



power contactor, AC-3e/AC-3, 95 A, 45 kW / 400 V, 3-pole, 83-155 V AC/DC, 50/60 Hz, with integrated varistor, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S3

|                                                                                                              |                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| product brand name                                                                                           | SIRIUS                                                                                                                              |
| product designation                                                                                          | Power contactor                                                                                                                     |
| product type designation                                                                                     | 3RT2                                                                                                                                |
| General technical data                                                                                       |                                                                                                                                     |
| size of contactor                                                                                            | S3                                                                                                                                  |
| product extension                                                                                            |                                                                                                                                     |
| • function module for communication                                                                          | No                                                                                                                                  |
| • auxiliary switch                                                                                           | Yes                                                                                                                                 |
| power loss [W] for rated value of the current                                                                |                                                                                                                                     |
| • at AC in hot operating state                                                                               | 19.8 W                                                                                                                              |
| • at AC in hot operating state per pole                                                                      | 6.6 W                                                                                                                               |
| • without load current share typical                                                                         | 1.8 W                                                                                                                               |
| type of calculation of power loss depending on pole                                                          | quadratic                                                                                                                           |
| insulation voltage                                                                                           |                                                                                                                                     |
| • of main circuit with degree of pollution 3 rated value                                                     | 1 000 V                                                                                                                             |
| • of auxiliary circuit with degree of pollution 3 rated value                                                | 690 V                                                                                                                               |
| surge voltage resistance                                                                                     |                                                                                                                                     |
| • of main circuit rated value                                                                                | 8 kV                                                                                                                                |
| • of auxiliary circuit rated value                                                                           | 6 kV                                                                                                                                |
| maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 | 690 V                                                                                                                               |
| shock resistance at rectangular impulse                                                                      |                                                                                                                                     |
| • at AC                                                                                                      | 10.3g / 5 ms, 6.7g / 10 ms                                                                                                          |
| • at DC                                                                                                      | 6.7 g / 5 ms, 4g / 10 ms                                                                                                            |
| shock resistance with sine pulse                                                                             |                                                                                                                                     |
| • at AC                                                                                                      | 16.3g / 5 ms, 10.g / 10 ms                                                                                                          |
| • at DC                                                                                                      | 10.6 g / 5 ms, 6.3 g / 10 ms                                                                                                        |
| mechanical service life (operating cycles)                                                                   |                                                                                                                                     |
| • of contactor typical                                                                                       | 10 000 000                                                                                                                          |
| • of the contactor with added electronically optimized auxiliary switch block typical                        | 5 000 000                                                                                                                           |
| • of the contactor with added auxiliary switch block typical                                                 | 10 000 000                                                                                                                          |
| reference code according to IEC 81346-2                                                                      | Q                                                                                                                                   |
| Substance Prohibitance (Date)                                                                                |                                                                                                                                     |
| SVHC substance name                                                                                          | Lead - 7439-92-1<br>Lead monoxide (lead oxide) - 1317-36-8<br>2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one - 71868-10-5 |
| Weight                                                                                                       | 1.9 kg                                                                                                                              |
| Ambient conditions                                                                                           |                                                                                                                                     |
| installation altitude at height above sea level maximum                                                      | 2 000 m                                                                                                                             |
| ambient temperature                                                                                          |                                                                                                                                     |

