



power contactor, AC-3e/AC-3, 7 A, 3 kW / 400 V, 3-pole, 48 V AC, 50/60 Hz, auxiliary contacts: 1 NC, spring-loaded terminal, size: S00

|  |                            |
|--|----------------------------|
| product brand name   | SIRIUS                     |
| product designation  | Power contactor            |
| product type designation   | 3RT2                       |
| <b>General technical data</b>  |                            |
| 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   | 0.6 W                      |
| • at AC in hot operating state per pole  | 0.2 W                      |
| • without load current share typical   | 1.1 W                      |
| type of calculation of power loss depending on pole  | quadratic                  |
| insulation voltage   |                            |
| • of main circuit with degree of pollution 3 rated value   | 690 V                      |
| • of auxiliary circuit with degree of pollution 3 rated value  | 690 V                      |
| surge voltage resistance   |                            |
| • of main circuit rated value  | 6 kV                       |
| • of auxiliary circuit rated value   | 6 kV                       |
| maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 | 400 V                      |
| shock resistance at rectangular impulse  |                            |
| • at AC  | 6,7g / 5 ms, 4,2g / 10 ms  |
| shock resistance with sine pulse   |                            |
| • at AC  | 10,5g / 5 ms, 6,6g / 10 ms |
| mechanical service life (operating cycles)   |                            |
| • of contactor typical   | 30 000 000                 |
| • of the contactor with added electronically optimized auxiliary switch block typical                        | 5 000 000                  |
| • of the contactor with added auxiliary switch block typical   | 10 000 000                 |
| reference code according to IEC 81346-2  | Q                          |
| Substance Prohibitance (Date)  | 10/01/2009                 |
| Weight   | 0.25 kg                    |
| <b>Ambient conditions</b>  |                            |
| installation altitude at height above sea level maximum  | 2 000 m                    |
| ambient temperature  |                            |
| • during operation   | -25 ... +60 °C             |
| • during storage   | -55 ... +80 °C             |
| relative humidity minimum  | 10 %                       |
| relative humidity at 55 °C according to IEC 60068-2-30 maximum   | 95 %                       |

| Environmental footprint   |           |
|---|-----------|
| Environmental Product Declaration(EPD)                            | Yes       |
| Global Warming Potential [CO2 eq] total                           | 39.6 kg   |
| Global Warming Potential [CO2 eq] during manufacturing            | 1.18 kg   |
| Global Warming Potential [CO2 eq] during operation                | 38.5 kg   |
| Global Warming Potential [CO2 eq] after end of life               | -0.155 kg |
| Main circuit  |           |
| number of poles for main current circuit                          | 3         |
| number of NO contacts for main contacts                           | 3         |
| operating voltage   |           |
| • at AC-3 rated value maximum                                     | 690 V     |
| • at AC-3e rated value maximum                                    | 690 V     |
| operational current   |           |
| • at AC-1 at 400 V at ambient temperature 40 °C rated value       | 18 A      |
| • at AC-1   |           |
| — up to 690 V at ambient temperature 40 °C rated value            | 18 A      |
| — up to 690 V at ambient temperature 60 °C rated value            | 16 A      |
| • at AC-3   |           |
| — at 400 V rated value  | 7 A       |
| — at 500 V rated value  | 6 A       |
| — at 690 V rated value  | 4.9 A     |
| • at AC-3e  |           |
| — at 400 V rated value  | 7 A       |
| — at 500 V rated value  | 6 A       |
| — at 690 V rated value  | 4.9 A     |
| • at AC-4 at 400 V rated value                                    | 6.5 A     |
| • at AC-5a up to 690 V rated value                                | 15.8 A    |
| • at AC-5b up to 400 V rated value                                | 5.8 A     |
| • at AC-6a  |           |
| — up to 230 V for current peak value n=20 rated value             | 4 A       |
| — up to 400 V for current peak value n=20 rated value             | 4 A       |
| — up to 500 V for current peak value n=20 rated value             | 3.8 A     |
| — up to 690 V for current peak value n=20 rated value             | 3.6 A     |
| • at AC-6a  |           |
| — up to 230 V for current peak value n=30 rated value             | 2.7 A     |
| — up to 400 V for current peak value n=30 rated value             | 2.7 A     |
| — up to 500 V for current peak value n=30 rated value             | 2.5 A     |
| — up to 690 V for current peak value n=30 rated value             | 2.4 A     |
| minimum cross-section in main circuit at maximum AC-1 rated value | 2.5 mm²   |
| operational current for approx. 200000 operating cycles at AC-4   |           |
| • at 400 V rated value  | 2.6 A     |
| • at 690 V rated value  | 1.8 A     |
| operational current   |           |
| • at 1 current path at DC-1                                       |           |
| — at 24 V rated value   | 15 A      |
| — at 60 V rated value   | 15 A      |
| — at 110 V rated value  | 1.5 A     |
| — at 220 V rated value  | 0.6 A     |
| — at 440 V rated value  | 0.42 A    |
| — at 600 V rated value  | 0.42 A    |
| • with 2 current paths in series at DC-1                          |           |
| — at 24 V rated value   | 15 A      |
| — at 60 V rated value   | 15 A      |
| — at 110 V rated value  | 8.4 A     |
| — at 220 V rated value  | 1.2 A     |
| — at 440 V rated value  | 0.6 A     |
| — at 600 V rated value  | 0.5 A     |

