



CONTACTOR, AC-3 18.5 KW/400 V, AC 42V 50/60HZ, 3-POLE, SIZE S2, SCREW CONNECTION

Figure similar

|   |                 |
|---|-----------------|
| <b>product brand name</b>   | SIRIUS          |
| <b>Product designation</b>  | power contactor |
| <b>General technical data:</b>  |                 |
| <b>Size of contactor</b>  | S2              |
| <b>Insulation voltage</b>   |                 |
| • Rated value   | 690 V           |
| <b>Degree of pollution</b>  | 3               |
| <b>Surge voltage resistance Rated value</b>   | 6 kV            |
| <b>Mechanical service life (switching cycles)</b>                                   |                 |
| • of the contactor typical  | 10 000 000      |
| • of the contactor with added electronics-compatible auxiliary switch block typical | 5 000 000       |
| • of the contactor with added auxiliary switch block typical                        | 10 000 000      |
| <b>Protection class IP</b>  |                 |
| • on the front  | IP00            |
| • of the terminal   | IP00            |
| <b>Equipment marking</b>  |                 |
| • acc. to DIN EN 61346-2  | Q               |
| • acc. to DIN EN 81346-2  | Q               |
| <b>Ambient conditions:</b>  |                 |
| <b>Installation altitude at height above sea level maximum</b>                      | 2 000 m         |
| <b>Ambient temperature</b>  |                 |
| • during operation  | -25 ... +60 °C  |

- during storage

-55 ... +80 °C

#### Main circuit:

|   |                    |
|---|--------------------|
| <b>Number of poles for main current circuit</b>   | 3                  |
| <b>Number of NC contacts for main contacts</b>  | 0                  |
| <b>Number of NO contacts for main contacts</b>  | 3                  |
| <b>Connectable conductor cross-section in main circuit at AC-1</b>  |                    |
| <ul style="list-style-type: none"> <li>• at 60 °C minimum permissible</li> </ul>  | 16 mm <sup>2</sup> |
| <ul style="list-style-type: none"> <li>• at 40 °C minimum permissible</li> </ul>  | 16 mm <sup>2</sup> |
| <b>Operating current</b>  |                    |
| <ul style="list-style-type: none"> <li>• at AC-1 at 400 V           <ul style="list-style-type: none"> <li>— at ambient temperature 40 °C Rated value</li> </ul> </li> </ul>  | 60 A               |
| <ul style="list-style-type: none"> <li>• at AC-1 up to 690 V           <ul style="list-style-type: none"> <li>— at ambient temperature 40 °C Rated value</li> <li>— at ambient temperature 60 °C Rated value</li> </ul> </li> </ul> | 60 A<br>55 A       |
| <ul style="list-style-type: none"> <li>• at AC-3           <ul style="list-style-type: none"> <li>— at 400 V Rated value</li> <li>— at 690 V Rated value</li> </ul> </li> </ul>   | 40 A<br>24 A       |
| <ul style="list-style-type: none"> <li>• at AC-4 at 400 V Rated value</li> </ul>  | 35 A               |
| <b>Operating current for ≥ 200000 operating cycles at AC-4</b>  |                    |
| <ul style="list-style-type: none"> <li>• at 400 V Rated value</li> </ul>  | 18.5 A             |
| <ul style="list-style-type: none"> <li>• at 690 V Rated value</li> </ul>  | 12.6 A             |
| <b>Operating current</b>  |                    |
| <ul style="list-style-type: none"> <li>• with 1 current path at DC-1           <ul style="list-style-type: none"> <li>— at 24 V Rated value</li> <li>— at 110 V Rated value</li> </ul> </li> </ul>                                  | 55 A<br>4.5 A      |
| <ul style="list-style-type: none"> <li>• with 2 current paths in series at DC-1           <ul style="list-style-type: none"> <li>— at 24 V Rated value</li> <li>— at 110 V Rated value</li> </ul> </li> </ul>                       | 55 A<br>25 A       |
| <ul style="list-style-type: none"> <li>• with 3 current paths in series at DC-1           <ul style="list-style-type: none"> <li>— at 24 V Rated value</li> <li>— at 110 V Rated value</li> </ul> </li> </ul>                       | 55 A<br>55 A       |
| <b>Operating current</b>  |                    |
| <ul style="list-style-type: none"> <li>• with 1 current path at DC-3 at DC-5           <ul style="list-style-type: none"> <li>— at 24 V Rated value</li> <li>— at 110 V Rated value</li> </ul> </li> </ul>                          | 35 A<br>2.5 A      |
| <ul style="list-style-type: none"> <li>• with 2 current paths in series at DC-3 at DC-5           <ul style="list-style-type: none"> <li>— at 110 V Rated value</li> <li>— at 24 V Rated value</li> </ul> </li> </ul>               | 25 A<br>55 A       |
| <ul style="list-style-type: none"> <li>• with 3 current paths in series at DC-3 at DC-5</li> </ul>  |                    |