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| <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -25 ... +60 °C                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -55 ... +80 °C                                                                                                                                                                                                         |
| <b>relative humidity minimum</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 10 %                                                                                                                                                                                                                   |
| <b>relative humidity at 55 °C according to IEC 60068-2-30 maximum</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 95 %                                                                                                                                                                                                                   |
| <b>Environmental footprint</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                        |
| Environmental Product Declaration (EPD)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Yes                                                                                                                                                                                                                    |
| Global Warming Potential [CO2 eq] total                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 267 kg                                                                                                                                                                                                                 |
| Global Warming Potential [CO2 eq] during manufacturing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 9.35 kg                                                                                                                                                                                                                |
| Global Warming Potential [CO2 eq] during operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 259 kg                                                                                                                                                                                                                 |
| Global Warming Potential [CO2 eq] after end of life                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -1.55 kg                                                                                                                                                                                                               |
| <b>Main circuit</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                        |
| <b>number of poles for main current circuit</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 3                                                                                                                                                                                                                      |
| <b>number of NO contacts for main contacts</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3                                                                                                                                                                                                                      |
| <b>operating voltage</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• at AC-3 rated value maximum</li> <li>• at AC-3e rated value maximum</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1 000 V<br>1 000 V                                                                                                                                                                                                     |
| <b>operational current</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• at AC-1 at 400 V at ambient temperature 40 °C rated value</li> <li>• at AC-1               <ul style="list-style-type: none"> <li>— up to 690 V at ambient temperature 40 °C rated value</li> <li>— up to 690 V at ambient temperature 60 °C rated value</li> </ul> </li> <li>• at AC-3               <ul style="list-style-type: none"> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> <li>— at 1000 V rated value</li> </ul> </li> <li>• at AC-3e               <ul style="list-style-type: none"> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> <li>— at 1000 V rated value</li> </ul> </li> <li>• at AC-4 at 400 V rated value</li> <li>• at AC-5a up to 690 V rated value</li> <li>• at AC-5b up to 400 V rated value</li> <li>• at AC-6a               <ul style="list-style-type: none"> <li>— up to 230 V for current peak value n=20 rated value</li> <li>— up to 400 V for current peak value n=20 rated value</li> <li>— up to 500 V for current peak value n=20 rated value</li> <li>— up to 690 V for current peak value n=20 rated value</li> </ul> </li> <li>• at AC-6a               <ul style="list-style-type: none"> <li>— up to 230 V for current peak value n=30 rated value</li> <li>— up to 400 V for current peak value n=30 rated value</li> <li>— up to 500 V for current peak value n=30 rated value</li> <li>— up to 690 V for current peak value n=30 rated value</li> </ul> </li> </ul> | 130 A<br><br>130 A<br>110 A<br><br>95 A<br>95 A<br>78 A<br>30 A<br><br>95 A<br>95 A<br>78 A<br>30 A<br><br>80 A<br>114 A<br>95 A<br><br>84.4 A<br>84.4 A<br>84.4 A<br>58 A<br><br>56.3 A<br>56.3 A<br>56.3 A<br>56.3 A |
| minimum cross-section in main circuit at maximum AC-1 rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 50 mm <sup>2</sup>                                                                                                                                                                                                     |
| <b>operational current for approx. 200000 operating cycles at AC-4</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• at 400 V rated value</li> <li>• at 690 V rated value</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 42 A<br>30 A                                                                                                                                                                                                           |
| <b>operational current</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• at 1 current path 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> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 100 A<br>60 A<br>9 A<br>2 A<br>0.6 A<br>0.4 A                                                                                                                                                                          |

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| <ul style="list-style-type: none"> <li>• <b>with 2 current paths in series at DC-1</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> <li>• <b>with 3 current paths in series at DC-1</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> <li>• <b>at 1 current path at DC-3 at DC-5</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> <li>• <b>with 2 current paths in series at DC-3 at DC-5</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> <li>• <b>with 3 current paths in series at DC-3 at DC-5</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> </ul> | 100 A    |
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| <b>operating power</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |
| • at AC-2 at 400 V rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 45 kW    |
| • at AC-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |
| — at 230 V rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 22 kW    |
| — at 400 V rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 45 kW    |
| — at 500 V rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 55 kW    |
| — at 690 V rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 75 kW    |
| — at 1000 V rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 37 kW    |
| • at AC-3e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |          |
| — at 230 V rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 22 kW    |
| — at 400 V rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 45 kW    |
| — at 500 V rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 55 kW    |
| — at 690 V rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 75 kW    |
| — at 1000 V rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 37 kW    |
| <b>operating power for approx. 200000 operating cycles at AC-4</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |
| • at 400 V rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 22 kW    |
| • at 690 V rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 27.4 kW  |
| <b>operating apparent power at AC-6a</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |
| • up to 230 V for current peak value n=20 rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 33 kVA   |
| • up to 400 V for current peak value n=20 rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 58 kVA   |
| • up to 500 V for current peak value n=20 rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 73 kVA   |
| • up to 690 V for current peak value n=20 rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 69 kVA   |
| <b>operating apparent power at AC-6a</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |
| • up to 230 V for current peak value n=30 rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 22.4 kVA |
| • up to 400 V for current peak value n=30 rated value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 39 kVA   |

