

Power contactor, AC-3 65 A, 30 kW / 400 V 220 V AC, 50/60 Hz 3-pole, Size S3, Screw terminal !!! Phased-out product !!! Successor is SIRIUS 3RT2 Preferred successor type is >>3RT2037-1AN20<<



|                                                                                                                                                      |                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| Product brand name                                                                                                                                   | SIRIUS                                                    |
| Product designation                                                                                                                                  | power contactor                                           |
| General technical data                                                                                                                               |                                                           |
| Size of contactor                                                                                                                                    | S3                                                        |
| Insulation voltage <ul style="list-style-type: none"> <li>• rated value</li> </ul>                                                                   | 1 000 V                                                   |
| Degree of pollution                                                                                                                                  | 3                                                         |
| Surge voltage resistance rated value                                                                                                                 | 6 kV                                                      |
| maximum permissible voltage for safe isolation <ul style="list-style-type: none"> <li>• between coil and main contacts acc. to EN 60947-1</li> </ul> | 690 V                                                     |
| Protection class IP <ul style="list-style-type: none"> <li>• on the front</li> <li>• of the terminal</li> </ul>                                      | IP20; IP20 on the front with cover / box terminal<br>IP00 |
| Shock resistance at rectangular impulse <ul style="list-style-type: none"> <li>• at AC</li> </ul>                                                    | 6,8g / 5 ms, 4g / 10 ms                                   |
| Shock resistance with sine pulse <ul style="list-style-type: none"> <li>• at AC</li> </ul>                                                           | 10,6g / 5 ms, 6,2g / 10 ms                                |
| Mechanical service life (switching cycles)                                                                                                           |                                                           |

|                                                                                     |            |
|-------------------------------------------------------------------------------------|------------|
| • of 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>Reference code acc. to DIN EN 81346-2</b>                                        | Q          |

#### Ambient conditions

|                                                        |                |
|--------------------------------------------------------|----------------|
| <b>Installation altitude at height above sea level</b> |                |
| • maximum                                              | 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 NO contacts for main contacts</b>                       | 3      |
| <b>Number of NC contacts for main contacts</b>                       | 0      |
| <b>Operating current</b>                                             |        |
| • at AC-1 at 400 V                                                   |        |
| — at ambient temperature 40 °C rated value                           | 100 A  |
| • at AC-1                                                            |        |
| — up to 690 V at ambient temperature 40 °C rated value               | 100 A  |
| — up to 690 V at ambient temperature 60 °C rated value               | 90 A   |
| — up to 1000 V at ambient temperature 40 °C rated value              | 50 A   |
| — up to 1000 V at ambient temperature 60 °C rated value              | 40 A   |
| • at AC-3                                                            |        |
| — at 400 V rated value                                               | 65 A   |
| — at 690 V rated value                                               | 47 A   |
| — at 1000 V rated value                                              | 25 A   |
| • at AC-4 at 400 V rated value                                       | 55 A   |
| <b>Connectable conductor cross-section in main circuit at AC-1</b>   |        |
| • at 60 °C minimum permissible                                       | 35 mm² |
| • at 40 °C minimum permissible                                       | 35 mm² |
| <b>Operating current for approx. 200000 operating cycles at AC-4</b> |        |
| • at 400 V rated value                                               | 28 A   |
| • at 690 V rated value                                               | 20 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>                                                                                   | 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 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>                                  | <br>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> | <br>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>                                                                                                                                                                                                                                                                                                                                                                                                                    | <br>15.1 kW<br>18.6 kW                                                                                    |
| <b>Thermal short-time current limited to 10 s</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 600 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> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 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   |

#### Control circuit/ Control

|                                                                                |              |
|--------------------------------------------------------------------------------|--------------|
| Type of voltage of the control supply voltage                                  | AC           |
| Control supply voltage at AC                                                   |              |
| • at 50 Hz rated value                                                         | 220 V        |
| • at 60 Hz rated value                                                         | 220 V        |
| Control supply voltage frequency                                               |              |
| • 1 rated value                                                                | 50 Hz        |
| • 2 rated value                                                                | 60 Hz        |
| Operating range factor control supply voltage rated value of magnet coil at AC |              |
| • at 50 Hz                                                                     | 0.8 ... 1.1  |
| • at 60 Hz                                                                     | 0.85 ... 1.1 |
| Apparent pick-up power of magnet coil at AC                                    | 247 V·A      |
| Inductive power factor with closing power of the coil                          | 0.62         |
| Apparent holding power of magnet coil at AC                                    | 25 V·A       |
| Inductive power factor with the holding power of the coil                      | 0.27         |
| Closing delay                                                                  |              |
| • at AC                                                                        | 16 ... 57 ms |
| Opening delay                                                                  |              |
| • at AC                                                                        | 10 ... 19 ms |
| Arcing time                                                                    | 10 ... 15 ms |

#### Auxiliary circuit

|                                              |      |
|----------------------------------------------|------|
| Number of NC contacts for auxiliary contacts |      |
| • instantaneous contact                      | 0    |
| Number of NO contacts for auxiliary contacts |      |
| • instantaneous contact                      | 0    |
| Operating current at AC-12 maximum           | 10 A |
| Operating current at AC-15                   |      |
| • at 230 V rated value                       | 6 A  |
| • at 400 V rated value                       | 3 A  |
| Operating current at DC-12                   |      |
| • at 60 V rated value                        | 6 A  |
| • at 110 V rated value                       | 3 A  |
| • at 220 V rated value                       | 1 A  |
| Operating current at DC-13                   |      |
| • 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                                                                                                  |
| <b>Short-circuit protection</b>                                 |                                                                                                              |
| <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: 125 A                                                                                            |
| • for short-circuit protection of the auxiliary switch required | fuse gL/gG: 10 A                                                                                             |
| <b>Installation/ mounting/ dimensions</b>                       |                                                                                                              |
| <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>                                                    | 139 mm                                                                                                       |
| <b>Required spacing</b>                                         |                                                                                                              |
| • for grounded parts                                            |                                                                                                              |
| — at the side                                                   | 6 mm                                                                                                         |
| <b>Connections/ Terminals</b>                                   |                                                                                                              |
| <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                                                                        |
| <b>Certificates/ approvals</b>                                  |                                                                                                              |

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



CCC



CSA



UL



RCM

[Type Examination Certificate](#)

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



EG-Konf.

[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS



LRS

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



RINA



RMRS

[Miscellaneous](#)

[Confirmation](#)

[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=3RT1044-1AN20>

### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1044-1AN20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1044-1AN20>