|  |           |
|--|-----------|
| — at 110 V Rated value   | 55 A      |
| — at 24 V Rated value  | 55 A      |
| <b>Operating power</b>   |           |
| • at AC-1  |           |
| — at 230 V at 60 °C Rated value  | 22 kW     |
| — at 690 V at 60 °C Rated value  | 66 kW     |
| <b>Operating power for ≥ 200000 operating cycles at AC-4</b>                                     |           |
| • at 400 V Rated value   | 9.5 kW    |
| • at 690 V Rated value   | 11.4 kW   |
| <b>Thermal short-time current restricted to 10 s</b>   | 400 A     |
| <b>Active power loss at AC-3 at 400 V for rated value of the operating current per conductor</b> | 2.6 W     |
| <b>No-load switching frequency</b>   |           |
| • with AC  | 5 000 1/h |
| <b>Operating frequency</b>   |           |
| • at AC-1 maximum  | 1 200 1/h |
| • at AC-2 maximum  | 600 1/h   |
| • at AC-3 maximum  | 1 000 1/h |
| • at AC-4 maximum  | 300 1/h   |

#### Control circuit/ Control:

|   |              |
|---|--------------|
| <b>Type of voltage of the control supply voltage</b>  | AC           |
| <b>Control supply voltage with AC</b>   |              |
| • at 50 Hz Rated value  | 42 V         |
| • at 60 Hz Rated value  | 42 V         |
| • Rated value   | 50 Hz        |
| <b>Control supply voltage frequency 2 Rated value</b>                                       | 60 Hz        |
| <b>Operating range factor control supply voltage rated value of the magnet coil with AC</b> |              |
| • at 50 Hz  | 0.8 ... 1.1  |
| • at 60 Hz  | 0.85 ... 1.1 |
| <b>Apparent pick-up power of the magnet coil with AC</b>                                    | 170 V·A      |
| <b>Inductive power factor with closing power of the coil</b>                                | 0.76         |
| <b>Apparent holding power of the magnet coil with AC</b>                                    | 15 V·A       |
| <b>Inductive power factor with the holding power of the coil</b>                            | 0.35         |
| <b>Closing delay</b>  |              |
| • with AC   | 10 ... 24 ms |
| <b>Arcing time</b>  | 10 ... 15 ms |

#### Auxiliary circuit:

|                              |  |
|------------------------------|--|
| <b>Number of NC contacts</b> |  |
| • for auxiliary contacts     |  |

|  |   |
|--|---|
| — instantaneous contact                              | 0   |
| <b>Number of NO contacts</b>                         |   |
| • for auxiliary contacts                             |   |
| — instantaneous contact                              | 0   |
| Operating current at AC-12 maximum                   | 10 A  |
| <b>Operating current at AC-15</b>                    |   |
| • at 230 V Rated value                               | 6 A   |
| • at 400 V Rated value                               | 3 A   |
| <b>Operating current at DC-12</b>                    |   |
| • at 60 V Rated value                                | 6 A   |
| • at 110 V Rated value                               | 3 A   |
| • at 220 V Rated value                               | 1 A   |
| <b>Operating current at DC-13</b>                    |   |
| • at 24 V Rated value                                | 10 A  |
| • at 60 V Rated value                                | 2 A   |
| • at 110 V Rated value                               | 1 A   |
| • at 220 V Rated value                               | 0.3 A   |
| <b>Contact reliability of the auxiliary contacts</b> | 1 faulty switching per 100 million (17 V, 1 mA) |

#### UL/CSA ratings:

|  |             |
|--|-------------|
| <b>Contact rating of the auxiliary contacts acc. to UL</b> | A600 / Q600 |
|--|-------------|

#### Short-circuit:

|   |                   |
|---|-------------------|
| <b>Design of the fuse link</b>                                  |                   |
| • for short-circuit protection of the main circuit              |                   |
| — with type of assignment 1 required                            | fuse gL/gG: 125 A |
| — with type of assignment 2 required                            | fuse gL/gG: 63 A  |
| • for short-circuit protection of the auxiliary switch required | fuse gL/gG: 10 A  |

#### Installation/ mounting/ dimensions:





|                         |  |
|-------------------------|--|
| <b>Mounting type</b>    | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022 |
| • Side-by-side mounting | Yes  |
| <b>Height</b>           | 112 mm   |
| <b>Width</b>            | 55 mm  |
| <b>Depth</b>            | 115 mm   |
| <b>Required spacing</b> |  |
| • for grounded parts    |  |
| — at the side           | 6 mm   |

