

CONT. F. RAILW. A., AC-3, 5.5KW 400V, DC 24V, 0,7...1,25\*US,  
VARISTOR INTEGRATED, 3-POLE, SZ S00 RING CABLE LUG  
CONNECTION



Figure similar

|                                                     |                |
|-----------------------------------------------------|----------------|
| product brandname                                   | SIRIUS         |
| Product designation                                 | 3RT2 contactor |
| General technical data                              |                |
| Size of contactor                                   | S00            |
| Product extension                                   |                |
| • function module for communication                 | No             |
| • Auxiliary switch                                  | No             |
| 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                                      | IP00           |
| • of the terminal                                   | IP00           |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <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>                                                                                                                                                                                                                                                                                                                                          | 7.3g / 5 ms, 4.7g / 10 ms<br><br>11,4g / 5 ms, 7,3g / 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 operation Note</li> <li>• during storage</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                      | -40 ... +70 °C<br>Railway application: See catalog for rated conditions<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> | 22 A<br><br>22 A<br>20 A<br><br>12 A<br><br>12 A<br>9.2 A<br>6.7 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>4 mm <sup>2</sup>                                                  |

|                                                                      |        |
|----------------------------------------------------------------------|--------|
| <b>Operating current for approx. 200000 operating cycles at AC-4</b> |        |
| • at 400 V rated value                                               | 4.1 A  |
| • at 690 V rated value                                               | 3.3 A  |
| <b>Operating current</b>                                             |        |
| • at 1 current path at DC-1                                          |        |
| — at 24 V rated value                                                | 20 A   |
| — at 110 V rated value                                               | 2.1 A  |
| — at 220 V rated value                                               | 0.8 A  |
| — at 440 V rated value                                               | 0.6 A  |
| — at 600 V rated value                                               | 0.6 A  |
| • with 2 current paths in series at DC-1                             |        |
| — at 24 V rated value                                                | 20 A   |
| — at 110 V rated value                                               | 12 A   |
| — at 220 V rated value                                               | 1.6 A  |
| — at 440 V rated value                                               | 0.8 A  |
| — at 600 V rated value                                               | 0.7 A  |
| • with 3 current paths in series at DC-1                             |        |
| — at 24 V rated value                                                | 20 A   |
| — at 110 V rated value                                               | 20 A   |
| — at 220 V rated value                                               | 20 A   |
| — at 440 V rated value                                               | 1.3 A  |
| — at 600 V rated value                                               | 1 A    |
| <b>Operating current</b>                                             |        |
| • at 1 current path at DC-3 at DC-5                                  |        |
| — at 24 V rated value                                                | 20 A   |
| — at 110 V rated value                                               | 0.1 A  |
| • with 2 current paths in series at DC-3 at DC-5                     |        |
| — at 110 V rated value                                               | 0.35 A |
| — at 24 V rated value                                                | 20 A   |
| • with 3 current paths in series at DC-3 at DC-5                     |        |
| — at 110 V rated value                                               | 20 A   |
| — at 220 V rated value                                               | 1.5 A  |
| — at 24 V rated value                                                | 20 A   |
| — at 440 V rated value                                               | 0.2 A  |
| — at 600 V rated value                                               | 0.2 A  |
| <b>Operating power</b>                                               |        |
| • at AC-1                                                            |        |
| — at 230 V rated value                                               | 7.5 kW |
| — at 230 V at 60 °C rated value                                      | 7.5 kW |
| — at 400 V rated value                                               | 13 kW  |

|                                                                                               |            |
|-----------------------------------------------------------------------------------------------|------------|
| — at 400 V at 60 °C rated value                                                               | 13 kW      |
| — at 690 V rated value                                                                        | 22 kW      |
| — at 690 V at 60 °C rated value                                                               | 22 kW      |
| • at AC-2 at 400 V rated value                                                                | 5.5 kW     |
| • at AC-3                                                                                     |            |
| — at 230 V rated value                                                                        | 3 kW       |
| — at 400 V rated value                                                                        | 5.5 kW     |
| — at 690 V rated value                                                                        | 5.5 kW     |
| <b>Operating power for approx. 200000 operating cycles at AC-4</b>                            |            |
| • at 400 V rated value                                                                        | 2 kW       |
| • at 690 V rated value                                                                        | 2.5 kW     |
| <b>Thermal short-time current limited to 10 s</b>                                             | 90 A       |
| <b>Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor</b> | 1.2 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> | 0.7 ... 1.25  |
| <b>Design of the surge suppressor</b>                                                 | with varistor |
| <b>Closing power of magnet coil at DC</b>                                             | 2.8 W         |
| <b>Holding power of magnet coil at DC</b>                                             | 2.8 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                                                  | 4 mA          |
| • at DC at 24 V maximum permissible                                                   | 10 mA         |