|                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• up to 500 V for current peak value n=30 rated value</li> <li>• up to 690 V for current peak value n=30 rated value</li> </ul>                                                                                                                                                                                                                                                          | 48.7 kVA<br>67.3 kVA                                                                                                                                                                                                                                                                                              |
| <b>short-time withstand current in cold operating state up to 40 °C</b> <ul style="list-style-type: none"> <li>• limited to 1 s switching at zero current maximum</li> <li>• limited to 5 s switching at zero current maximum</li> <li>• limited to 10 s switching at zero current maximum</li> <li>• limited to 30 s switching at zero current maximum</li> <li>• limited to 60 s switching at zero current maximum</li> </ul> | 1 725 A; Use minimum cross-section acc. to AC-1 rated value<br>1 297 A; Use minimum cross-section acc. to AC-1 rated value<br>946 A; Use minimum cross-section acc. to AC-1 rated value<br>610 A; Use minimum cross-section acc. to AC-1 rated value<br>486 A; Use minimum cross-section acc. to AC-1 rated value |
| <b>no-load switching frequency</b> <ul style="list-style-type: none"> <li>• at AC</li> <li>• at DC</li> </ul>                                                                                                                                                                                                                                                                                                                   | 1 000 1/h<br>1 000 1/h                                                                                                                                                                                                                                                                                            |
| <b>operating frequency</b> <ul style="list-style-type: none"> <li>• at AC-1 maximum</li> <li>• at AC-2 maximum</li> <li>• at AC-3 maximum</li> <li>• at AC-3e maximum</li> <li>• at AC-4 maximum</li> </ul>                                                                                                                                                                                                                     | 900 1/h<br>350 1/h<br>850 1/h<br>850 1/h<br>250 1/h                                                                                                                                                                                                                                                               |
| <b>Control circuit/ Control</b>                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                   |
| <b>type of voltage of the control supply voltage</b>                                                                                                                                                                                                                                                                                                                                                                            | AC/DC                                                                                                                                                                                                                                                                                                             |
| <b>control supply voltage at AC</b> <ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> <li>• at 60 Hz rated value</li> </ul>                                                                                                                                                                                                                                                                                    | 83 ... 155 V<br>83 ... 155 V                                                                                                                                                                                                                                                                                      |
| <b>control supply voltage at DC rated value</b>                                                                                                                                                                                                                                                                                                                                                                                 | 83 ... 155 V                                                                                                                                                                                                                                                                                                      |
| <b>operating range factor control supply voltage rated value of magnet coil at DC</b> <ul style="list-style-type: none"> <li>• initial value</li> <li>• full-scale value</li> </ul>                                                                                                                                                                                                                                             | 0.8<br>1.1                                                                                                                                                                                                                                                                                                        |
| <b>operating range factor control supply voltage rated value of magnet coil at AC</b> <ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>                                                                                                                                                                                                                                                          | 0.8 ... 1.1<br>0.8 ... 1.1                                                                                                                                                                                                                                                                                        |
| <b>design of the surge suppressor</b>                                                                                                                                                                                                                                                                                                                                                                                           | with varistor                                                                                                                                                                                                                                                                                                     |
| <b>inrush current peak</b>                                                                                                                                                                                                                                                                                                                                                                                                      | 1.5 A                                                                                                                                                                                                                                                                                                             |
| <b>duration of inrush current peak</b>                                                                                                                                                                                                                                                                                                                                                                                          | 50 µs                                                                                                                                                                                                                                                                                                             |
