

Power contactor, AC-3 12 A, 5.5 kW / 400 V 1 NC, 600 V AC, 60 Hz  
3-pole, Size S00 screw terminal



|  |                 |
|--|-----------------|
| product brand name   | SIRIUS          |
| product designation  | Power contactor |
| product type designation   | 3RT2            |
| General technical data   |                 |
| size of contactor  | S00             |
| product extension  |                 |
| • function module for communication  | No              |
| • auxiliary switch   | Yes             |
| power loss [W] for rated value of the current                                    |                 |
| • at AC in hot operating state   | 3.6 W           |
| • at AC in hot operating state per pole  | 1.2 W           |
| power loss [W] for rated value of the current without load current share typical | 6.5 W           |
| surge voltage resistance   |                 |
| • of main circuit rated value  | 6 kV            |
| • of auxiliary circuit rated value   | 6 kV            |
| maximum permissible voltage for safe isolation                                   |                 |
| • between coil and main contacts acc. to EN 60947-1                              | 400 V           |

|   |                            |
|---|----------------------------|
| <b>protection class IP</b>  |                            |
| • on the front  | IP20                       |
| • of the terminal   | IP20                       |
| <b>shock resistance at rectangular impulse</b>                                      |                            |
| • at AC   | 7,3g / 5 ms, 4,7g / 10 ms  |
| <b>shock resistance with sine pulse</b>   |                            |
| • at AC   | 11,4g / 5 ms, 7,3g / 10 ms |
| <b>mechanical service life (switching cycles)</b>                                   |                            |
| • of contactor typical  | 30 000 000                 |
| • of the contactor with added electronics-compatible auxiliary switch block typical | 5 000 000                  |
| • of the contactor with added auxiliary switch block typical                        | 10 000 000                 |
| <b>reference code acc. to DIN EN 81346-2</b>  | Q                          |

|   |                |
|---|----------------|
| <b>Ambient conditions</b>                                 |                |
| • installation altitude at height above sea level maximum | 2 000 m        |
| <b>ambient temperature</b>                                |                |
| • during operation  | -25 ... +60 °C |
| • during storage  | -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>operating voltage</b>  |        |
| • at AC-3 rated value maximum                                       | 690 V  |
| <b>operating current</b>  |        |
| • at AC-1 at 400 V<br>— at ambient temperature 40 °C rated value    | 22 A   |
| • at AC-1<br>— up to 690 V at ambient temperature 40 °C rated value | 22 A   |
| — up to 690 V at ambient temperature 60 °C rated value              | 20 A   |
| • at AC-3<br>— at 400 V rated value                                 | 12 A   |
| — at 500 V rated value  | 9.2 A  |
| — at 690 V rated value  | 6.7 A  |
| • at AC-4 at 400 V rated value                                      | 8.5 A  |
| • at AC-5a up to 690 V rated value                                  | 19.4 A |
| • at AC-5b up to 400 V rated value                                  | 9.9 A  |
| • at AC-6a  |        |

|  |                   |
|--|-------------------|
| — up to 230 V for current peak value n=20 rated value                | 7.2 A             |
| — up to 400 V for current peak value n=20 rated value                | 7.2 A             |
| — up to 500 V for current peak value n=20 rated value                | 7.2 A             |
| — up to 690 V for current peak value n=20 rated value                | 6.7 A             |
| • at AC-6a   |                   |
| — up to 230 V for current peak value n=30 rated value                | 4.8 A             |
| — up to 400 V for current peak value n=30 rated value                | 4.8 A             |
| — up to 500 V for current peak value n=30 rated value                | 4.8 A             |
| — up to 690 V for current peak value n=30 rated value                | 4.8 A             |
| <b>minimum cross-section in main circuit</b>                         |                   |
| • at maximum AC-1 rated value  | 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>   |                   |

