

CONTACTOR, AC-3, 3KW/400V, 1NO, DC 24V, W. INTEGRATED  
DIODE 3-POLE, SZ S00 SCREW TERMINAL .



Figure similar

|                                                     |                |
|-----------------------------------------------------|----------------|
| product brand name                                  | SIRIUS         |
| Product designation                                 | 3RT2 contactor |
| General technical data                              |                |
| Size of contactor                                   | S00            |
| Product extension                                   |                |
| • function module for communication                 | No             |
| • Auxiliary switch                                  | Yes            |
| 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                                   | IP20           |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| <b>Shock resistance</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                |
| <ul style="list-style-type: none"> <li>• at rectangular impulse <ul style="list-style-type: none"> <li>— at DC</li> </ul> </li> <li>• with sine pulse <ul style="list-style-type: none"> <li>— at DC</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                          | 6,7g / 5 ms, 4,2g / 10 ms<br><br>10,5g / 5 ms, 6,6g / 10 ms    |
| <b>Mechanical service life (switching cycles)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                |
| <ul style="list-style-type: none"> <li>• of contactor typical</li> <li>• of the contactor with added electronics-compatible auxiliary switch block typical</li> <li>• of the contactor with added auxiliary switch block typical</li> </ul>                                                                                                                                                                                                                                                                                                                          | 30 000 000<br>5 000 000<br>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> <li>• during storage</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -25 ... +60 °C<br>-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 voltage</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                |
| <ul style="list-style-type: none"> <li>• at AC-3 rated value maximum</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 690 V                                                          |
| <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> <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> </ul> </li> <li>• at AC-2 at 400 V rated value</li> <li>• at AC-3 <ul style="list-style-type: none"> <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 A<br><br>18 A<br>16 A<br><br>7 A<br><br>7 A<br>6 A<br>4.9 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>                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2.5 mm <sup>2</sup><br>2.5 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>                                                                                                                                                                                                                                    | 2.6 A                                       |
| <ul style="list-style-type: none"> <li>• at 690 V rated value</li> </ul>                                                                                                                                                                                                                                    | 1.8 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> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> </ul>                      | 15 A<br>1.5 A<br>0.6 A<br>0.42 A<br>0.42 A  |
| <ul style="list-style-type: none"> <li>• with 2 current paths in series at DC-1 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> </ul>         | 15 A<br>8.4 A<br>1.2 A<br>0.6 A<br>0.5 A    |
| <ul style="list-style-type: none"> <li>• with 3 current paths in series at DC-1 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> </ul>         | 15 A<br>15 A<br>15 A<br>0.9 A<br>0.7 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> </ul>                                                                                                              | 15 A<br>0.1 A                               |
| <ul style="list-style-type: none"> <li>• with 2 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> <li>— at 110 V rated value</li> <li>— at 24 V rated value</li> </ul> </li> </ul>                                                                                                 | 0.25 A<br>15 A                              |
| <ul style="list-style-type: none"> <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 220 V rated value</li> <li>— at 24 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> </ul> | 15 A<br>1.2 A<br>15 A<br>0.14 A<br>0.14 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 rated value</li> <li>— at 230 V at 60 °C rated value</li> <li>— at 400 V rated value</li> <li>— at 400 V at 60 °C rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul>                     | 6.3 kW<br>6 kW<br>11 kW<br>10.5 kW<br>19 kW |

|                                                                                               |            |
|-----------------------------------------------------------------------------------------------|------------|
| — at 690 V at 60 °C rated value                                                               | 18 kW      |
| • at AC-2 at 400 V rated value                                                                | 3 kW       |
| • at AC-3                                                                                     |            |
| — at 230 V rated value                                                                        | 1.5 kW     |
| — at 400 V rated value                                                                        | 3 kW       |
| — at 690 V rated value                                                                        | 4 kW       |
| <b>Operating power for approx. 200000 operating cycles at AC-4</b>                            |            |
| • at 400 V rated value                                                                        | 1.15 kW    |
| • at 690 V rated value                                                                        | 1.15 kW    |
| <b>Thermal short-time current limited to 10 s</b>                                             | 56 A       |
| <b>Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor</b> | 0.4 W      |
| <b>No-load switching frequency</b>                                                            |            |
| • at DC                                                                                       | 10 000 1/h |
| <b>Operating frequency</b>                                                                    |            |
| • at AC-1 maximum                                                                             | 1 000 1/h  |
| • at AC-2 maximum                                                                             | 750 1/h    |
| • at AC-3 maximum                                                                             | 750 1/h    |
| • at AC-4 maximum                                                                             | 250 1/h    |