| <b>locked-rotor current mean value</b>                                                                                                                                                                                                                                                                                                                                                                                          | 1.1 A                                                                                                                                                                                                                                                                                                             |
| <b>locked-rotor current peak</b>                                                                                                                                                                                                                                                                                                                                                                                                | 2.7 A                                                                                                                                                                                                                                                                                                             |
| <b>duration of locked-rotor current</b>                                                                                                                                                                                                                                                                                                                                                                                         | 150 ms                                                                                                                                                                                                                                                                                                            |
| <b>holding current mean value</b>                                                                                                                                                                                                                                                                                                                                                                                               | 15 mA                                                                                                                                                                                                                                                                                                             |
| <b>apparent pick-up power of magnet coil at AC</b> <ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>                                                                                                                                                                                                                                                                                             | 151 VA<br>151 VA                                                                                                                                                                                                                                                                                                  |
| <b>apparent holding power</b> <ul style="list-style-type: none"> <li>• at minimum rated control supply voltage at DC</li> <li>• at maximum rated control supply voltage at DC</li> </ul>                                                                                                                                                                                                                                        | 1.8 VA<br>1.8 VA                                                                                                                                                                                                                                                                                                  |
| <b>apparent holding power</b> <ul style="list-style-type: none"> <li>• at minimum rated control supply voltage at AC <ul style="list-style-type: none"> <li>— at 50 Hz</li> <li>— at 60 Hz</li> </ul> </li> <li>• at maximum rated control supply voltage at AC <ul style="list-style-type: none"> <li>— at 50 Hz</li> <li>— at 60 Hz</li> </ul> </li> </ul>                                                                    | 3.1 VA<br>3.1 VA<br>3.1 VA<br>3.1 VA                                                                                                                                                                                                                                                                              |
| <b>apparent holding power of magnet coil at AC</b> <ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>                                                                                                                                                                                                                                                                                             | 3.1 VA<br>3.1 VA                                                                                                                                                                                                                                                                                                  |
| <b>inductive power factor with the holding power of the coil</b> <ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>                                                                                                                                                                                                                                                                               | 0.95<br>0.95                                                                                                                                                                                                                                                                                                      |
| <b>closing power of magnet coil at DC</b>                                                                                                                                                                                                                                                                                                                                                                                       | 76 W                                                                                                                                                                                                                                                                                                              |
| <b>holding power of magnet coil at DC</b>                                                                                                                                                                                                                                                                                                                                                                                       | 1.8 W                                                                                                                                                                                                                                                                                                             |
| <b>closing delay</b> <ul style="list-style-type: none"> <li>• at AC</li> </ul>                                                                                                                                                                                                                                                                                                                                                  | 50 ... 70 ms                                                                                                                                                                                                                                                                                                      |

