

CONTACTOR, AC-3 30 KW/400 V, DC 24 V, 3-POLE, SIZE S3, CAGE CLAMP



Figure similar

|                                                     |                         |
|-----------------------------------------------------|-------------------------|
| product brandname                                   | SIRIUS                  |
| Product designation                                 | power contactor         |
| General technical data                              |                         |
| Size of contactor                                   | S3                      |
| Insulation voltage                                  |                         |
| • rated value                                       | 1 000 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 | 690 V                   |
| Protection class IP                                 |                         |
| • on the front                                      | IP00                    |
| • of the terminal                                   | IP00                    |
| Shock resistance                                    |                         |
| • at rectangular impulse                            |                         |
| — at DC                                             | 6,8g / 5 ms, 4g / 10 ms |

|                                                                                                                                                                                                                                                                                                                                                                         |                               |
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| <ul style="list-style-type: none"> <li>• with sine pulse</li> <li>— at DC</li> </ul>                                                                                                                                                                                                                                                                                    | 10,6g / 5 ms, 6,2g / 10 ms    |
| <b>Mechanical service life (switching cycles)</b>                                                                                                                                                                                                                                                                                                                       |                               |
| <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>Ambient conditions</b>                                                                                                                                                                                                                                                                                                                                               |                               |
| <b>Installation altitude at height above sea level maximum</b>                                                                                                                                                                                                                                                                                                          | 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                |
| <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>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>                                                                                                                                                                                                      | 100 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> <li>— up to 690 V at ambient temperature 60 °C rated value</li> <li>— up to 1000 V at ambient temperature 40 °C rated value</li> <li>— up to 1000 V at ambient temperature 60 °C rated value</li> </ul> </li> </ul> | 100 A<br>90 A<br>50 A<br>40 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> <li>— at 1000 V rated value</li> </ul> </li> </ul>                                                                                                                                                                  | 65 A<br>47 A<br>25 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> <li>• at 40 °C minimum permissible</li> </ul>                                                                                                                                                                                                                                                | 35 mm²<br>35 mm²              |
| <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> <li>• at 690 V rated value</li> </ul>                                                                                                                                                                                                                                                                | 28 A<br>20 A                  |
| <b>Operating current</b>                                                                                                                                                                                                                                                                                                                                                |                               |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                       |
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| <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 110 V rated value</li> </ul> </li> <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> <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>                                                                                   | 90 A<br>4.5 A<br><br>90 A<br>90 A<br><br>90 A<br>90 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 110 V rated value</li> <li>— at 24 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 110 V rated value</li> <li>— at 24 V rated value</li> </ul> </li> </ul>                                  | 40 A<br>2.5 A<br><br>90 A<br>90 A<br><br>90 A<br>90 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> <li>— at 1000 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> <li>— at 1000 V rated value</li> </ul> </li> </ul> | 34 kW<br>59 kW<br>102 kW<br>102 kW<br>66 W<br>30 kW<br><br>18.5 kW<br>30 kW<br>37 kW<br>45 kW<br>30 W |
| <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>                                                                                                                                                                                                                                                                                                                                                                                                                    | 15.1 kW<br>18.6 kW                                                                                    |
| <b>Thermal short-time current limited to 10 s</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 600 A                                                                                                 |
| <b>Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 4.6 W                                                                                                 |
| <b>No-load switching frequency</b> <ul style="list-style-type: none"> <li>• at DC</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1 000 1/h                                                                                             |

|                                                                                       |                                                 |
|---------------------------------------------------------------------------------------|-------------------------------------------------|
| <b>Operating frequency</b>                                                            |                                                 |
| • at AC-1 maximum                                                                     | 1 000 1/h                                       |
| • at AC-2 maximum                                                                     | 400 1/h                                         |
| • at AC-3 maximum                                                                     | 1 000 1/h                                       |
| • at AC-4 maximum                                                                     | 300 1/h                                         |
| <b>Control circuit/ Control</b>                                                       |                                                 |
| <b>Type of voltage of the control supply voltage</b>                                  | DC                                              |
| <b>Control supply voltage at DC</b>                                                   |                                                 |
| • rated value                                                                         | 24 V                                            |
| <b>Operating range factor control supply voltage rated value of magnet coil at DC</b> | 0.8 ... 1.1                                     |
| <b>Closing power of magnet coil at DC</b>                                             | 15 W                                            |
| <b>Holding power of magnet coil at DC</b>                                             | 15 W                                            |
| <b>Closing delay</b>                                                                  |                                                 |
| • at DC                                                                               | 90 ... 230 ms                                   |
| <b>Opening delay</b>                                                                  |                                                 |
| • at DC                                                                               | 14 ... 20 ms                                    |
| <b>Arcing time</b>                                                                    | 10 ... 15 ms                                    |
| <b>Auxiliary circuit</b>                                                              |                                                 |
| <b>Number of NC contacts</b>                                                          |                                                 |
| • for auxiliary contacts                                                              |                                                 |
| — instantaneous contact                                                               | 0                                               |
| <b>Number of NO contacts</b>                                                          |                                                 |
| • for auxiliary contacts                                                              |                                                 |
| — instantaneous contact                                                               | 0                                               |
| <b>Operating current at AC-12 maximum</b>                                             | 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 auxiliary contacts</b>                                      | 1 faulty switching per 100 million (17 V, 1 mA) |
| <b>UL/CSA ratings</b>                                                                 |                                                 |
| <b>Contact rating of auxiliary contacts according to UL</b>                           | A600 / Q600                                     |

