                                                                                                                     |
| • for AWG cables for main contacts                              | 2x (18 ... 8)                                                                                                                        |
| <b>connectable conductor cross-section for main contacts</b>    |                                                                                                                                      |
| • solid                                                         | 1 ... 10 mm²                                                                                                                         |
| • stranded                                                      | 1 ... 10 mm²                                                                                                                         |
| • finely stranded with core end processing                      | 1 ... 6 mm²                                                                                                                          |
| • finely stranded without core end processing                   | 1 ... 6 mm²                                                                                                                          |

|                                                                   |                                   |
|-------------------------------------------------------------------|-----------------------------------|
| <b>connectable conductor cross-section for auxiliary contacts</b> |                                   |
| • solid or stranded                                               | 0.5 ... 2.5 mm <sup>2</sup>       |
| • finely stranded with core end processing                        | 0.5 ... 1.5 mm <sup>2</sup>       |
| • finely stranded without core end processing                     | 0.5 ... 2.5 mm <sup>2</sup>       |
| <b>type of connectable conductor cross-sections</b>               |                                   |
| • for auxiliary contacts                                          |                                   |
| — solid or stranded                                               | 2x (0.5 ... 2.5 mm <sup>2</sup> ) |
| — finely stranded with core end processing                        | 2x (0.5 ... 1.5 mm <sup>2</sup> ) |
| — finely stranded without core end processing                     | 2x (0.5 ... 2.5 mm <sup>2</sup> ) |
| • for AWG cables for auxiliary contacts                           | 2x (20 ... 14)                    |
| <b>AWG number as coded connectable conductor cross section</b>    |                                   |
| • for main contacts                                               | 18 ... 8                          |
| • for auxiliary contacts                                          | 20 ... 14                         |

#### Safety related data

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

#### Approvals Certificates

##### General Product Approval

[Confirmation](#)



[KC](#)

| General Product Approval | EMV | Functional Safety | Test Certificates | Marine / Shipping |
|--------------------------|-----|-------------------|-------------------|-------------------|
|--------------------------|-----|-------------------|-------------------|-------------------|



[Type Examination Certificate](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



| Marine / Shipping | other |
|-------------------|-------|
|-------------------|-------|



[Miscellaneous](#)

| other | Railway | Environment |
|-------|---------|-------------|
|-------|---------|-------------|

#### Further information

**Information on the packaging**

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

**Information- and Downloadcenter (Catalogs, Brochures,...)**

<https://www.siemens.com/ic10>

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2024-2AL20>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2024-2AL20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2024-2AL20>

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

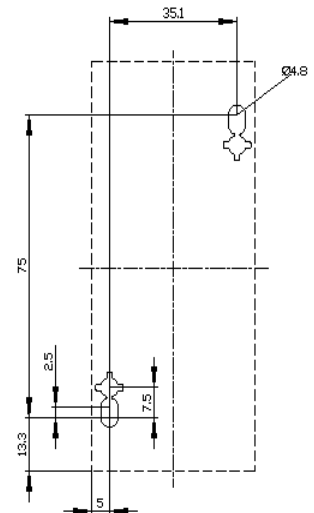
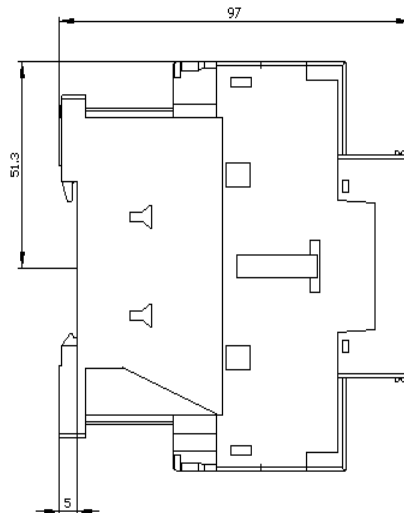
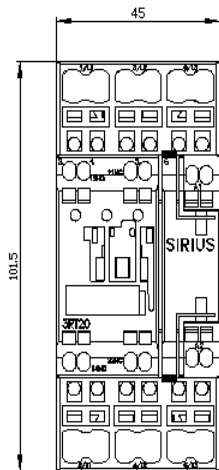
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2024-2AL20&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2024-2AL20&lang=en)