|                                                                                                                                                                                                |                                                                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at DC</li> </ul>                                                                                                                                      | 50 ... 70 ms                                                                                                                         |
| <b>opening delay</b>                                                                                                                                                                           |                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• at AC</li> </ul>                                                                                                                                      | 38 ... 57 ms                                                                                                                         |
| <ul style="list-style-type: none"> <li>• at DC</li> </ul>                                                                                                                                      | 38 ... 57 ms                                                                                                                         |
| <b>arcing time</b>                                                                                                                                                                             | 10 ... 20 ms                                                                                                                         |
| <b>control version of the switch operating mechanism</b>                                                                                                                                       | Standard A1 - A2                                                                                                                     |
| <b>Auxiliary circuit</b>                                                                                                                                                                       |                                                                                                                                      |
| number of NC contacts for auxiliary contacts instantaneous contact                                                                                                                             | 1                                                                                                                                    |
| number of NO contacts for auxiliary contacts instantaneous contact                                                                                                                             | 1                                                                                                                                    |
| operational current at AC-12 maximum                                                                                                                                                           | 10 A                                                                                                                                 |
| <b>operational current at AC-15</b>                                                                                                                                                            |                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• at 230 V rated value</li> </ul>                                                                                                                       | 6 A                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• at 400 V rated value</li> </ul>                                                                                                                       | 3 A                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• at 500 V rated value</li> </ul>                                                                                                                       | 2 A                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• at 690 V rated value</li> </ul>                                                                                                                       | 1 A                                                                                                                                  |
| <b>operational current at DC-12</b>                                                                                                                                                            |                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• at 24 V rated value</li> </ul>                                                                                                                        | 10 A                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• at 48 V rated value</li> </ul>                                                                                                                        | 6 A                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• at 60 V rated value</li> </ul>                                                                                                                        | 6 A                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• at 110 V rated value</li> </ul>                                                                                                                       | 3 A                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• at 125 V rated value</li> </ul>                                                                                                                       | 2 A                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• at 220 V rated value</li> </ul>                                                                                                                       | 1 A                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>                                                                                                                       | 0.15 A                                                                                                                               |
| <b>operational current at DC-13</b>                                                                                                                                                            |                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• at 24 V rated value</li> </ul>                                                                                                                        | 10 A                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• at 48 V rated value</li> </ul>                                                                                                                        | 2 A                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• at 60 V rated value</li> </ul>                                                                                                                        | 2 A                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• at 110 V rated value</li> </ul>                                                                                                                       | 1 A                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• at 125 V rated value</li> </ul>                                                                                                                       | 0.9 A                                                                                                                                |
| <ul style="list-style-type: none"> <li>• at 220 V rated value</li> </ul>                                                                                                                       | 0.3 A                                                                                                                                |
| <ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>                                                                                                                       | 0.1 A                                                                                                                                |
| <b>contact reliability of auxiliary contacts</b>                                                                                                                                               | 1 faulty switching per 100 million (17 V, 1 mA)                                                                                      |
| <b>UL/CSA ratings</b>                                                                                                                                                                          |                                                                                                                                      |
| <b>full-load current (FLA) for 3-phase AC motor</b>                                                                                                                                            |                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• at 480 V rated value</li> </ul>                                                                                                                       | 96 A                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>                                                                                                                       | 77 A                                                                                                                                 |
| <b>yielded mechanical performance [hp]</b>                                                                                                                                                     |                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• for single-phase AC motor <ul style="list-style-type: none"> <li>— at 110/120 V rated value</li> </ul> </li> </ul>                                    | 10 hp                                                                                                                                |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at 230 V rated value</li> </ul> </li> </ul>                                                                   | 20 hp                                                                                                                                |
