

CONTACTOR, AC-3, 5.5KW/400V, 1NO, AC 24V, 50/60 HZ, 3-POLE, SZ S00, 120 PIECES SPRING-LOADED TERMINAL



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                                  | 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 AC</li> </ul> </li> <li>• with sine pulse <ul style="list-style-type: none"> <li>— at AC</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 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> | 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                    |

|                                                                                                                                                                                                                                                                                                             |                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| <ul style="list-style-type: none"> <li>• at 400 V rated value</li> </ul>                                                                                                                                                                                                                                    | 4.1 A                                       |
| <ul style="list-style-type: none"> <li>• at 690 V rated value</li> </ul>                                                                                                                                                                                                                                    | 3.3 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>                      | 20 A<br>2.1 A<br>0.8 A<br>0.6 A<br>0.6 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>         | 20 A<br>12 A<br>1.6 A<br>0.8 A<br>0.7 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>         | 20 A<br>20 A<br>20 A<br>1.3 A<br>1 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>                                                                                                              | 20 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>                                                                                                 | 0.35 A<br>20 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> | 20 A<br>1.5 A<br>20 A<br>0.2 A<br>0.2 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>                     | 7.5 kW<br>7.5 kW<br>13 kW<br>13 kW<br>22 kW |

|                                                                                                                              |              |
|------------------------------------------------------------------------------------------------------------------------------|--------------|
| <ul style="list-style-type: none"> <li>— at 690 V at 60 °C rated value</li> </ul>                                            | 22 kW        |
| <ul style="list-style-type: none"> <li>• at AC-2 at 400 V rated value</li> </ul>                                             | 5.5 kW       |
| <ul style="list-style-type: none"> <li>• at AC-3</li> </ul>                                                                  |              |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at 230 V rated value</li> </ul> </li> </ul> | 3 kW         |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at 400 V rated value</li> </ul> </li> </ul> | 5.5 kW       |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at 690 V rated value</li> </ul> </li> </ul> | 5.5 kW       |
| <b>Operating power for approx. 200000 operating cycles at AC-4</b>                                                           |              |
| <ul style="list-style-type: none"> <li>• at 400 V rated value</li> </ul>                                                     | 2 kW         |
| <ul style="list-style-type: none"> <li>• at 690 V rated value</li> </ul>                                                     | 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>                                                                                           |              |
| <ul style="list-style-type: none"> <li>• at AC</li> </ul>                                                                    | 10 000 1/h   |
| <b>Operating frequency</b>                                                                                                   |              |
| <ul style="list-style-type: none"> <li>• at AC-1 maximum</li> </ul>                                                          | 1 000 1/h    |
| <ul style="list-style-type: none"> <li>• at AC-2 maximum</li> </ul>                                                          | 750 1/h      |
| <ul style="list-style-type: none"> <li>• at AC-3 maximum</li> </ul>                                                          | 750 1/h      |
| <ul style="list-style-type: none"> <li>• at AC-4 maximum</li> </ul>                                                          | 250 1/h      |
| <b>Control circuit/ Control</b>                                                                                              |              |
| <b>Type of voltage of the control supply voltage</b>                                                                         | AC           |
| <b>Control supply voltage at AC</b>                                                                                          |              |
| <ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> </ul>                                                     | 24 V         |
| <ul style="list-style-type: none"> <li>• at 60 Hz rated value</li> </ul>                                                     | 24 V         |
| <b>Operating range factor control supply voltage rated value of magnet coil at AC</b>                                        |              |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>                                                                 | 0.8 ... 1.1  |
| <ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>                                                                 | 0.85 ... 1.1 |
| <b>Apparent pick-up power of magnet coil at AC</b>                                                                           |              |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>                                                                 | 37 V·A       |
| <ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>                                                                 | 43 V·A       |
| <b>Inductive power factor with closing power of the coil</b>                                                                 |              |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>                                                                 | 0.8          |
| <ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>                                                                 | 0.8          |
| <b>Apparent holding power of magnet coil at AC</b>                                                                           |              |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>                                                                 | 5.7 V·A      |
| <ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>                                                                 | 6.5 V·A      |
| <b>Inductive power factor with the holding power of the coil</b>                                                             |              |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>                                                                 | 0.25         |
| <ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>                                                                 | 0.25         |