|  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• at 1 current path at DC-3 at DC-5 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> </ul> </li> <li>• with 2 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> </ul> </li> <li>• with 3 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> <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>0.1 A<br><br>20 A<br>0.35 A<br><br>20 A<br>20 A<br>1.5 A<br>0.2 A<br>0.2 A |
| <b>operating power</b> <ul style="list-style-type: none"> <li>• at AC-2 at 400 V rated value</li> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 230 V rated value</li> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul>   | 5.5 kW<br><br>3 kW<br>5.5 kW<br>5.5 kW<br>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> <li>• at 690 V rated value</li> </ul>  | 2 kW<br>2.5 kW   |
| <b>operating apparent output at AC-6a</b> <ul style="list-style-type: none"> <li>• up to 230 V for current peak value n=20 rated value</li> <li>• up to 400 V for current peak value n=20 rated value</li> <li>• up to 500 V for current peak value n=20 rated value</li> <li>• up to 690 V for current peak value n=20 rated value</li> </ul>   | 2.8 kV·A<br>4.9 kV·A<br>6.2 kV·A<br>8 kV·A   |
| <b>operating apparent output at AC-6a</b> <ul style="list-style-type: none"> <li>• up to 230 V for current peak value n=30 rated value</li> <li>• up to 400 V for current peak value n=30 rated value</li> <li>• up to 500 V for current peak value n=30 rated value</li> <li>• up to 690 V for current peak value n=30 rated value</li> </ul>   | 1.9 kV·A<br>3.3 kV·A<br>4.1 kV·A<br>5.7 kV·A                                       |
| <b>short-time withstand current in cold operating state up to 40 °C</b>  |  |

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• limited to 1 s switching at zero current maximum</li> <li>• limited to 5 s switching at zero current maximum</li> <li>• limited to 10 s switching at zero current maximum</li> <li>• limited to 30 s switching at zero current maximum</li> <li>• limited to 60 s switching at zero current maximum</li> </ul> | 200 A; Use minimum cross-section acc. to AC-1 rated value<br><br>123 A; Use minimum cross-section acc. to AC-1 rated value<br><br>96 A; Use minimum cross-section acc. to AC-1 rated value<br><br>74 A; Use minimum cross-section acc. to AC-1 rated value<br><br>61 A; Use minimum cross-section acc. to AC-1 rated value |
| <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> <li>• at AC-2 maximum</li> <li>• at AC-3 maximum</li> <li>• at AC-4 maximum</li> </ul>  | 1 000 1/h<br>750 1/h<br>750 1/h<br>250 1/h   |

| Control circuit/ Control  |                  |
|---|------------------|
| <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 60 Hz rated value</li> </ul>              | 600 V            |
| <b>operating range factor control supply voltage rated value of magnet coil at AC</b> |                  |
| <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 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 60 Hz</li> </ul>                          | 0.8              |
| <b>apparent holding power of magnet coil at AC</b>                                    |                  |
| <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 60 Hz</li> </ul>                          | 0.25             |
| <b>closing delay</b>  |                  |
| <ul style="list-style-type: none"> <li>• at AC</li> </ul>                             | 8 ... 33 ms      |
| <b>opening delay</b>  |                  |
| <ul style="list-style-type: none"> <li>• at AC</li> </ul>                             | 4 ... 15 ms      |
| <b>arcing time</b>  | 10 ... 15 ms     |
| <b>control version of the switch operating mechanism</b>                              | Standard A1 - A2 |

| Auxiliary circuit   |   |
|---|---|
| <b>number of NC contacts for auxiliary contacts</b>                       |   |
| <ul style="list-style-type: none"> <li>• instantaneous contact</li> </ul> | 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                          | gG: 50A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)   |
| — with type of assignment 2 required                            | gG: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA) |
| • for short-circuit protection of the auxiliary switch required | gG: 10 A (500 V, 1 kA)  |

## 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 60715   |
| • side-by-side mounting      | Yes  |
| <b>height</b>                | 58 mm  |
| <b>width</b>                 | 45 mm  |
| <b>depth</b>                 | 73 mm  |
| <b>required spacing</b>      |  |
| • with side-by-side mounting |  |
| — forwards                   | 10 mm  |
| — upwards                    | 10 mm  |
| — downwards                  | 10 mm  |
| — at the side                | 0 mm   |
| • for grounded parts         |  |
| — forwards                   | 10 mm  |
| — upwards                    | 10 mm  |
| — at the side                | 6 mm   |
| — downwards                  | 10 mm  |
| • for live parts             |  |
| — forwards                   | 10 mm  |
| — upwards                    | 10 mm  |
| — downwards                  | 10 mm  |
| — at the side                | 6 mm   |