| <ul style="list-style-type: none"> <li>• for 3-phase AC motor <ul style="list-style-type: none"> <li>— at 200/208 V rated value</li> </ul> </li> </ul>                                         | 30 hp                                                                                                                                |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at 220/230 V rated value</li> </ul> </li> </ul>                                                               | 30 hp                                                                                                                                |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at 460/480 V rated value</li> </ul> </li> </ul>                                                               | 75 hp                                                                                                                                |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at 575/600 V rated value</li> </ul> </li> </ul>                                                               | 75 hp                                                                                                                                |
| <b>contact rating of auxiliary contacts according to UL</b>                                                                                                                                    | A600 / P600                                                                                                                          |
| <b>Short-circuit protection</b>                                                                                                                                                                |                                                                                                                                      |
| <b>design of the fuse link</b>                                                                                                                                                                 |                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• for short-circuit protection of the main circuit <ul style="list-style-type: none"> <li>— with type of coordination 1 required</li> </ul> </li> </ul> | gG: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, 80 kA)                                                     |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— with type of assignment 2 required</li> </ul> </li> </ul>                                                     | gG: 160 A (690 V, 100 kA), aM: 100 A (690 V, 100 kA), BS88: 125 A (415 V, 80 kA)                                                     |
| <ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>                                                                              | gG: 10 A (500 V, 1 kA)                                                                                                               |
| <b>Installation/ mounting/ dimensions</b>                                                                                                                                                      |                                                                                                                                      |
| <b>mounting position</b>                                                                                                                                                                       | +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface |
| <b>fastening method</b>                                                                                                                                                                        | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715                                                             |
| <b>height</b>                                                                                                                                                                                  | 140 mm                                                                                                                               |
| <b>width</b>                                                                                                                                                                                   | 70 mm                                                                                                                                |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>depth</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 152 mm                                                                                                                                                                           |
| <b>required spacing</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards 20 mm</li> <li>— upwards 10 mm</li> <li>— downwards 10 mm</li> <li>— at the side 0 mm</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards 20 mm</li> <li>— upwards 10 mm</li> <li>— at the side 10 mm</li> <li>— downwards 10 mm</li> </ul> </li> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards 20 mm</li> <li>— upwards 10 mm</li> <li>— downwards 10 mm</li> <li>— at the side 10 mm</li> </ul> </li> </ul> |                                                                                                                                                                                  |
| <b>Connections/ Terminals</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                  |
| <b>type of electrical connection</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control circuit</li> <li>• at contactor for auxiliary contacts</li> <li>• of magnet coil</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                   | screw-type terminals<br>screw-type terminals<br>Screw-type terminals<br>Screw-type terminals                                                                                     |
| <b>type of connectable conductor cross-sections</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> </ul> </li> <li>• for AWG cables for main contacts</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                      | 2x (2.5 ... 35 mm <sup>2</sup> ), 1x (2.5 ... 50 mm <sup>2</sup> )<br>2x (10 ... 1/0), 1x (10 ... 2)                                                                             |
| <b>connectable conductor cross-section for main contacts</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• solid</li> <li>• stranded</li> <li>• finely stranded with core end processing</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2.5 ... 16 mm <sup>2</sup><br>6 ... 70 mm <sup>2</sup><br>2.5 ... 50 mm <sup>2</sup>                                                                                             |
| <b>connectable conductor cross-section for auxiliary contacts</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• solid or stranded</li> <li>• finely stranded with core end processing</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.5 ... 2.5 mm <sup>2</sup><br>0.5 ... 2.5 mm <sup>2</sup>                                                                                                                       |
| <b>type of connectable conductor cross-sections</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• for AWG cables for auxiliary contacts</li> </ul>                                                                                                                                                                                                                                                                                                                                               | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )<br>2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )<br>2x (20 ... 16), 2x (18 ... 14) |
| <b>AWG number as coded connectable conductor cross section</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• for main contacts</li> <li>• for auxiliary contacts</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 10 ... 2<br>20 ... 14                                                                                                                                                            |
| <b>Safety related data</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                  |
| <b>product function</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• mirror contact according to IEC 60947-4-1</li> <li>• positively driven operation according to IEC 60947-5-1</li> <li>• suitable for safety function</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                              | Yes<br>No<br>Yes                                                                                                                                                                 |
| 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• with low demand rate according to SN 31920</li> <li>• with high demand rate according to SN 31920</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                | 40 %<br>73 %                                                                                                                                                                     |
| <b>B10 value with high demand rate according to SN 31920</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1 000 000                                                                                                                                                                        |
| <b>failure rate [FIT] with low demand rate according to SN 31920</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 100 FIT                                                                                                                                                                          |
| ISO 13849                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                  |
| <b>device type according to ISO 13849-1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3                                                                                                                                                                                |
| <b>overdimensioning according to ISO 13849-2 necessary</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Yes                                                                                                                                                                              |
| IEC 61508                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                  |

