

Power contactor, AC-3 150 A, 75 kW / 400 V AC (50-60 Hz) / DC operation 110-127 V UC Auxiliary contacts 2 NO + 2 NC 3-pole, Size S6 Busbar connections Drive: conventional screw terminal



|                          |                 |
|--------------------------|-----------------|
| Product brand name       | SIRIUS          |
| Product designation      | Power contactor |
| Product type designation | 3RT1            |

| General technical data  |       |
|---|-------|
| Size of contactor   | S6    |
| Product extension   |       |
| <ul style="list-style-type: none"> <li>function module for communication</li> </ul>                 | No    |
| <ul style="list-style-type: none"> <li>Auxiliary switch</li> </ul>                                  | Yes   |
| Power loss [W] for rated value of the current   |       |
| <ul style="list-style-type: none"> <li>at AC in hot operating state</li> </ul>                      | 27 W  |
| <ul style="list-style-type: none"> <li>at AC in hot operating state per pole</li> </ul>             | 9 W   |
| Power loss [W] for rated value of the current without load current share typical                    | 5.2 W |
| Surge voltage resistance  |       |
| <ul style="list-style-type: none"> <li>of main circuit rated value</li> </ul>                       | 8 kV  |
| <ul style="list-style-type: none"> <li>of auxiliary circuit rated value</li> </ul>                  | 6 kV  |
| maximum permissible voltage for safe isolation  |       |
| <ul style="list-style-type: none"> <li>between coil and main contacts acc. to EN 60947-1</li> </ul> | 690 V |

|   |   |
|---|---|
| <b>Protection class IP</b>  | IP00; IP20 on the front with cover / box terminal<br>IP00 |
| <ul style="list-style-type: none"> <li>• on the front</li> <li>• of the terminal</li> </ul>   |   |
| <b>Shock resistance at rectangular impulse</b>  | 8,5g / 5 ms, 4,2g / 10 ms                                 |
| <ul style="list-style-type: none"> <li>• at AC</li> <li>• at DC</li> </ul>  | 8,5g / 5 ms, 4,2g / 10 ms                                 |
| <b>Shock resistance with sine pulse</b>   | 13,4g / 5 ms, 6,5g / 10 ms                                |
| <ul style="list-style-type: none"> <li>• at AC</li> <li>• at DC</li> </ul>  | 13,4g / 5 ms, 6,5g / 10 ms                                |
| <b>Mechanical service life (switching cycles)</b>   |   |
| <ul style="list-style-type: none"> <li>• of contactor typical</li> </ul>  | 10 000 000  |
| <ul style="list-style-type: none"> <li>• of the contactor with added electronics-compatible auxiliary switch block typical</li> </ul> | 5 000 000   |
| <ul style="list-style-type: none"> <li>• of the contactor with added auxiliary switch block typical</li> </ul>                        | 10 000 000  |
| <b>Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750</b>   | K   |
| <b>Reference code acc. to DIN EN 81346-2</b>  | Q   |

#### Ambient conditions

|  |                |
|--|----------------|
| <b>Installation altitude at height above sea level</b>   | 2 000 m        |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>                                    |                |
| <b>Ambient temperature</b>   | -25 ... +60 °C |
| <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> </ul> | -55 ... +80 °C |

#### Main circuit

|   |         |
|---|---------|
| <b>Number of poles for main current circuit</b>   | 3       |
| <b>Number of NO contacts for main contacts</b>  | 3       |
| <b>Operating voltage</b>  | 1 000 V |
| <ul style="list-style-type: none"> <li>• at AC-3 rated value maximum</li> </ul>   |         |
| <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> </ul>    | 185 A   |
| <ul style="list-style-type: none"> <li>• at AC-1 <ul style="list-style-type: none"> <li>— up to 690 V at ambient temperature 40 °C rated value</li> </ul> </li> </ul> | 185 A   |
| <ul style="list-style-type: none"> <li>— up to 690 V at ambient temperature 60 °C rated value</li> </ul>  | 160 A   |
| <ul style="list-style-type: none"> <li>— up to 1000 V at ambient temperature 40 °C rated value</li> </ul>   | 90 A    |
| <ul style="list-style-type: none"> <li>— up to 1000 V at ambient temperature 60 °C rated value</li> </ul>   | 90 A    |
| <ul style="list-style-type: none"> <li>• at AC-2 at 400 V rated value</li> </ul>  | 150 A   |