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

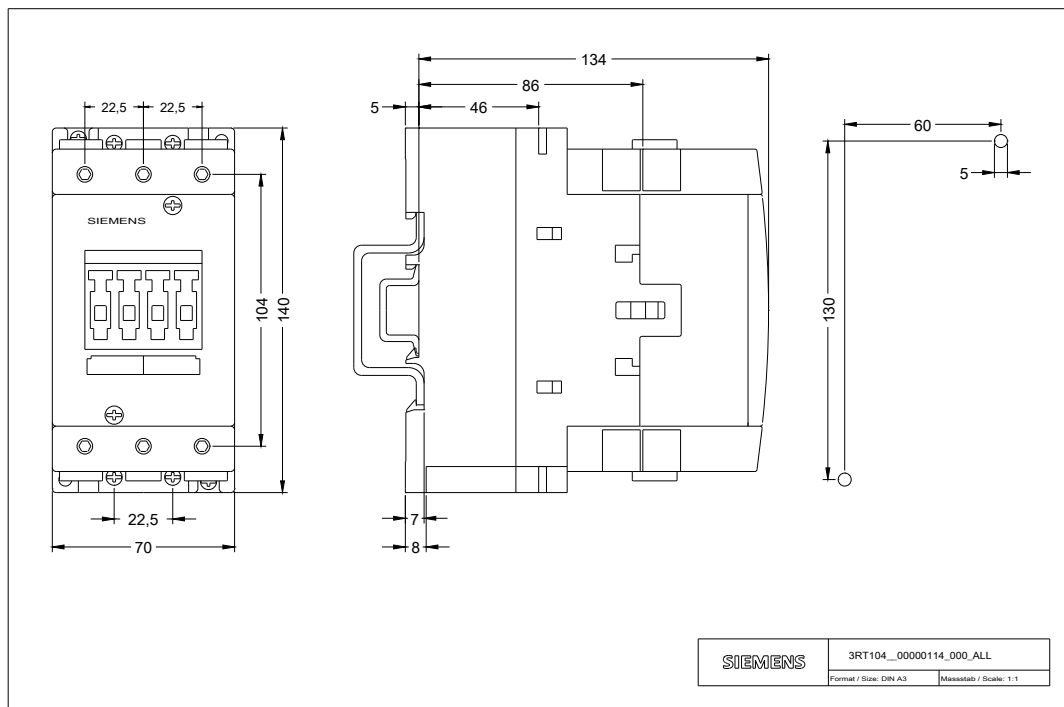
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1044-1AN20&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1044-1AN20&lang=en)

### Characteristic: Tripping characteristics, I<sub>t</sub>, Let-through current

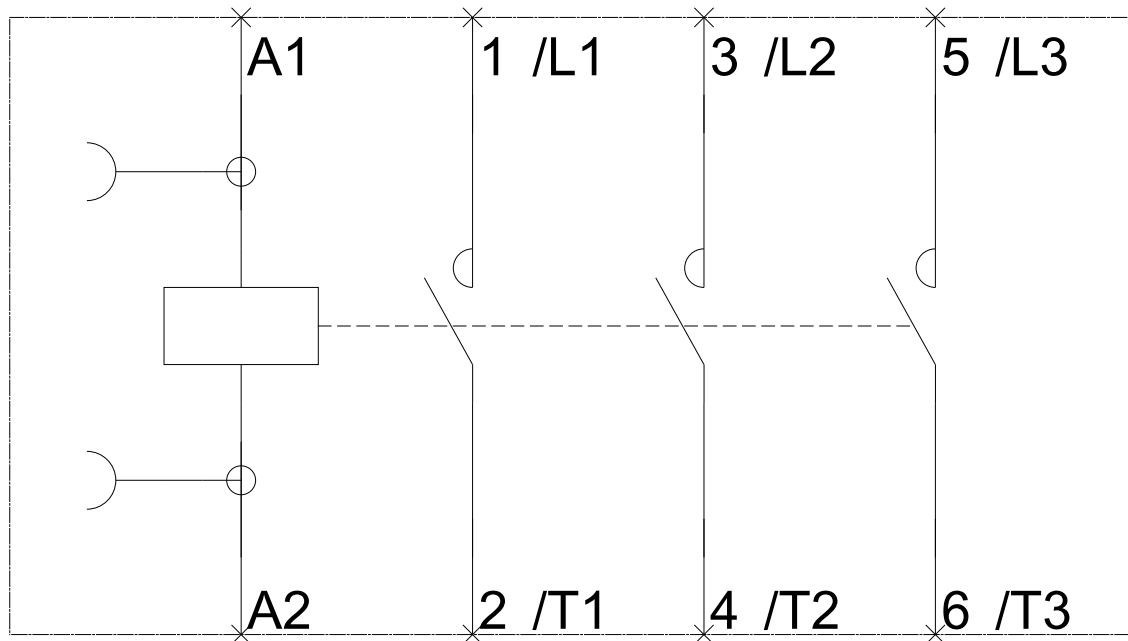
<https://support.industry.siemens.com/cs/ww/en/ps/3RT1044-1AN20/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1044-1AN20&objecttype=14&gridview=view1>



-Q



last modified:

04/07/2020