## Connections/ Terminals

|   |   |
|---|---|
| <b>type of electrical connection</b>                |   |
| • for main current circuit                          | screw-type terminals                                  |
| • for auxiliary and control current circuit         | screw-type terminals                                  |
| • at contactor for auxiliary contacts               | Screw-type terminals                                  |
| • of magnet coil                                    | Screw-type terminals                                  |
| <b>type of connectable conductor cross-sections</b> |   |
| • for main contacts                                 |   |
| — solid   | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm² |
| — single or multi-stranded                          | 2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²), 2x 4 mm² |

|  |   |
|--|---|
| <ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> <li>• at AWG conductors for main contacts</li> </ul>  | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )<br>2x (20 ... 16), 2x (18 ... 14), 2x 12  |
| <b>connectable conductor cross-section for main contacts</b> <ul style="list-style-type: none"> <li>• solid</li> <li>• stranded</li> <li>• finely stranded with core end processing</li> </ul>   | 0.5 ... 4 mm <sup>2</sup><br>0.5 ... 4 mm <sup>2</sup><br>0.5 ... 2.5 mm <sup>2</sup>   |
| <b>connectable conductor cross-section for auxiliary contacts</b> <ul style="list-style-type: none"> <li>• single or multi-stranded</li> <li>• finely stranded with core end processing</li> </ul>   | 0.5 ... 4 mm <sup>2</sup><br>0.5 ... 2.5 mm <sup>2</sup>  |
| <ul style="list-style-type: none"> <li>• type of connectable conductor cross-sections for auxiliary contacts <ul style="list-style-type: none"> <li>— single or multi-stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• type of connectable conductor cross-sections at AWG conductors for auxiliary contacts</li> </ul> | 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup><br>2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )<br>2x (20 ... 16), 2x (18 ... 14), 2x 12 |
| <b>AWG number as coded connectable conductor cross section</b> <ul style="list-style-type: none"> <li>• for main contacts</li> <li>• for auxiliary contacts</li> </ul>   | 20 ... 12<br>20 ... 12  |

#### Safety related data

|   |              |
|---|--------------|
| <b>B10 value</b> <ul style="list-style-type: none"> <li>• with high demand rate acc. to SN 31920</li> </ul>   | 1 000 000    |
| <b>proportion of dangerous failures</b> <ul style="list-style-type: none"> <li>• with low demand rate acc. to SN 31920</li> <li>• with high demand rate acc. to SN 31920</li> </ul> | 40 %<br>73 % |
| <b>failure rate [FIT]</b> <ul style="list-style-type: none"> <li>• with low demand rate acc. to SN 31920</li> </ul>   | 100 FIT      |
| <b>product function</b> <ul style="list-style-type: none"> <li>• mirror contact acc. to IEC 60947-4-1</li> </ul>  | Yes          |
| <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  |
| <b>suitability for use safety-related switching OFF</b>   | Yes          |

#### Certificates/ approvals



|                          |     |
|--------------------------|-----|
| General Product Approval | EMC |
|--------------------------|-----|



[KC](#)



|                                       |                           |                   |                   |
|---------------------------------------|---------------------------|-------------------|-------------------|
| Functional Safety/Safety of Machinery | Declaration of Conformity | Test Certificates | Marine / Shipping |
|---------------------------------------|---------------------------|-------------------|-------------------|

[Type Examination Certificate](#)



[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



|                   |
|-------------------|
| Marine / Shipping |
|-------------------|



|       |
|-------|
| other |
|-------|

[Confirmation](#)



|                     |
|---------------------|
| Further information |
|---------------------|

**Information- and Downloadcenter (Catalogs, Brochures,...)**

<https://www.siemens.com/ic10>

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2017-1AT62>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2017-1AT62>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2017-1AT62>