|  |   |
|--|---|
| <ul style="list-style-type: none"> <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> <li>— at 1000 V rated value</li> </ul> </li> <li>• at AC-4 at 400 V rated value</li> <li>• at AC-5a up to 690 V rated value</li> <li>• at AC-5b up to 400 V rated value</li> <li>• at AC-6a <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> <li>— up to 1000 V for current peak value n=20 rated value</li> </ul> </li> <li>• at AC-6a <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> <li>— up to 1000 V for current peak value n=30 rated value</li> </ul> </li> </ul> | <p>150 A</p> <p>150 A</p> <p>150 A</p> <p>65 A</p> <p>132 A</p> <p>162 A</p> <p>124 A</p> <p>148 A</p> <p>148 A</p> <p>148 A</p> <p>148 A</p> <p>57 A</p> <p>99 A</p> <p>99 A</p> <p>99 A</p> <p>99 A</p> <p>57 A</p> |
| <b>Minimum cross-section in main circuit</b>   |   |
| <ul style="list-style-type: none"> <li>• at maximum AC-1 rated value</li> </ul>  | 95 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> <li>• at 690 V rated value</li> </ul>   | <p>68 A</p> <p>57 A</p>   |
| <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>   | <p>160 A</p> <p>18 A</p> <p>3.4 A</p> <p>0.8 A</p> <p>0.5 A</p>   |

|  |  |
|--|--|
| <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> <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>   | 160 A<br>160 A<br>20 A<br>3.2 A<br>1.6 A<br><br>160 A<br>160 A<br>160 A<br>11.5 A<br>4 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> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 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> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 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> | 160 A<br>2.5 A<br>0.6 A<br>0.17 A<br>0.12 A<br><br>160 A<br>160 A<br>2.5 A<br>0.65 A<br>0.37 A<br><br>160 A<br>160 A<br>160 A<br>1.4 A<br>0.75 A |
| <b>Operating power</b>   |  |
| <ul style="list-style-type: none"> <li>• at AC-1 <ul style="list-style-type: none"> <li>— at 230 V at 60 °C rated value</li> <li>— at 400 V rated value</li> <li>— at 400 V at 60 °C rated value</li> <li>— at 690 V rated value</li> <li>— at 690 V at 60 °C rated value</li> <li>— at 1000 V at 60 °C rated value</li> </ul> </li> <li>• at AC-2 at 400 V rated value</li> <li>• at AC-3</li> </ul>  | 60 kW<br>105 kW<br>105 kW<br>181 kW<br>181 kW<br>148 kW<br>75 kW   |

|   |               |
|---|---------------|
| — at 230 V rated value  | 45 kW         |
| — at 400 V rated value  | 75 kW         |
| — at 500 V rated value  | 90 kW         |
| — at 690 V rated value  | 132 kW        |
| — at 1000 V rated value   | 90 kW         |
| <b>Operating power for approx. 200000 operating cycles at AC-4</b>                    |               |
| • at 400 V rated value  | 38 kW         |
| • at 690 V rated value  | 55 kW         |
| <b>No-load switching frequency</b>  |               |
| • at AC   | 2 000 1/h     |
| • at DC   | 2 000 1/h     |
| <b>Operating frequency</b>  |               |
| • at AC-1 maximum   | 800 1/h       |
| • at AC-2 maximum   | 300 1/h       |
| • at AC-3 maximum   | 750 1/h       |
| • at AC-4 maximum   | 130 1/h       |
| <b>Control circuit/ Control</b>   |               |
| <b>Type of voltage of the control supply voltage</b>                                  | AC/DC         |
| <b>Control supply voltage at AC</b>   |               |
| • at 50 Hz rated value  | 110 ... 127 V |
| • at 60 Hz rated value  | 110 ... 127 V |
| <b>Control supply voltage at DC</b>   |               |
| • rated value   | 110 ... 127 V |
| <b>Operating range factor control supply voltage rated value of magnet coil at DC</b> |               |
| • initial value   | 0.8           |
| • Full-scale value  | 1.1           |
| <b>Operating range factor control supply voltage rated value of magnet coil at AC</b> |               |
| • at 50 Hz  | 0.8 ... 1.1   |
| • at 60 Hz  | 0.8 ... 1.1   |
| <b>Design of the surge suppressor</b>   | with varistor |
| <b>Apparent pick-up power of magnet coil at AC</b>                                    |               |
| • at 50 Hz  | 300 V·A       |
| <b>Inductive power factor with closing power of the coil</b>                          |               |
| • at 50 Hz  | 0.9           |
| <b>Apparent holding power of magnet coil at AC</b>                                    |               |
| • at 50 Hz  | 5.8 V·A       |
| <b>Inductive power factor with the holding power of the coil</b>                      |               |
| • at 50 Hz  | 0.8           |