|                                                                              |              |
|------------------------------------------------------------------------------|--------------|
| <b>Closing delay</b>                                                         |              |
| • at AC                                                                      | 8 ... 33 ms  |
| <b>Opening delay</b>                                                         |              |
| • at AC                                                                      | 4 ... 15 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>                     |                                                 |
| • for auxiliary contacts                         |                                                 |
| — instantaneous contact                          | 0                                               |
| <b>Number of NO contacts</b>                     |                                                 |
| • for auxiliary contacts                         |                                                 |
| — instantaneous contact                          | 1                                               |
| Operating current at AC-12 maximum               | 10 A                                            |
| <b>Operating current at AC-15</b>                |                                                 |
| • at 230 V rated value                           | 10 A                                            |
| • at 400 V rated value                           | 3 A                                             |
| • at 500 V rated value                           | 2 A                                             |
| • at 690 V rated value                           | 1 A                                             |
| <b>Operating current at DC-12</b>                |                                                 |
| • at 24 V rated value                            | 10 A                                            |
| • at 48 V rated value                            | 6 A                                             |
| • at 60 V rated value                            | 6 A                                             |
| • at 110 V rated value                           | 3 A                                             |
| • at 125 V rated value                           | 2 A                                             |
| • at 220 V rated value                           | 1 A                                             |
| • at 600 V rated value                           | 0.15 A                                          |
| <b>Operating current at DC-13</b>                |                                                 |
| • at 24 V rated value                            | 10 A                                            |
| • at 48 V rated value                            | 2 A                                             |
| • at 60 V rated value                            | 2 A                                             |
| • at 110 V rated value                           | 1 A                                             |
| • at 125 V rated value                           | 0.9 A                                           |
| • at 220 V rated value                           | 0.3 A                                           |
| • at 600 V rated value                           | 0.1 A                                           |
| <b>Contact reliability of auxiliary contacts</b> | 1 faulty switching per 100 million (17 V, 1 mA) |

#### UL/CSA ratings

|                                                         |  |
|---------------------------------------------------------|--|
| <b>Full-load current (FLA) for three-phase AC motor</b> |  |
|---------------------------------------------------------|--|

|                                                             |             |
|-------------------------------------------------------------|-------------|
| • at 480 V rated value                                      | 11 A        |
| • at 600 V rated value                                      | 11 A        |
| <b>Yielded mechanical performance [hp]</b>                  |             |
| • for single-phase AC motor                                 |             |
| — at 110/120 V rated value                                  | 0.5 hp      |
| — at 230 V rated value                                      | 2 hp        |
| • for three-phase AC motor                                  |             |
| — at 200/208 V rated value                                  | 3 hp        |
| — at 220/230 V rated value                                  | 3 hp        |
| — at 460/480 V rated value                                  | 7.5 hp      |
| — at 575/600 V rated value                                  | 10 hp       |
| <b>Contact rating of auxiliary contacts according to UL</b> | A600 / Q600 |

### Short-circuit protection

|                                                                 |                                                |
|-----------------------------------------------------------------|------------------------------------------------|
| <b>Design of the fuse link</b>                                  |                                                |
| • for short-circuit protection of the main circuit              |                                                |
| — with type of coordination 1 required                          | gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 50 A     |
| — with type of assignment 2 required                            | gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25 A |
| • for short-circuit protection of the auxiliary switch required | 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>         | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022                                               |
| • Side-by-side mounting      | Yes                                                                                                                                  |
| <b>Height</b>                | 70 mm                                                                                                                                |
| <b>Width</b>                 | 45 mm                                                                                                                                |
| <b>Depth</b>                 | 73 mm                                                                                                                                |
| <b>Required spacing</b>      |                                                                                                                                      |
| • with side-by-side mounting |                                                                                                                                      |
| — forwards                   | 0 mm                                                                                                                                 |
| — Backwards                  | 0 mm                                                                                                                                 |
| — upwards                    | 0 mm                                                                                                                                 |
| — downwards                  | 0 mm                                                                                                                                 |
| — at the side                | 0 mm                                                                                                                                 |
| • for grounded parts         |                                                                                                                                      |
| — forwards                   | 0 mm                                                                                                                                 |
| — Backwards                  | 0 mm                                                                                                                                 |
| — upwards                    | 0 mm                                                                                                                                 |
| — at the side                | 6 mm                                                                                                                                 |
| — downwards                  | 0 mm                                                                                                                                 |

|                  |      |
|------------------|------|
| • for live parts |      |
| — forwards       | 0 mm |
| — Backwards      | 0 mm |
| — upwards        | 0 mm |
| — downwards      | 0 mm |
| — at the side    | 6 mm |

