

Power contactor, AC-3 32 A, 15 kW / 400 V 230 V AC, 50 / 60 Hz, 3-pole, Size S2, Screw terminal !!! Phased-out product !!! Successor is SIRIUS 3RT2 Preferred successor type is >>3RT2027-1AL20<<



|   |                        |
|---|------------------------|
| Product brand name                                  | SIRIUS                 |
| Product designation                                 | power contactor        |
| General technical data                              |                        |
| Size of contactor                                   | S2                     |
| Insulation voltage                                  |                        |
| • rated value                                       | 690 V                  |
| Degree of pollution                                 | 3                      |
| Surge voltage resistance rated value                | 6 kV                   |
| maximum permissible voltage for safe isolation      |                        |
| • between coil and main contacts acc. to EN 60947-1 | 400 V                  |
| Protection class IP                                 |                        |
| • on the front                                      | IP20                   |
| • of the terminal                                   | IP00                   |
| Shock resistance at rectangular impulse             |                        |
| • at AC   | 10g / 5 ms, 5g / 10 ms |
| Shock resistance with sine pulse                    |                        |
| • at AC   | 15g / 5 ms, 8g / 10 ms |
| Mechanical service life (switching cycles)          |                        |

|   |            |
|---|------------|
| <ul style="list-style-type: none"> <li>• of contactor typical</li> </ul>  | 10 000 000 |
| <ul style="list-style-type: none"> <li>• of the contactor with added electronics-compatible auxiliary switch block typical</li> </ul> | 5 000 000  |
| <ul style="list-style-type: none"> <li>• of the contactor with added auxiliary switch block typical</li> </ul>                        | 10 000 000 |
| <b>Reference code acc. to DIN EN 81346-2</b>  | Q          |

#### Ambient conditions

|  |                |
|--|----------------|
| <b>Installation altitude at height above sea level</b>               |                |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>          | 2 000 m        |
| <b>Ambient temperature</b>   |                |
| <ul style="list-style-type: none"> <li>• during operation</li> </ul> | -25 ... +60 °C |
| <ul style="list-style-type: none"> <li>• during storage</li> </ul>   | -55 ... +80 °C |

#### Main circuit

|   |                    |
|---|--------------------|
| <b>Number of poles for main current circuit</b>   | 3                  |
| <b>Number of NO contacts for main contacts</b>  | 3                  |
| <b>Number of NC contacts for main contacts</b>  | 0                  |
| <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>    | 50 A               |
| <ul style="list-style-type: none"> <li>• at AC-1 <ul style="list-style-type: none"> <li>— up to 690 V at ambient temperature 40 °C rated value</li> </ul> </li> </ul> | 50 A               |
| <ul style="list-style-type: none"> <li>— up to 690 V at ambient temperature 60 °C rated value</li> </ul>  | 45 A               |
| <ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 400 V rated value</li> </ul> </li> </ul>                                 | 32 A               |
| <ul style="list-style-type: none"> <li>— at 690 V rated value</li> </ul>  | 20 A               |
| <ul style="list-style-type: none"> <li>• at AC-4 at 400 V rated value</li> </ul>  | 29 A               |
| <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>  | 10 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 for approx. 200000 operating cycles at AC-4</b>  |                    |
| <ul style="list-style-type: none"> <li>• at 400 V rated value</li> </ul>  | 15.6 A             |
| <ul style="list-style-type: none"> <li>• at 690 V rated value</li> </ul>  | 11 A               |
| <b>Operating 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> </ul> </li> </ul>                | 45 A               |
| <ul style="list-style-type: none"> <li>— at 110 V rated value</li> </ul>  | 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> </ul> </li> </ul>   | 45 A               |

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>— at 110 V rated value</li> <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>   | 25 A<br><br>45 A<br>45 A   |
| <b>Operating current</b> <ul style="list-style-type: none"> <li>• at 1 current path at DC-3 at DC-5 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> </ul> </li> <li>• with 2 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> </ul> </li> <li>• with 3 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> </ul> </li> </ul> | 35 A<br>2.5 A<br><br>45 A<br>25 A<br><br>45 A<br>45 A                                  |
| <b>Operating power</b> <ul style="list-style-type: none"> <li>• at AC-1 <ul style="list-style-type: none"> <li>— at 230 V at 60 °C rated value</li> <li>— at 400 V rated value</li> <li>— at 690 V rated value</li> <li>— at 690 V at 60 °C rated value</li> </ul> </li> <li>• at AC-2 at 400 V rated value</li> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 230 V rated value</li> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul>   | 18 kW<br>31 kW<br>54 kW<br>54 kW<br>15 kW<br><br>7.5 kW<br>15 kW<br>18.5 kW<br>18.5 kW |
| <b>Operating power 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>   | 8.2 kW<br>10 kW  |
| <b>Thermal short-time current limited to 10 s</b>   | 320 A  |
| <b>No-load switching frequency</b> <ul style="list-style-type: none"> <li>• at AC</li> </ul>  | 5 000 1/h  |
| <b>Operating frequency</b> <ul style="list-style-type: none"> <li>• at AC-1 maximum</li> <li>• at AC-2 maximum</li> <li>• at AC-3 maximum</li> <li>• at AC-4 maximum</li> </ul>   | 1 200 1/h<br>750 1/h<br>1 000 1/h<br>250 1/h   |
| <b>Control circuit/ Control</b>   |  |
| <b>Type of voltage of the control supply voltage</b>  | AC   |
| <b>Control supply voltage at AC</b>   |  |