|   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• <b>with 3 current paths in series at DC-1</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 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>• <b>at 1 current path at DC-3 at DC-5</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>— at 110 V rated value</li> </ul> </li> <li>• <b>with 2 current paths in series at DC-3 at DC-5</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>— at 110 V rated value</li> </ul> </li> <li>• <b>with 3 current paths in series at DC-3 at DC-5</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> </ul> | 15 A<br>15 A<br>15 A<br>15 A<br>0.9 A<br>0.7 A<br><br>15 A<br>0.35 A<br>0.1 A<br><br>15 A<br>3.5 A<br>0.25 A<br><br>15 A<br>15 A<br>15 A<br>1.2 A<br>0.14 A<br>0.14 A   |
| <b>operating power</b> <ul style="list-style-type: none"> <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> <li>• at AC-3e <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>  | <br>1.5 kW<br>3 kW<br>3 kW<br>4 kW<br><br>1.5 kW<br>3 kW<br>3 kW<br>4 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>   | <br>1.15 kW<br>1.15 kW  |
| <b>operating apparent power 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>   | <br>1.5 kVA<br>2.7 kVA<br>3.3 kVA<br>4.3 kVA  |
| <b>operating apparent power 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>   | <br>1 kVA<br>1.8 kVA<br>2.2 kVA<br>2.9 kVA  |
| <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>   | <br>120 A; Use minimum cross-section acc. to AC-1 rated value<br>86 A; Use minimum cross-section acc. to AC-1 rated value<br>67 A; Use minimum cross-section acc. to AC-1 rated value<br>52 A; Use minimum cross-section acc. to AC-1 rated value<br>43 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>  | <br>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-3e maximum</li> </ul>  | <br>1 000 1/h<br>750 1/h<br>750 1/h<br>750 1/h  |

|   |   |
|---|---|
| • at AC-4 maximum   | 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>   |   |
| • at 50 Hz rated value  | 48 V  |
| • at 60 Hz rated value  | 48 V  |
| <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  | 0.85 ... 1.1                                    |
| <b>apparent pick-up power of magnet coil at AC</b>                                    |   |
| • at 50 Hz  | 27 VA   |
| • at 60 Hz  | 24.3 VA   |
| <b>inductive power factor with closing power of the coil</b>                          |   |
| • at 50 Hz  | 0.8   |
| • at 60 Hz  | 0.75  |
| <b>apparent holding power of magnet coil at AC</b>                                    |   |
| • at 50 Hz  | 4.2 VA  |
| • at 60 Hz  | 3.3 VA  |
| <b>inductive power factor with the holding power of the coil</b>                      |   |
| • at 50 Hz  | 0.25  |
| • at 60 Hz  | 0.25  |
| <b>closing delay</b>  |   |
| • at AC   | 9 ... 35 ms                                     |
| <b>opening delay</b>  |   |
| • at AC   | 4 ... 15 ms                                     |
| <b>arcing time</b>  | 10 ... 15 ms                                    |
| <b>control version of the switch operating mechanism</b>                              | Standard A1 - A2                                |
| <b>Auxiliary circuit</b>  |   |
| number of NC contacts for auxiliary contacts instantaneous contact                    | 1   |
| operational current at AC-12 maximum  | 10 A  |
| <b>operational 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>operational 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>operational 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) |
| <b>UL/CSA ratings</b>   |   |
| <b>full-load current (FLA) for 3-phase AC motor</b>                                   |   |
| • at 480 V rated value  | 4.8 A   |
| • at 600 V rated value  | 6.1 A   |
| <b>yielded mechanical performance [hp]</b>  |   |
| • for single-phase AC motor   |   |
| — at 110/120 V rated value  | 0.25 hp   |