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

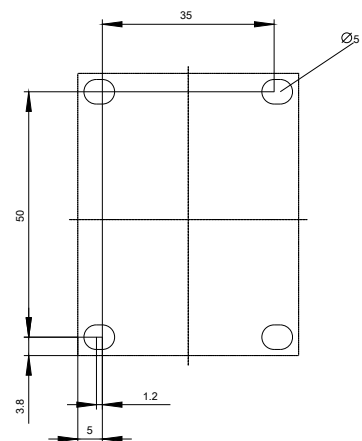
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2017-1AT62&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2017-1AT62&lang=en)

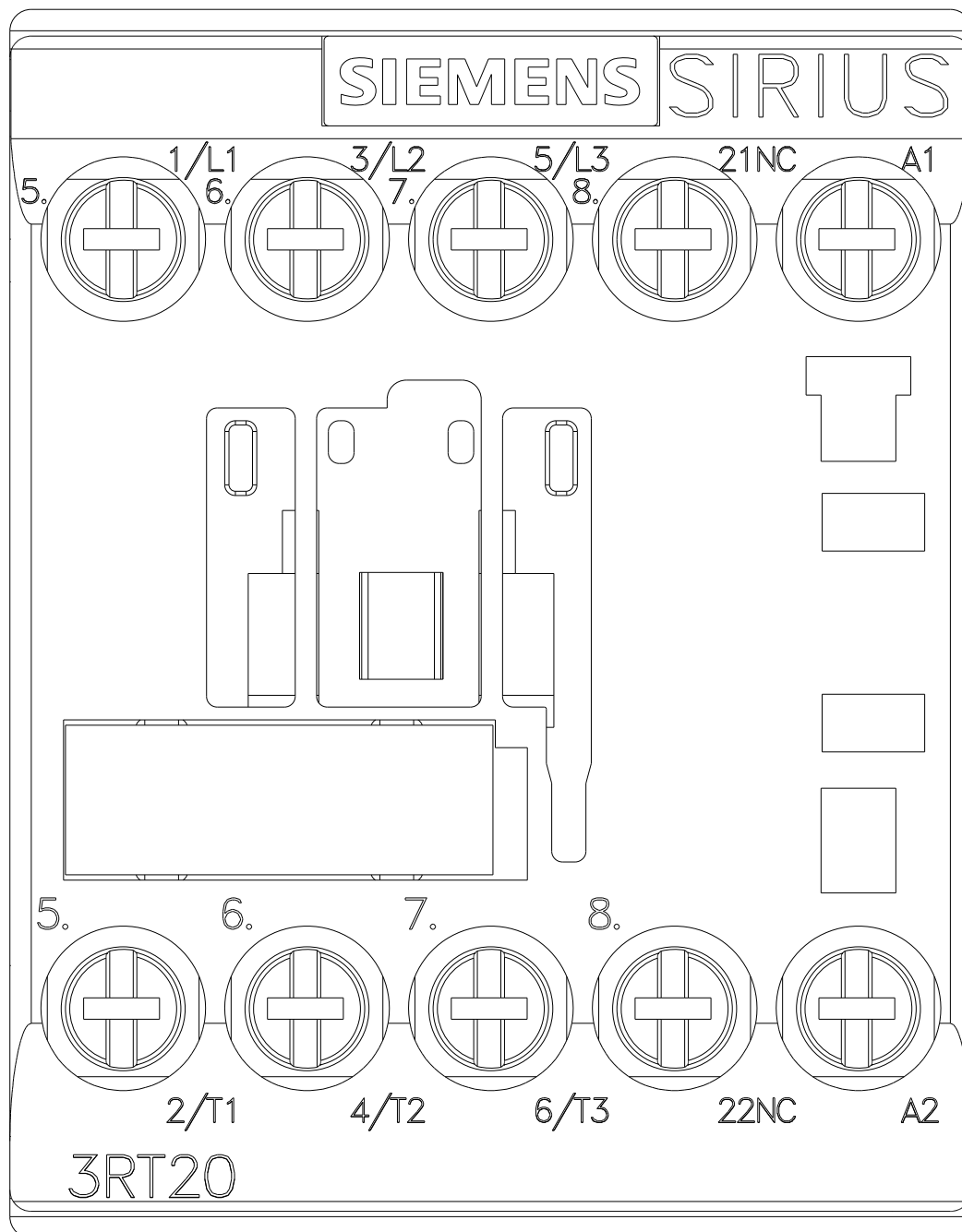
**Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current**