|                                                         |                                                  |
|---------------------------------------------------------|--------------------------------------------------|
| safety device type according to IEC 61508-2             | Type A                                           |
| Electrical Safety                                       |                                                  |
| protection class IP on the front according to IEC 60529 | IP20                                             |
| touch protection on the front according to IEC 60529    | finger-safe, for vertical contact from the front |
| Approvals Certificates                                  |                                                  |
| General Product Approval                                |                                                  |



[Confirmation](#)



[KC](#)

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



[Type Examination Certificate](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



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



[Confirmation](#)

[Special Test Certificate](#)

|                 |             |
|-----------------|-------------|
| Dangerous goods | Environment |
|-----------------|-------------|

[Transport Information](#)



[Environmental Confirmations](#)

#### 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=3RT2046-1NF30>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2046-1NF30>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2046-1NF30>

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

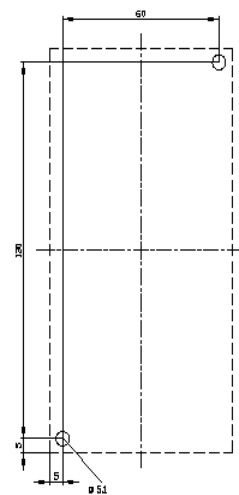
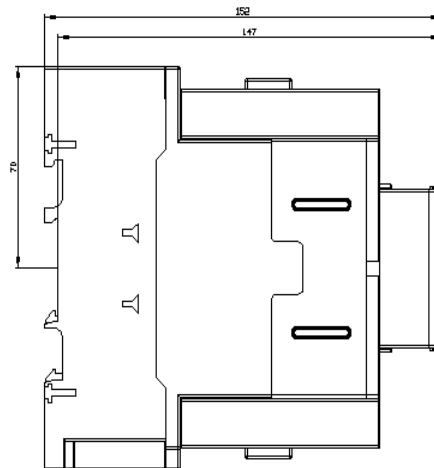
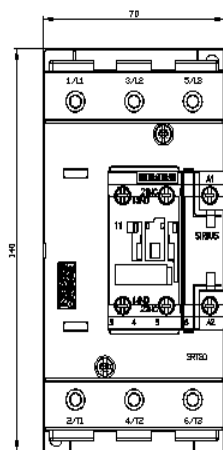
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2046-1NF30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2046-1NF30&lang=en)

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

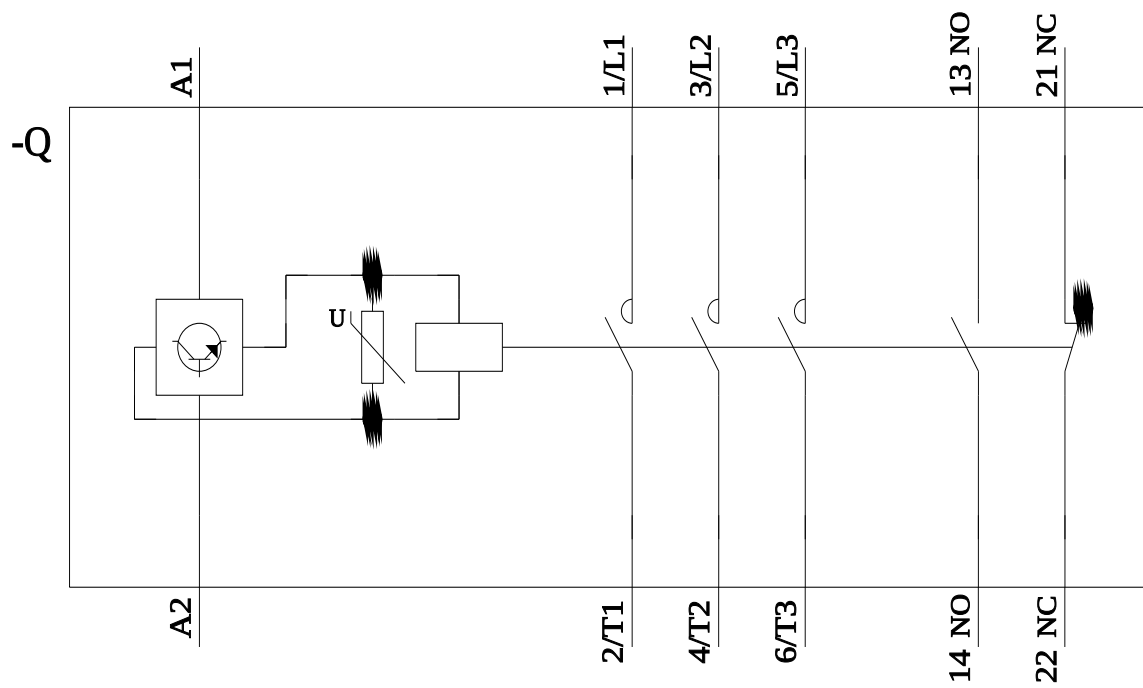
<https://support.industry.siemens.com/cs/ww/en/ps/3RT2046-1NF30/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2046-1NF30&objecttype=14&gridview=view1>







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