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>— at 230 V rated value</li> <li>• for 3-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>  | 0.75 hp<br><br>1.5 hp<br>2 hp<br>3 hp<br>5 hp  |
| <b>contact rating of auxiliary contacts according to UL</b>   | A600 / Q600  |
| <b>Short-circuit protection</b>   |  |
| <b>design of the fuse link</b> <ul style="list-style-type: none"> <li>• for short-circuit protection of the main circuit <ul style="list-style-type: none"> <li>— with type of coordination 1 required</li> <li>— with type of assignment 2 required</li> </ul> </li> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>  | gG: 35A (690V, 100kA), aM: 20A (690V, 100kA), BS88: 35A (415V, 80kA)<br>gG: 20A (690V, 100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA)<br>gG: 10 A (500 V, 1 kA) |
| <b>Installation/ mounting/ dimensions</b>   |  |
| <b>mounting position</b>  | +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface                                   |
| fastening method side-by-side mounting  | Yes  |
| <b>fastening method</b>   | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715   |
| <b>height</b>   | 70 mm  |
| <b>width</b>  | 45 mm  |
| <b>depth</b>  | 73 mm  |
| <b>required spacing</b> <ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards</li> <li>— 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> <li>— at the side</li> </ul> </li> </ul> | 10 mm<br>10 mm<br>10 mm<br>0 mm<br><br>10 mm<br>10 mm<br>6 mm<br>10 mm<br><br>10 mm<br>10 mm<br>10 mm<br>6 mm  |
| <b>Connections/ Terminals</b>   |  |
| <b>type of electrical connection</b> <ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control circuit</li> <li>• at contactor for auxiliary contacts</li> <li>• of magnet coil</li> </ul>   | spring-loaded terminals<br>spring-loaded terminals<br>Spring-type terminals<br>Spring-type terminals   |
| <b>type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>— solid</li> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> </ul> </li> <li>• for AWG cables for main contacts</li> </ul>  | 2x (0.5 ... 4 mm <sup>2</sup> )<br>2x (0.5 ... 4 mm <sup>2</sup> )<br>2x (0.5 ... 2.5 mm <sup>2</sup> )<br>2x (0.5 ... 2.5 mm <sup>2</sup> )<br>2x (20 ... 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> <li>• finely stranded without 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><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>• solid or stranded</li> <li>• finely stranded with core end processing</li> <li>• finely stranded without core end processing</li> </ul>  | 0.5 ... 4 mm <sup>2</sup><br>0.5 ... 2.5 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</li> </ul>  |  |

|  |                      |
|--|----------------------|
| — solid or stranded  | 2x (0,5 ... 4 mm²)   |
| — finely stranded with core end processing                     | 2x (0.5 ... 2.5 mm²) |
| — finely stranded without core end processing                  | 2x (0.5 ... 2.5 mm²) |
| • for AWG cables for auxiliary contacts                        | 2x (20 ... 12)       |
| <b>AWG number as coded connectable conductor cross section</b> |                      |
| • for main contacts  | 20 ... 12            |
| • for auxiliary contacts                                       | 20 ... 12            |

#### Safety related data

|  |  |
|--|--|
| <b>product function</b>  |  |
| • mirror contact according to IEC 60947-4-1                          | Yes  |
| • positively driven operation according to IEC 60947-5-1             | No   |
| • suitable for safety function                                       | Yes  |
| suitability for use safety-related switching OFF                     | Yes  |
| <b>service life maximum</b>  | 20 a   |
| <b>test wear-related service life necessary</b>                      | Yes  |
| <b>proportion of dangerous failures</b>                              |  |
| • with low demand rate according to SN 31920                         | 40 %   |
| • with high demand rate according to SN 31920                        | 73 %   |
| <b>B10 value with high demand rate according to SN 31920</b>         | 1 000 000  |
| <b>failure rate [FIT] with low demand rate according to SN 31920</b> | 100 FIT  |
| <b>ISO 13849</b>   |  |
| <b>device type according to ISO 13849-1</b>                          | 3  |
| <b>overdimensioning according to ISO 13849-2 necessary</b>           | Yes  |
| <b>IEC 61508</b>   |  |
| <b>safety device type according to IEC 61508-2</b>                   | Type A   |
| <b>Electrical Safety</b>   |  |
| <b>protection class IP on the front according to IEC 60529</b>       | IP20   |
| <b>touch protection on the front according to IEC 60529</b>          | finger-safe, for vertical contact from the front |

#### Approvals Certificates

##### General Product Approval



[Confirmation](#)



[KC](#)

| General Product Approval | EMV | Test Certificates | Marine / Shipping |
|--------------------------|-----|-------------------|-------------------|
|--------------------------|-----|-------------------|-------------------|



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



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



[Miscellaneous](#)

| other | Railway | Environment |
|-------|---------|-------------|
|-------|---------|-------------|

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[Confirmation](#)

[Special Test Certificate](#)



[Environmental Confirmations](#)

#### Further information

**Information on the packaging**

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

**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=3RT2015-2AH02>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2015-2AH02>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2015-2AH02>