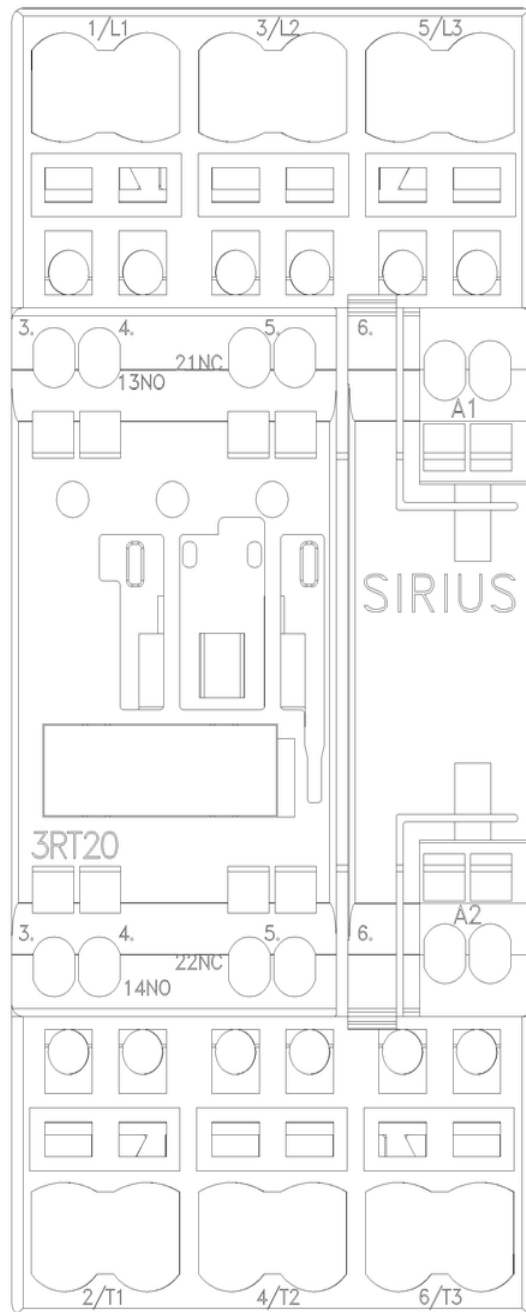
**Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2024-2AL20/char>

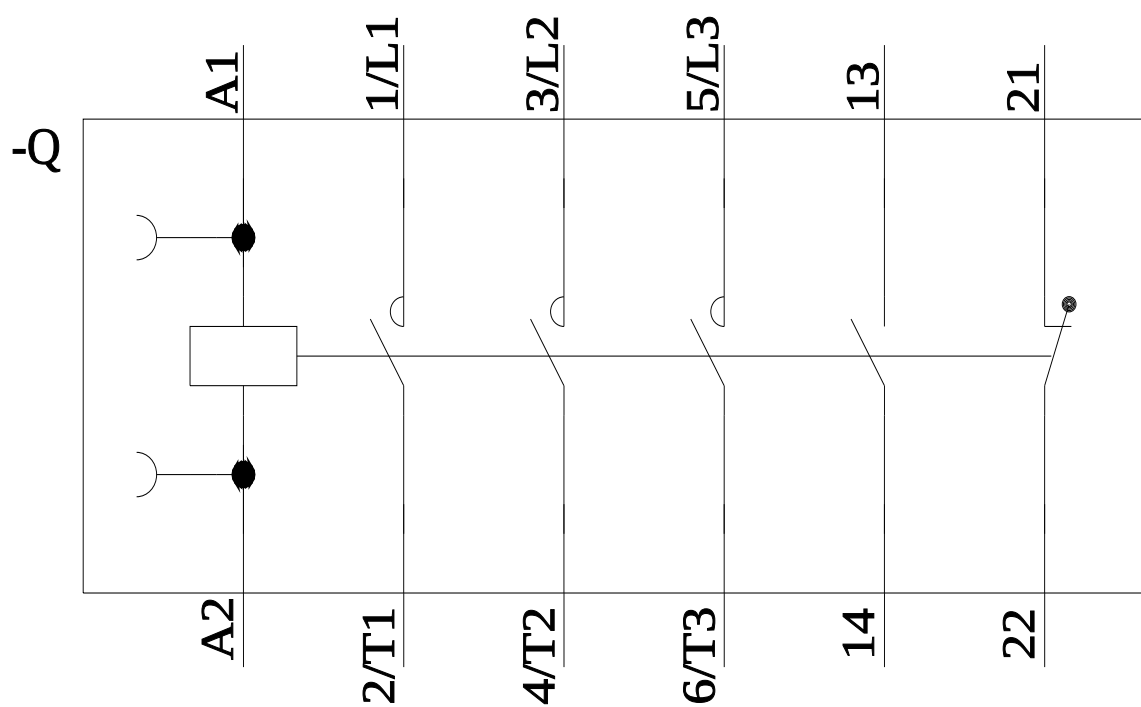
**Further characteristics (e.g. electrical endurance, switching frequency)**

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2024-2AL20&objecttype=14&gridview=view1>









last modified:

