

CONTACTOR, AC-3, 45 KW / 400 V AC 230 V, 2NO + 2NC FRONT, VARISTOR TOP MOUNTED SPECIAL PACKING LABEL TO VW-EQUIPMENT SPECIFICATION



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 AC                                             | 6,8g / 5 ms, 4g / 10 ms |

|                                                                                                                                                                                                                                                                                                                                                                         |                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| <ul style="list-style-type: none"> <li>• with sine pulse</li> <li>— at AC</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>                                                                                                                                                                                                      | 120 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> | 120 A<br>100 A<br>70 A<br>60 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>                                                                                                                                                                  | 95 A<br>58 A<br>30 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>50 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>                                                                                                                                                                                                                                                                | 42 A<br>27 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> <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>                                                                                   | 100 A<br>9 A<br>100 A<br>100 A<br>100 A<br>100 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>100 A<br>100 A<br>100 A<br>100 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> | 38 kW<br>66 kW<br>114 kW<br>114 kW<br>98 W<br>45 kW<br>22 kW<br>45 kW<br>55 kW<br>55 kW<br>37 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>                                                                                                                                                                                                                                                                                                                                                                                                                    | 22 kW<br>25.4 kW                                                                                |
| <b>Thermal short-time current limited to 10 s</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 760 A                                                                                           |
| <b>Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 10.8 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          | 900 1/h |
| • at AC-2 maximum          | 350 1/h |
| • at AC-3 maximum          | 850 1/h |
| • at AC-4 maximum          | 250 1/h |

| Control circuit/ Control                                                              |               |
|---------------------------------------------------------------------------------------|---------------|
| <b>Type of voltage of the control supply voltage</b>                                  | AC            |
| <b>Control supply voltage at AC</b>                                                   |               |
| • at 50 Hz rated value                                                                | 230 V         |
| <b>Control supply voltage frequency 1 rated value</b>                                 | 50 Hz         |
| <b>Operating range factor control supply voltage rated value of magnet coil at AC</b> |               |
| • at 50 Hz                                                                            | 0.8 ... 1.1   |
| <b>Design of the surge suppressor</b>                                                 | with varistor |
| <b>Apparent pick-up power of magnet coil at AC</b>                                    | 270 V·A       |
| <b>Inductive power factor with closing power of the coil</b>                          | 0.68          |
| <b>Apparent holding power of magnet coil at AC</b>                                    | 22 V·A        |
| <b>Inductive power factor with the holding power of the coil</b>                      | 0.27          |
| <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  |

| Auxiliary circuit                         |      |
|-------------------------------------------|------|
| <b>Number of NC contacts</b>              |      |
| • for auxiliary contacts                  |      |
| — instantaneous contact                   | 2    |
| <b>Number of NO contacts</b>              |      |
| • for auxiliary contacts                  |      |
| — instantaneous contact                   | 2    |
| <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) |

#### 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>                                  |                   |
| • for short-circuit protection of the main circuit              |                   |
| — with type of coordination 1 required                          | fuse gL/gG: 250 A |
| — with type of assignment 2 required                            | fuse gL/gG: 160 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 and 75 mm standard mounting rail |
| • Side-by-side mounting | Yes                                                                    |
| <b>Height</b>           | 146 mm                                                                 |
| <b>Width</b>            | 70 mm                                                                  |
| <b>Depth</b>            | 188 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-sections</b> |                                                                                                              |
| • for main contacts                                 |                                                                                                              |
| — solid                                             | 2x (2.5 ... 16 mm <sup>2</sup> )                                                                             |
| — stranded                                          | 2x (10 ... 50 mm <sup>2</sup> )                                                                              |
| — single or multi-stranded                          | 2x (2,5 ... 16 mm <sup>2</sup> )                                                                             |
| — finely stranded with core end processing          | 2x (2.5 ... 35 mm <sup>2</sup> )                                                                             |
| — finely stranded without core end processing       | 2x (10 ... 35 mm <sup>2</sup> )                                                                              |
| • at AWG conductors for main contacts               | 2x (10 ... 1/0)                                                                                              |
| <b>Type of connectable conductor cross-sections</b> |                                                                                                              |
| • for auxiliary contacts                            |                                                                                                              |
| — 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> ) |
| — finely stranded with core end processing          | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )                                        |
| • at AWG conductors for auxiliary contacts          | 2x (20 ... 16), 2x (18 ... 14), 1x 12                                                                        |

## 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> |

## Shipping Approval



## other

[Umweltbestätigung](#)

[Bestätigungen](#)

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## 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=3RT1046-1CP04-0KV0>

### Cax online generator

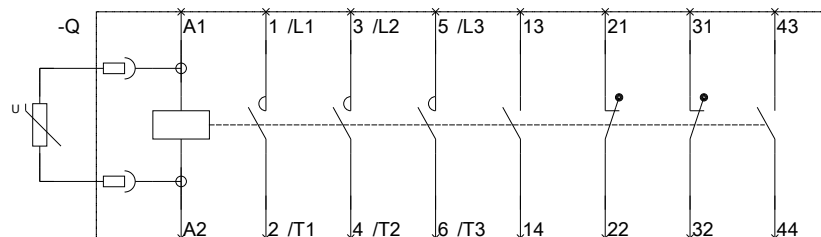
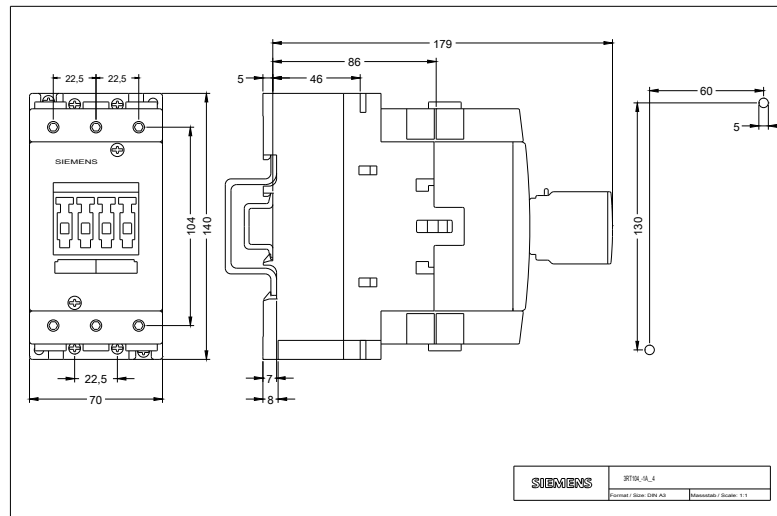
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1046-1CP04-0KV0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1046-1CP04-0KV0>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1046-1CP04-0KV0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1046-1CP04-0KV0&lang=en)



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