## Connections/Terminals

|                                                     |                                   |
|-----------------------------------------------------|-----------------------------------|
| <b>Type of electrical connection</b>                |                                   |
| • for main current circuit                          | spring-loaded terminals           |
| • for auxiliary and control current circuit         | spring-loaded terminals           |
| <b>Type of connectable conductor cross-sections</b> |                                   |
| • for main contacts                                 |                                   |
| — solid                                             | 2x (0.5 ... 4 mm <sup>2</sup> )   |
| — single or multi-stranded                          | 2x (0,5 ... 4 mm <sup>2</sup> )   |
| — finely stranded with core end processing          | 2x (0.5 ... 2.5 mm <sup>2</sup> ) |
| — finely stranded without core end processing       | 2x (0.5 ... 2.5 mm <sup>2</sup> ) |
| • at AWG conductors for main contacts               | 2x (20 ... 12)                    |
| <b>Type of connectable conductor cross-sections</b> |                                   |
| • for auxiliary contacts                            |                                   |
| — single or multi-stranded                          | 2x (0,5 ... 4 mm <sup>2</sup> )   |
| — finely stranded with core end processing          | 2x (0.5 ... 2.5 mm <sup>2</sup> ) |
| — finely stranded without core end processing       | 2x (0.5 ... 2.5 mm <sup>2</sup> ) |
| • at AWG conductors for auxiliary contacts          | 2x (20 ... 12)                    |

## 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; with 3RH29 |
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b> | 20 y            |
| <b>Protection against electrical shock</b>                                | finger-safe     |

## Certificates/approvals

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

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

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

#### 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=3RT2017-2AB01-Z X95>

##### Cax online generator

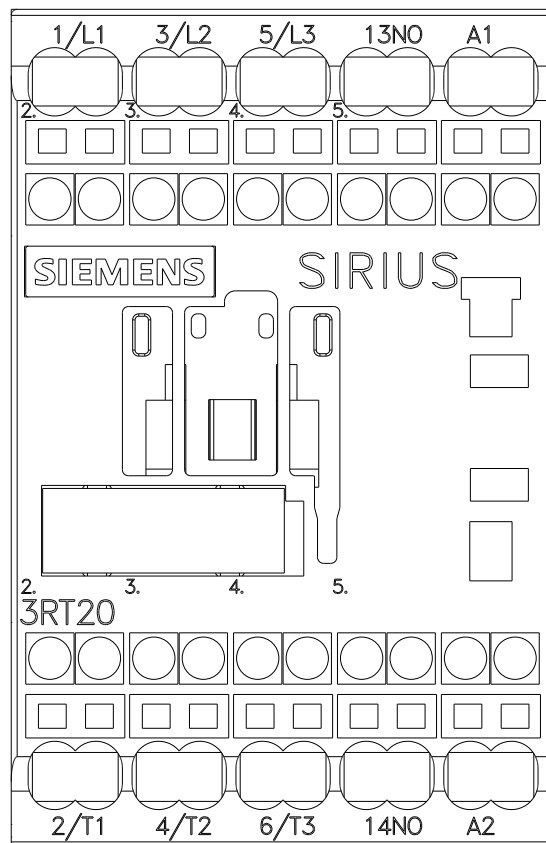
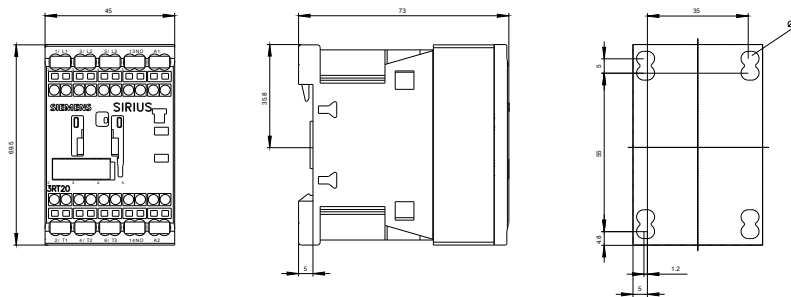
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2017-2AB01-Z X95>

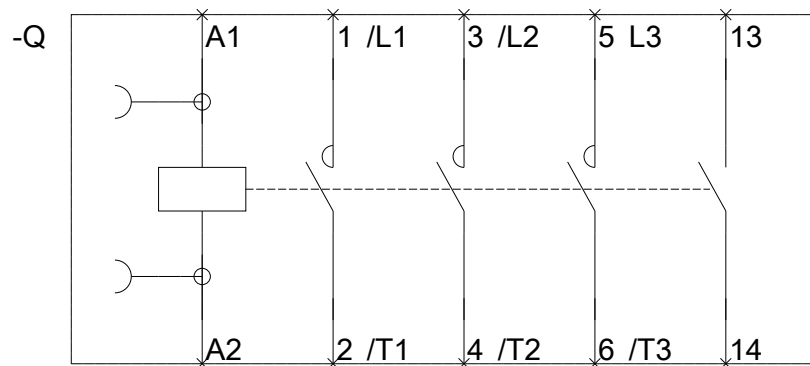
##### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2017-2AB01-Z X95>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2017-2AB01-Z X95&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2017-2AB01-Z X95&lang=en)





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