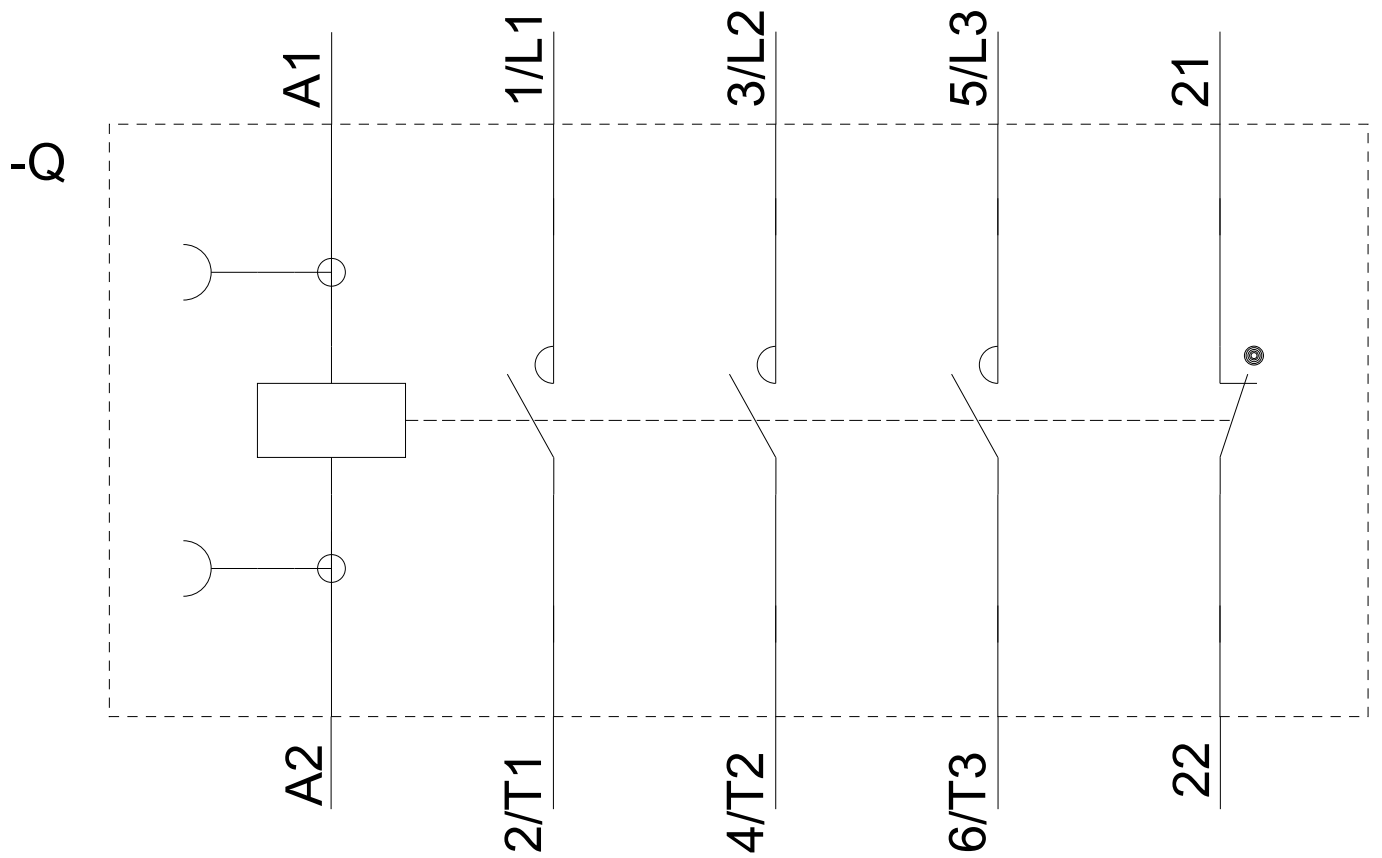
<https://support.industry.siemens.com/cs/ww/en/ps/3RT2017-1AT62/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2017-1AT62&objecttype=14&gridview=view1>







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