#### Control circuit/ Control

|                                                                                       |               |
|---------------------------------------------------------------------------------------|---------------|
| <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>Design of the surge suppressor</b>                                                 | with diode    |
| <b>Closing power of magnet coil at DC</b>                                             | 4 W           |
| <b>Holding power of magnet coil at DC</b>                                             | 4 W           |
| <b>Closing delay</b>                                                                  |               |
| • at DC                                                                               | 30 ... 100 ms |
| <b>Opening delay</b>                                                                  |               |
| • at DC                                                                               | 7 ... 13 ms   |
| <b>Arcing time</b>                                                                    | 10 ... 15 ms  |
| <b>Residual current of the electronics for control with signal &lt;0&gt;</b>          |               |
| • at AC at 230 V maximum permissible                                                  | 3 mA          |
| • at DC at 24 V maximum permissible                                                   | 10 mA         |

#### Auxiliary circuit

|                              |   |
|------------------------------|---|
| <b>Number of NC contacts</b> |   |
| • for auxiliary contacts     |   |
| — instantaneous contact      | 0 |

|                                                                                                                                                                                                                                                                        |                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <b>Number of NO contacts</b>                                                                                                                                                                                                                                           |                                                 |
| <ul style="list-style-type: none"> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>— instantaneous contact</li> </ul> </li> </ul>                                                                                                                  | 1                                               |
| Operating current at AC-12 maximum                                                                                                                                                                                                                                     | 10 A                                            |
| <b>Operating current at AC-15</b>                                                                                                                                                                                                                                      |                                                 |
| <ul style="list-style-type: none"> <li>• at 230 V rated value</li> </ul>                                                                                                                                                                                               | 10 A                                            |
| <ul style="list-style-type: none"> <li>• at 400 V rated value</li> </ul>                                                                                                                                                                                               | 3 A                                             |
| <ul style="list-style-type: none"> <li>• at 500 V rated value</li> </ul>                                                                                                                                                                                               | 2 A                                             |
| <ul style="list-style-type: none"> <li>• at 690 V rated value</li> </ul>                                                                                                                                                                                               | 1 A                                             |
| <b>Operating current at DC-12</b>                                                                                                                                                                                                                                      |                                                 |
| <ul style="list-style-type: none"> <li>• at 24 V rated value</li> </ul>                                                                                                                                                                                                | 10 A                                            |
| <ul style="list-style-type: none"> <li>• at 48 V rated value</li> </ul>                                                                                                                                                                                                | 6 A                                             |
| <ul style="list-style-type: none"> <li>• at 60 V rated value</li> </ul>                                                                                                                                                                                                | 6 A                                             |
| <ul style="list-style-type: none"> <li>• at 110 V rated value</li> </ul>                                                                                                                                                                                               | 3 A                                             |
| <ul style="list-style-type: none"> <li>• at 125 V rated value</li> </ul>                                                                                                                                                                                               | 2 A                                             |
| <ul style="list-style-type: none"> <li>• at 220 V rated value</li> </ul>                                                                                                                                                                                               | 1 A                                             |
| <ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>                                                                                                                                                                                               | 0.15 A                                          |
| <b>Operating current at DC-13</b>                                                                                                                                                                                                                                      |                                                 |
| <ul style="list-style-type: none"> <li>• at 24 V rated value</li> </ul>                                                                                                                                                                                                | 10 A                                            |
| <ul style="list-style-type: none"> <li>• at 48 V rated value</li> </ul>                                                                                                                                                                                                | 2 A                                             |
| <ul style="list-style-type: none"> <li>• at 60 V rated value</li> </ul>                                                                                                                                                                                                | 2 A                                             |
| <ul style="list-style-type: none"> <li>• at 110 V rated value</li> </ul>                                                                                                                                                                                               | 1 A                                             |
| <ul style="list-style-type: none"> <li>• at 125 V rated value</li> </ul>                                                                                                                                                                                               | 0.9 A                                           |
| <ul style="list-style-type: none"> <li>• at 220 V rated value</li> </ul>                                                                                                                                                                                               | 0.3 A                                           |
| <ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>                                                                                                                                                                                               | 0.1 A                                           |
| Contact reliability of auxiliary contacts                                                                                                                                                                                                                              | 1 faulty switching per 100 million (17 V, 1 mA) |
| <b>UL/CSA ratings</b>                                                                                                                                                                                                                                                  |                                                 |
| <b>Full-load current (FLA) for three-phase AC motor</b>                                                                                                                                                                                                                |                                                 |
| <ul style="list-style-type: none"> <li>• at 480 V rated value</li> </ul>                                                                                                                                                                                               | 4.8 A                                           |
| <ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>                                                                                                                                                                                               | 6.1 A                                           |
| <b>Yielded mechanical performance [hp]</b>                                                                                                                                                                                                                             |                                                 |
| <ul style="list-style-type: none"> <li>• for single-phase AC motor <ul style="list-style-type: none"> <li>— at 110/120 V rated value</li> <li>— at 230 V rated value</li> </ul> </li> </ul>                                                                            | 0.25 hp<br>0.75 hp                              |
| <ul style="list-style-type: none"> <li>• for three-phase AC motor <ul style="list-style-type: none"> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> <li>— at 460/480 V rated value</li> <li>— at 575/600 V rated value</li> </ul> </li> </ul> | 1.5 hp<br>2 hp<br>3 hp<br>5 hp                  |
| Contact rating of auxiliary contacts according to UL                                                                                                                                                                                                                   | A600 / Q600                                     |
| <b>Short-circuit protection</b>                                                                                                                                                                                                                                        |                                                 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <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>                                                                                                                                                                                                                                                                        | gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A<br>gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20 A<br>fuse gL/gG: 10 A                 |
| <b>Installation/ mounting/ dimensions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                      |
| <b>Mounting position</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface |
| <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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 58 mm                                                                                                                                |
| <b>Width</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 45 mm                                                                                                                                |
| <b>Depth</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 73 mm                                                                                                                                |
| <b>Required spacing</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— at the side</li> <li>— downwards</li> </ul> </li> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul> | 0 mm<br>0 mm<br>0 mm<br>0 mm<br>0 mm<br><br>0 mm<br>0 mm<br>0 mm<br>6 mm<br>0 mm<br><br>0 mm<br>0 mm<br>0 mm<br>0 mm<br>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> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm²                                                                                |