#### Connections/ Terminals:


|   |                      |
|---|----------------------|
| <b>Type of electrical connection</b>        |                      |
| • for main current circuit                  | screw-type terminals |
| • for auxiliary and control current circuit | screw-type terminals |

|  |
|--|
| <b>Type of connectable conductor cross-section</b> <ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>— solid 2x (0.75 ... 16 mm<sup>2</sup>)</li> <li>— stranded 2x (0.75 ... 25 mm<sup>2</sup>)</li> <li>— single or multi-stranded 2x (0,75 ... 16 mm<sup>2</sup>)</li> <li>— finely stranded with core end processing 2x (0.75 ... 16 mm<sup>2</sup>)</li> <li>— finely stranded without core end processing 2x (0.75 ... 16 mm<sup>2</sup>)</li> </ul> </li> <li>• for AWG conductors for main contacts 2x (18 ... 2)</li> </ul> |
| <b>Type of connectable conductor cross-section</b> <ul style="list-style-type: none"> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>— solid 2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>), max. 2x (0.75 ... 4 mm<sup>2</sup>)</li> <li>— finely stranded with core end processing 2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)</li> </ul> </li> <li>• for AWG conductors for auxiliary contacts 2x (20 ... 16), 2x (18 ... 14), 1x 12</li> </ul>   |

Certificates/ approvals:

|  |   |   |  |
|--|---|---|--|
| <b>General Product Approval</b>  | <b>Functional Safety/Safety of Machinery</b>  | <b>Declaration of Conformity</b>  | <b>Test Certificates</b>   |
|  CSA |  UL |  EG-Konf. | <a href="#">Type Examination</a><br><a href="#">Special Test Certificate</a> |
|      |   |   |  |

|  |   |   |  |   |  |
|--|---|---|--|---|--|
| <b>Test Certificates</b>                           | <b>Shipping Approval</b>  |   |  |   |  |
| <a href="#">Type Test Certificates/Test Report</a> |  ABS |  DNV |  GL |  LRS |  RINA |

|  |   |                              |                       |
|--|---|------------------------------|-----------------------|
| <b>Shipping Approval</b>   | <b>other</b>                                |                              |                       |
|  RMRS | <a href="#">Environmental Confirmations</a> | <a href="#">Confirmation</a> | <a href="#">other</a> |

Further information

**Information- and Downloadcenter (Catalogs, Brochures,...)**  
<http://www.siemens.com/industrial-controls/catalogs>

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<http://www.siemens.com/industrymall>

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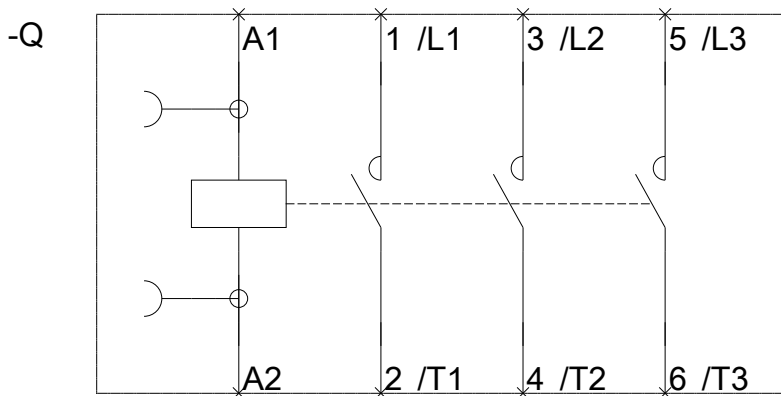
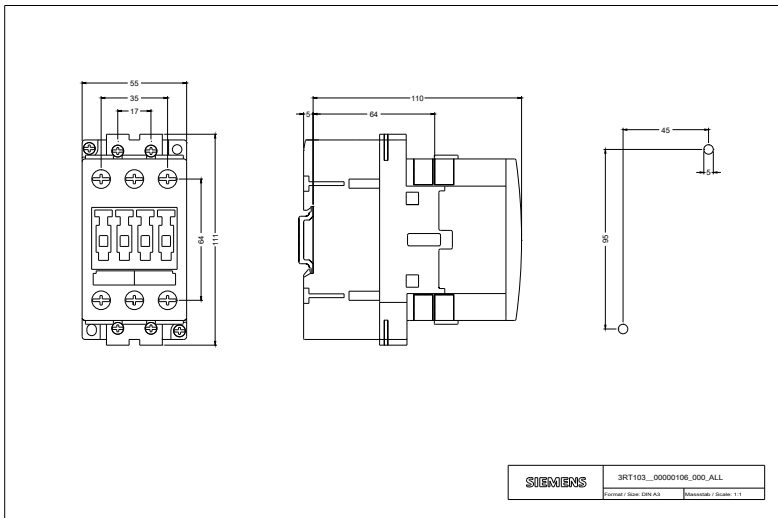
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT10351AD20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT10351AD20>

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

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