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

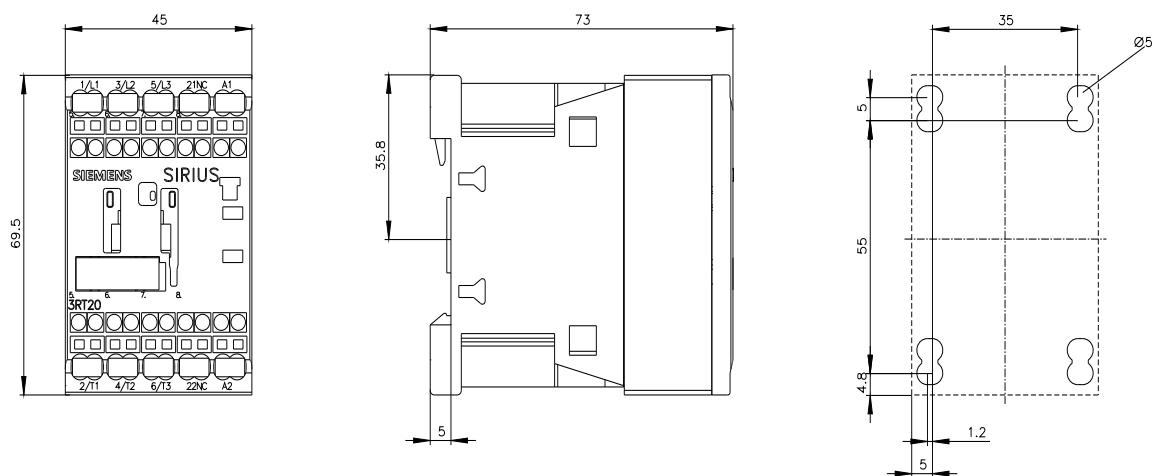
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2015-2AH02&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2015-2AH02&lang=en)

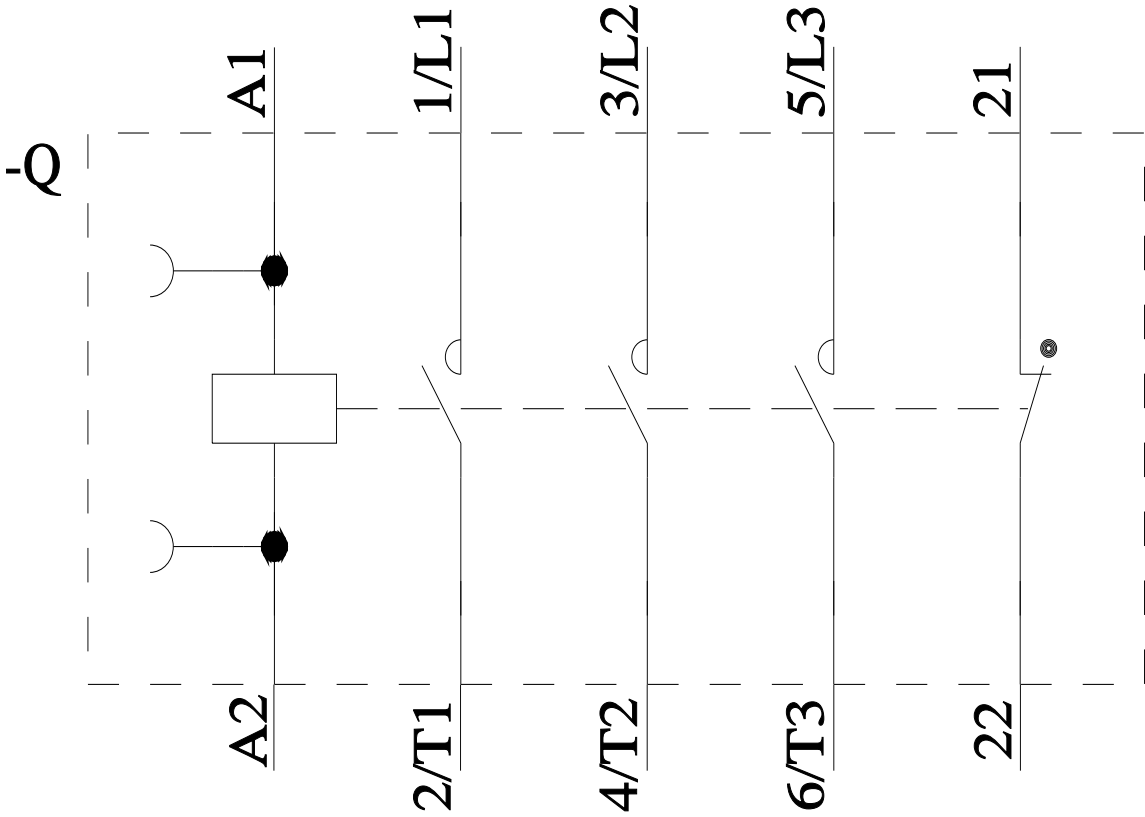
**Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2015-2AH02/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2015-2AH02&objecttype=14&gridview=view1>







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