|  |                  |
|--|------------------|
| <b>Closing power of magnet coil at DC</b>                | 360 W            |
| <b>Holding power of magnet coil at DC</b>                | 5.2 W            |
| <b>Closing delay</b>                                     |                  |
| • at AC  | 20 ... 95 ms     |
| • at DC  | 20 ... 95 ms     |
| <b>Opening delay</b>                                     |                  |
| • at AC  | 40 ... 60 ms     |
| • at DC  | 40 ... 60 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> |   |
| • instantaneous contact                             | 2   |
| <b>Number of NO contacts for auxiliary contacts</b> |   |
| • instantaneous contact                             | 2   |
| <b>Operating current at AC-12 maximum</b>           | 10 A  |
| <b>Operating current at AC-15</b>                   |   |
| • at 230 V rated value                              | 6 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                                  | 156 A |

|  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>   | 144 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 230 V rated value</li> </ul> </li> <li>• for three-phase AC motor <ul style="list-style-type: none"> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> <li>— at 460/480 V rated value</li> <li>— at 575/600 V rated value</li> </ul> </li> </ul> | 30 hp<br><br>50 hp<br>60 hp<br>125 hp<br>150 hp |
| <b>Contact rating of auxiliary contacts according to UL</b>  | 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> | gG: 355 A (690 V, 100 kA)<br>gG: 315 A (690 V, 100 kA), aM: 200 A (690 V, 50 kA), BS88: 315 A (415 V, 50 kA)<br>gG: 10 A (500 V, 1 kA) |
|--|--|

### Installation/ mounting/ dimensions

|  |  |
|--|--|
| <b>Mounting position</b>   | with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back |
| <b>Mounting type</b> <ul style="list-style-type: none"> <li>• Side-by-side mounting</li> </ul>   | screw fixing<br>Yes  |
| <b>Height</b>  | 172 mm   |
| <b>Width</b>   | 120 mm   |
| <b>Depth</b>   | 170 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>— 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>— 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>— upwards</li> <li>— downwards</li> </ul> </li> </ul> | 20 mm<br>10 mm<br>10 mm<br>0 mm<br><br>20 mm<br>10 mm<br>10 mm<br>10 mm<br><br>20 mm<br>10 mm<br>10 mm                   |

— at the side

10 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> <li>• at contactor for auxiliary contacts</li> <li>• of magnet coil</li> </ul>   | Connection bar<br>screw-type terminals<br>Screw-type terminals<br>Screw-type terminals   |
| <b>Type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>• at AWG conductors for main contacts</li> </ul>   | 4 ... 250 kcmil  |
| <b>Connectable conductor cross-section for main contacts</b> <ul style="list-style-type: none"> <li>• stranded</li> </ul>   | 25 ... 120 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>   |
| <b>Type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>• for auxiliary contacts               <ul style="list-style-type: none"> <li>— solid</li> <li>— single or multi-stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• 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> ), max. 2x (0.75 ... 4 mm <sup>2</sup> )<br>2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ), max. 2x (0,75 ... 4 mm <sup>2</sup> )<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), 1x 12 |
| <b>AWG number as coded connectable conductor cross section</b> <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>   | 18 ... 14  |

## 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>Product function</b> <ul style="list-style-type: none"> <li>• Mirror contact acc. to IEC 60947-4-1</li> <li>• positively driven operation acc. to IEC 60947-5-1</li> </ul> | Yes<br>No  |
| <b>Protection against electrical shock</b>  | finger-safe when touched vertically from front acc. to IEC 60529 |

## Certificates/ approvals



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



[Type Examination Certificate](#)

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



[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

[Miscellaneous](#)



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



[Confirmation](#)

[Miscellaneous](#)

[Special Test Certificate](#)

## Further information

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

[www.siemens.com/sirius/catalogs](http://www.siemens.com/sirius/catalogs)

### Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1055-6AF36>

### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1055-6AF36>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1055-6AF36>