## Short-circuit protection

### Design of the fuse link

- for short-circuit protection of the main circuit
  - with type of coordination 1 required
  - with type of assignment 2 required
- for short-circuit protection of the auxiliary switch required

fuse gL/gG: 250 A

fuse gL/gG: 125 A

fuse gL/gG: 10 A

## Installation/ mounting/ dimensions

### Mounting type

screw and snap-on mounting onto 35 mm and 75 mm standard mounting rail

- Side-by-side mounting

Yes

### Height

146 mm

### Width

70 mm

### Depth

152 mm

### Required spacing

- for grounded parts
  - at the side

6 mm

## Connections/Terminals

### Type of electrical connection

- for main current circuit
- for auxiliary and control current circuit

screw-type terminals

spring-loaded terminals

### Type of connectable conductor cross-sections

- for main contacts
  - solid
  - stranded
  - single or multi-stranded
  - finely stranded with core end processing
  - finely stranded without core end processing
- at AWG conductors for main contacts

2x (2.5 ... 16 mm<sup>2</sup>)

2x (10 ... 50 mm<sup>2</sup>)

2x (2,5 ... 16 mm<sup>2</sup>)

2x (2.5 ... 35 mm<sup>2</sup>)

2x (10 ... 35 mm<sup>2</sup>)

2x (10 ... 1/0)

### Type of connectable conductor cross-sections

- for auxiliary contacts
  - solid
  - finely stranded with core end processing
  - finely stranded without core end processing
- at AWG conductors for auxiliary contacts

2x (0.25 ... 2.5 mm<sup>2</sup>)

2x (0.25 ... 1.5 mm<sup>2</sup>)

2x (0.25 ... 2.5 mm<sup>2</sup>)

2x (24 ... 14)

## Certificates/approvals

| General Product Approval                                                                 |                                                                                          |                                                                                         |                                                                                   | Declaration of<br>Conformity                                                                    | Test<br>Certificates                                   |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| <br>CCC | <br>CSA | <br>UL |  | <br>EG-Konf. | <a href="#">spezielle<br/>Prüfbescheinigunge<br/>n</a> |

| Test Certificates                                 | Shipping Approval       |                                                                                          |                                                                                         |                                                                                            |                                                                                             |
|---------------------------------------------------|-------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <a href="#">Typprüfbescheinigung/Werkszeugnis</a> | <a href="#">sonstig</a> | <br>ABS | <br>GL | <br>LRS | <br>RINA |

| Shipping<br>Approval                                                                      | other                             |                               |                         |  |  |
|-------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------|-------------------------|--|--|
| <br>RMRS | <a href="#">Umweltbestätigung</a> | <a href="#">Bestätigungen</a> | <a href="#">sonstig</a> |  |  |

#### Further information

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

<http://www.siemens.com/industrial-controls/catalogs>

##### Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1044-3BB40>

##### Cax online generator

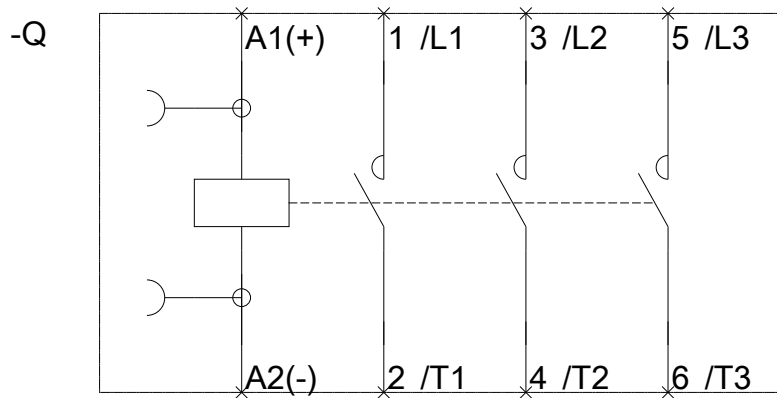
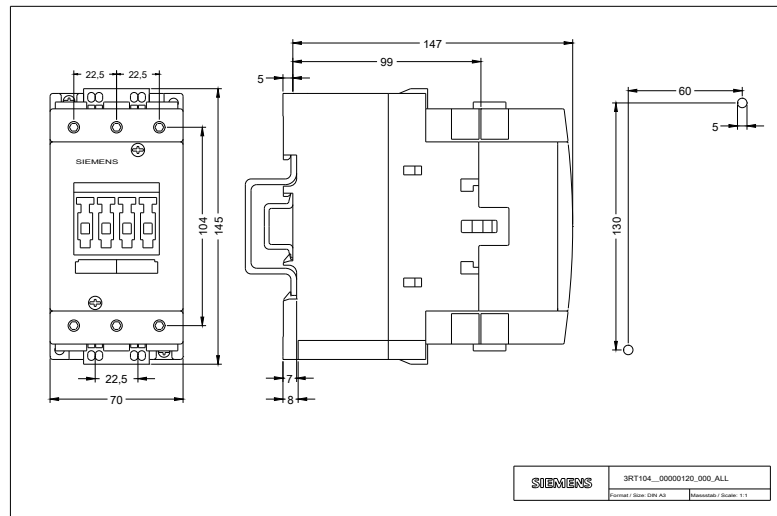
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1044-3BB40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1044-3BB40>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1044-3BB40&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1044-3BB40&lang=en)



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