- single or multi-stranded
- finely stranded with core end processing
- at AWG conductors for main contacts

2x (0,5 ... 1,5 mm<sup>2</sup>), 2x (0,75 ... 2,5 mm<sup>2</sup>), 2x 4 mm<sup>2</sup>  
 2x (0,5 ... 1,5 mm<sup>2</sup>), 2x (0,75 ... 2,5 mm<sup>2</sup>)  
 2x (20 ... 16), 2x (18 ... 14), 2x 12

#### Type of connectable conductor cross-sections

- for auxiliary contacts
  - single or multi-stranded
  - finely stranded with core end processing
- at AWG conductors for auxiliary contacts

2x (0,5 ... 1,5 mm<sup>2</sup>), 2x (0,75 ... 2,5 mm<sup>2</sup>), 2x 4 mm<sup>2</sup>  
 2x (0,5 ... 1,5 mm<sup>2</sup>), 2x (0,75 ... 2,5 mm<sup>2</sup>)  
 2x (20 ... 16), 2x (18 ... 14), 2x 12

#### Safety related data

##### B10 value

- with high demand rate acc. to SN 31920

1 000 000

##### Proportion of dangerous failures

- with low demand rate acc. to SN 31920
- with high demand rate acc. to SN 31920

40 %

73 %

##### Failure rate [FIT]

- with low demand rate acc. to SN 31920

100 FIT

##### Product function

- Mirror contact acc. to IEC 60947-4-1

Yes; with 3RH29

##### T1 value for proof test interval or service life acc. to IEC 61508

20 y

#### Certificates/approvals

##### General Product Approval

##### Declaration of Conformity

##### Test Certificates



CCC



CSA

[KTL](#)



EG-Konf.