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

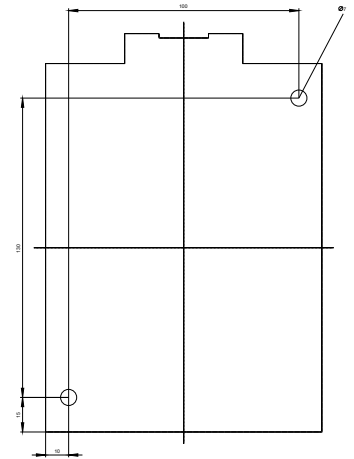
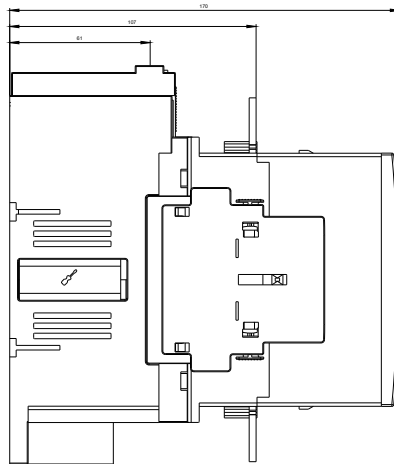
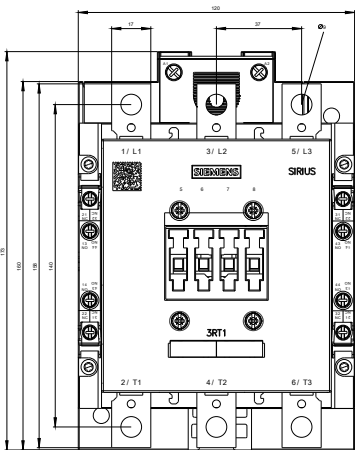
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1055-6AF36&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1055-6AF36&lang=en)

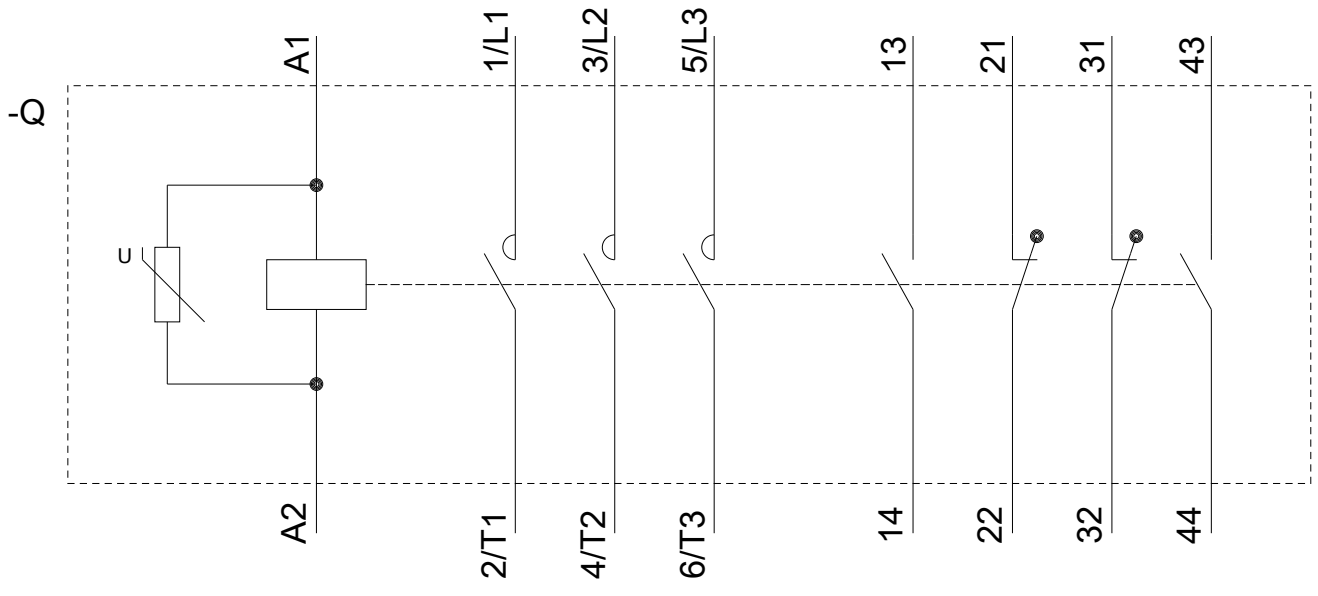
### Characteristic: Tripping characteristics, I<sup>t</sup>, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1055-6AF36/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1055-6AF36&objecttype=14&gridview=view1>





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