| Auxiliary circuit            |  |
|------------------------------|--|
| <b>Number of NC 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                                               |
| <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>       | 0                                               |
| 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                                           |
| <b>Contact reliability of auxiliary contacts</b>                                                                                                            | 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>                                                                                    | 11 A                                            |
| <ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>                                                                                    | 11 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> </ul> </li> </ul> | 0.5 hp                                          |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at 230 V rated value</li> </ul> </li> </ul>                                | 2 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> </ul> </li> </ul>  | 3 hp                                            |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at 220/230 V rated value</li> </ul> </li> </ul>                            | 3 hp                                            |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at 460/480 V rated value</li> </ul> </li> </ul>                            | 7.5 hp                                          |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at 575/600 V rated value</li> </ul> </li> </ul>                            | 10 hp                                           |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Contact rating of auxiliary contacts according to UL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | A600 / Q600                                                                                                                          |
| Short-circuit protection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                      |
| <b>Design of the fuse link</b> <ul style="list-style-type: none"> <li>for short-circuit protection of the main circuit <ul style="list-style-type: none"> <li>with type of coordination 1 required</li> <li>with type of assignment 2 required</li> </ul> </li> <li>for short-circuit protection of the auxiliary switch required</li> </ul>                                                                                                                                                                                                                                     | gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 50 A<br>gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25 A<br>fuse gL/gG: 10 A                     |
| Installation/ mounting/ dimensions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                      |
| <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> <ul style="list-style-type: none"> <li>Side-by-side mounting</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022<br>Yes                                        |
| <b>Height</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 58 mm                                                                                                                                |
| <b>Width</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 45 mm                                                                                                                                |
| <b>Depth</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 117 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         |
| Connections/Terminals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                      |
| <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>                                                                                                                                                                                                                                                                                                                                                                                                               | ring cable connection<br>ring cable connection                                                                                       |

## Safety related data

|                                                                           |           |
|---------------------------------------------------------------------------|-----------|
| <b>B10 value</b>                                                          |           |
| • with high demand rate acc. to SN 31920                                  | 1 000 000 |
| <b>Proportion of dangerous failures</b>                                   |           |
| • with low demand rate acc. to SN 31920                                   | 40 %      |
| • with high demand rate acc. to SN 31920                                  | 73 %      |
| <b>Failure rate [FIT]</b>                                                 |           |
| • with low demand rate acc. to SN 31920                                   | 100 FIT   |
| <b>Product function</b>                                                   |           |
| • Mirror contact acc. to IEC 60947-4-1                                    | Yes       |
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b> | 20 y      |

## Certificates/approvals

| General Product Approval                                                                 | Declaration of Conformity                                                                       |
|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <br>CCC | <br>EG-Konf. |
| <br>CSA | <br>UL         |
| <br>KTL | <br>EAC      |

| Test Certificates                                                | Shipping Approval                                                                                     |
|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <a href="#">spezielle Prüfbescheinigung</a><br><a href="#">n</a> | <br>ABS            |
| <a href="#">Typprüfbescheinigung/Werkszeugnis</a>                | <br>BUREAU VERITAS |
|                                                                  | <br>DNV          |
|                                                                  | <br>GL           |

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

| other                                                                                      | Railway                                                |
|--------------------------------------------------------------------------------------------|--------------------------------------------------------|
| <br>VDE | <a href="#">Schwingen/Schocke</a><br><a href="#">n</a> |

## Further information

Information- and Downloadcenter (Catalogs, Brochures,...)  
<http://www.siemens.com/industrial-controls/catalogs>