|  |                             |
|--|-----------------------------|
| <ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> <li>• at 60 Hz rated value</li> </ul> | 230 V<br>230 V              |
| <b>Control supply voltage frequency</b>  |                             |
| <ul style="list-style-type: none"> <li>• 1 rated value</li> <li>• 2 rated value</li> </ul>               | 50 Hz<br>60 Hz              |
| <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>0.85 ... 1.1 |
| <b>Apparent pick-up power of magnet coil at AC</b>   | 127 V·A                     |
| <b>Inductive power factor with closing power of the coil</b>   | 0.73                        |
| <b>Apparent holding power of magnet coil at AC</b>   | 11.3 V·A                    |
| <b>Inductive power factor with the holding power of the coil</b>   | 0.41                        |
| <b>Closing delay</b>   |                             |
| <ul style="list-style-type: none"> <li>• at AC</li> </ul>  | 11 ... 30 ms                |
| <b>Opening delay</b>   |                             |
| <ul style="list-style-type: none"> <li>• at AC</li> </ul>  | 7 ... 20 ms                 |
| <b>Arcing time</b>   | 10 ... 15 ms                |

#### Auxiliary circuit

|  |   |
|--|---|
| <b>Number of NC contacts for auxiliary contacts</b>  |   |
| <ul style="list-style-type: none"> <li>• instantaneous contact</li> </ul>  | 0   |
| <b>Number of NO contacts for auxiliary contacts</b>  |   |
| <ul style="list-style-type: none"> <li>• instantaneous contact</li> </ul>  | 0   |
| <b>Operating current at AC-12 maximum</b>  | 10 A  |
| <b>Operating current at AC-15</b>  |   |
| <ul style="list-style-type: none"> <li>• at 230 V rated value</li> <li>• at 400 V rated value</li> </ul>   | 6 A<br>3 A                                      |
| <b>Operating current at DC-12</b>  |   |
| <ul style="list-style-type: none"> <li>• at 60 V rated value</li> <li>• at 110 V rated value</li> <li>• at 220 V rated value</li> </ul>                                | 6 A<br>3 A<br>1 A                               |
| <b>Operating current at DC-13</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> </ul> | 10 A<br>2 A<br>1 A<br>0.3 A                     |
| <b>Contact reliability of auxiliary contacts</b>   | 1 faulty switching per 100 million (17 V, 1 mA) |

#### UL/CSA ratings

|   |             |
|---|-------------|
| <b>Contact rating of auxiliary contacts according to UL</b> | A600 / Q600 |
|---|-------------|

#### Short-circuit protection

|  |  |
|--|--|
| <b>Design of the fuse link</b>   |  |
| <ul style="list-style-type: none"> <li>• for short-circuit protection of the main circuit <ul style="list-style-type: none"> <li>— with type of coordination 1 required</li> <li>— with type of assignment 2 required</li> </ul> </li> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>                              | fuse gL/gG: 125 A<br>fuse gL/gG: 63 A<br>fuse gL/gG: 10 A  |
| <b>Installation/ mounting/ dimensions</b>  |  |
| <b>Mounting type</b>   | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022   |
| <ul style="list-style-type: none"> <li>• Side-by-side mounting</li> </ul>  | Yes  |
| <b>Height</b>  | 112 mm   |
| <b>Width</b>   | 55 mm  |
| <b>Depth</b>   | 115 mm   |
| <b>Required spacing</b>  |  |
| <ul style="list-style-type: none"> <li>• for grounded parts <ul style="list-style-type: none"> <li>— at the side</li> </ul> </li> </ul>  | 6 mm   |
| <b>Connections/ Terminals</b>  |  |
| <b>Type of electrical connection</b>   |  |
| <ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control current circuit</li> </ul>  | 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>— solid</li> <li>— stranded</li> <li>— single or multi-stranded</li> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> </ul> </li> <li>• at AWG conductors for main contacts</li> </ul> | 2x (0.75 ... 16 mm <sup>2</sup> )<br>2x (0.75 ... 25 mm <sup>2</sup> )<br>2x (0,75 ... 16 mm <sup>2</sup> )<br>2x (0.75 ... 16 mm <sup>2</sup> )<br>2x (0.75 ... 16 mm <sup>2</sup> )<br>2x (18 ... 2)                         |
| <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</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• at AWG conductors for auxiliary contacts</li> </ul>  | 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> )<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), 1x 12 |
| <b>Certificates/ approvals</b>   |  |

|                          |     |                                       |
|--------------------------|-----|---------------------------------------|
| General Product Approval | EMC | Functional Safety/Safety of Machinery |
|--------------------------|-----|---------------------------------------|



[Type Examination Certificate](#)

|                           |                   |                   |
|---------------------------|-------------------|-------------------|
| Declaration of Conformity | Test Certificates | Marine / Shipping |
|---------------------------|-------------------|-------------------|



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[Special Test Certificate](#)

[Miscellaneous](#)



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



[Confirmation](#)

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|         |
|---------|
| Railway |
|---------|

[Special Test Certificate](#)

## Further information

**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=3RT1034-1AL20>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1034-1AL20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1034-1AL20>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1034-1AL20&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1034-1AL20&lang=en)

**Characteristic: Tripping characteristics, I<sub>Δt</sub>, Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1034-1AL20/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1034-1AL20&objecttype=14&gridview=view1>