[spezielle Prüfbescheinigungen](#)

[n](#)

##### Test Certificates

##### Shipping Approval

[Typprüfbescheinigung/Werkszeugnis](#)



ABS



BUREAU VERITAS



DNV



GL



LRS

##### Shipping Approval

##### other



PRS



RINA



RMRS

[Umweltbestätigung](#)

[Bestätigungen](#)

## 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=3RT2015-1FB41-Z W96>

### Cax online generator

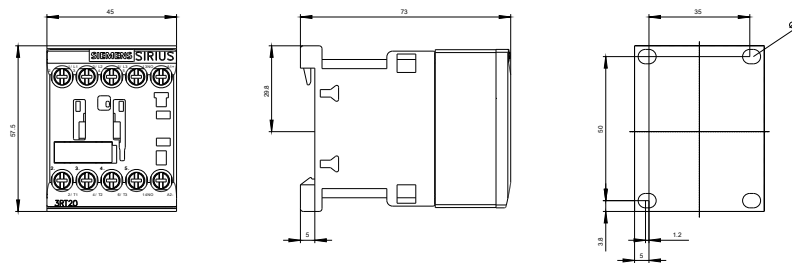
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2015-1FB41-Z W96>

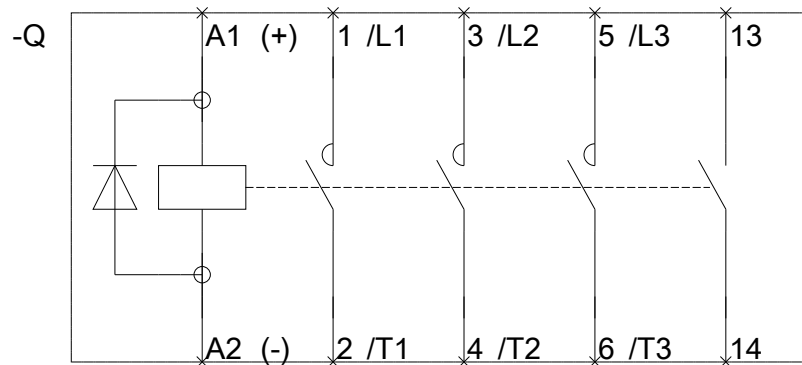
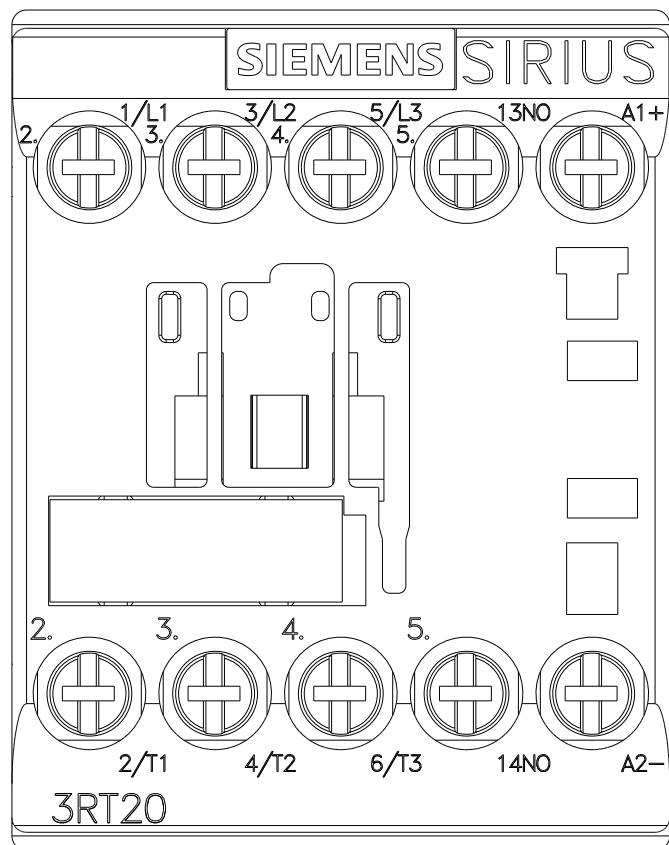
### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2015-1FB41-Z W96>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2015-1FB41-Z W96&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2015-1FB41-Z W96&lang=en)





last modified:

09/20/2016