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2017-4LB42-0LA0>

**Cax online generator**

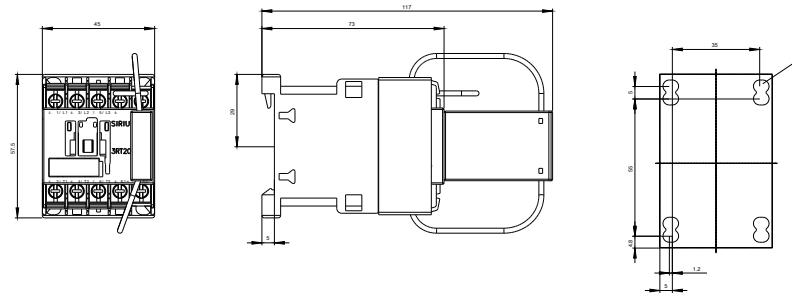
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2017-4LB42-0LA0>

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

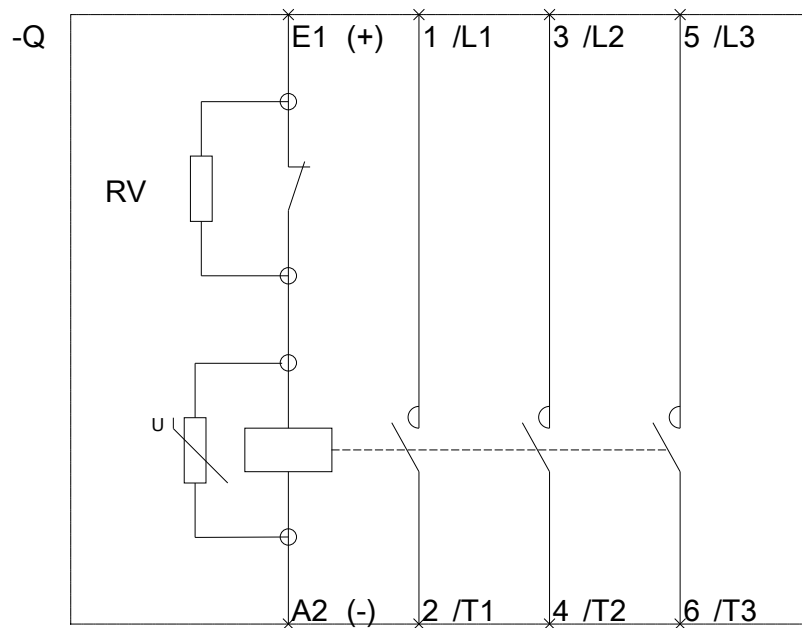
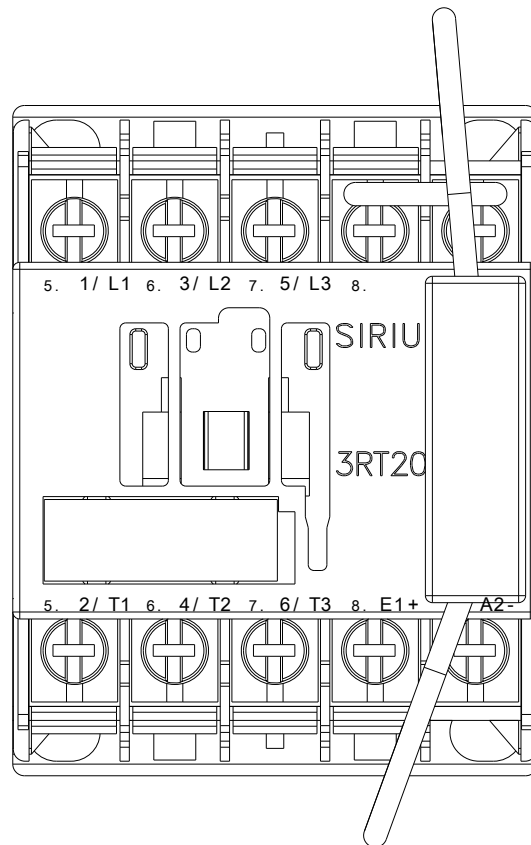
<https://support.industry.siemens.com/cs/ww/en/ps/3RT2017-4LB42-0LA0>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2017-4LB42-0LA0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2017-4LB42-0LA0&lang=en)







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