



power contactor, AC-3, 12 A, 5.5 kW / 400 V, 4-pole, 230 V AC, 50/60 Hz, main contacts: 2 NO + 2 NC, spring-loaded terminal, size: S00

|  |                            |
|--|----------------------------|
| <b>product brand name</b>  | SIRIUS                     |
| <b>product designation</b>   | contactor                  |
| <b>product type designation</b>  | 3RT25                      |
| <b>General technical data</b>  |                            |
| <b>size of contactor</b>   | S00                        |
| <b>product extension</b>   |                            |
| • function module for communication  | No                         |
| • auxiliary switch   | Yes                        |
| <b>power loss [W] for rated value of the current</b>   |                            |
| • at AC in hot operating state per pole  | 0.5 W                      |
| • without load current share typical   | 1.5 W                      |
| <b>type of calculation of power loss depending on pole</b>   | quadratic                  |
| <b>insulation voltage</b>  |                            |
| • of main circuit with degree of pollution 3 rated value   | 690 V                      |
| • of auxiliary circuit with degree of pollution 3 rated value  | 690 V                      |
| <b>surge voltage resistance</b>  |                            |
| • 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                      |
| <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 (operating cycles)</b>  |                            |
| • 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                 |
| <b>reference code according to IEC 81346-2</b>   | Q                          |
| <b>Substance Prohibitance (Date)</b>   | 10/01/2009                 |
| <b>Weight</b>  | 0.255 kg                   |
| <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>relative humidity minimum</b>   | 10 %                       |
| <b>relative humidity at 55 °C according to IEC 60068-2-30 maximum</b>  | 95 %                       |
| <b>Environmental footprint</b>   |                            |

|  |  |
|--|--|
| 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  |
| <b>Main circuit</b>  |  |
| <b>number of poles for main current circuit</b>  | 4  |
| <b>number of NO contacts for main contacts</b>   | 2  |
| <b>number of NC contacts for main contacts</b>   | 2  |
| <b>operational current</b>   |  |
| <ul style="list-style-type: none"> <li>● at AC-1 up to 690 V <ul style="list-style-type: none"> <li>— at ambient temperature 40 °C rated value</li> <li>— at ambient temperature 60 °C rated value</li> </ul> </li> <li>● at AC-2 at AC-3 at 400 V <ul style="list-style-type: none"> <li>— per NO contact rated value</li> <li>— per NC contact rated value</li> </ul> </li> </ul>  | 22 A<br>20 A<br>12 A<br>9 A  |
| minimum cross-section in main circuit at maximum AC-1 rated value  | 4 mm <sup>2</sup>  |
| <b>operational current</b>   |  |
| <ul style="list-style-type: none"> <li>● <b>at 1 current path at DC-1</b> <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> </ul> </li> <li>● <b>with 2 current paths in series at DC-1</b> <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> </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 per NC contact rated value</li> <li>— at 24 V per NO contact rated value</li> <li>— at 110 V per NC contact rated value</li> <li>— at 110 V per NO contact rated value</li> <li>— at 220 V per NC contact rated value</li> <li>— at 220 V per NO contact 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 per NC contact rated value</li> <li>— at 24 V per NO contact rated value</li> <li>— at 110 V per NC contact rated value</li> <li>— at 110 V per NO contact rated value</li> </ul> </li> </ul> | 20 A<br>2.1 A<br>0.8 A<br>0.6 A<br>20 A<br>12 A<br>1.6 A<br>0.8 A<br>20 A<br>20 A<br>0.075 A<br>0.15 A<br>0.375 A<br>0.75 A<br>20 A<br>20 A<br>0.175 A<br>0.35 A   |
| operating power at AC-2 at AC-3  |  |
| <ul style="list-style-type: none"> <li>● at 230 V per NC contact rated value</li> <li>● at 230 V per NO contact rated value</li> <li>● at 400 V per NC contact rated value</li> <li>● at 400 V per NO contact rated value</li> </ul>   | 2.2 kW<br>3 kW<br>4 kW<br>5.5 kW   |
| <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>  | 125 A; Use minimum cross-section acc. to AC-1 rated value<br>123 A; Use minimum cross-section acc. to AC-1 rated value<br>96 A; Use minimum cross-section acc. to AC-1 rated value<br>74 A; Use minimum cross-section acc. to AC-1 rated value<br>61 A; Use minimum cross-section acc. to AC-1 rated value |
| <b>power loss [W] at AC-3 at 400 V for rated value of the operational current per conductor</b>  | 0.5 W  |
| <b>power loss [W] at AC-3e at 400 V for rated value of the operational current per conductor</b>   | 0.5 W  |
| <b>no-load switching frequency</b>   |  |
| <ul style="list-style-type: none"> <li>● at AC</li> <li>● at DC</li> </ul>   | 10 000 1/h<br>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  |

| Control circuit/ Control   |   |
|--|---|
| <b>type of voltage of the control supply voltage</b>   | AC  |
| <b>control supply voltage at AC</b>  |   |
| • at 50 Hz rated value   | 230 V   |
| • at 60 Hz rated value   | 230 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>   | 37 VA   |
| • at 50 Hz   | 37 VA   |
| • at 60 Hz   | 33 VA   |
| <b>inductive power factor with closing power of the coil</b>                                 | 0.8   |
| • at 50 Hz   | 0.8   |
| • at 60 Hz   | 0.75  |
| <b>apparent holding power of magnet coil at AC</b>   | 5.7 VA  |
| • at 50 Hz   | 5.7 VA  |
| • at 60 Hz   | 4.4 VA  |
| <b>inductive power factor with the holding power of the coil</b>                             | 0.25  |
| • 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>residual current of the electronics for control with signal &lt;0&gt;</b>                 |   |
| • at AC at 230 V maximum permissible   | 0.004 A   |
| Auxiliary circuit  |   |
| number of NC contacts for auxiliary contacts instantaneous contact                           | 0   |
| number of NO contacts for auxiliary contacts instantaneous contact                           | 0   |
| 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   |
| <b>operational current at DC-12</b>  |   |
| • 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 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>yielded mechanical performance [hp]</b>   |   |
| • for single-phase AC motor at 230 V rated value   | 2 hp  |
| • for 3-phase AC motor at 460/480 V rated value  | 5 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<br>— with type of coordination 1 required | gG: 35 A (690 V, 100 kA)                        |

— with type of coordination 2 required

gG: 20 A (690 V, 100 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 |
| 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 50022   |
| <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 0 mm</li> <li>— backwards 0 mm</li> <li>— upwards 0 mm</li> <li>— downwards 0 mm</li> <li>— at the side 0 mm</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— backwards 0 mm</li> <li>— upwards 0 mm</li> <li>— at the side 6 mm</li> <li>— downwards 0 mm</li> </ul> </li> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— backwards 0 mm</li> <li>— upwards 0 mm</li> <li>— downwards 0 mm</li> <li>— at the side 6 mm</li> </ul> </li> </ul> |  |

### 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 circuit</li> <li>• at contactor for auxiliary contacts</li> <li>• of magnet coil</li> </ul>  | <p>spring-loaded terminals</p> <p>spring-loaded terminals</p> <p>Spring-type terminals</p> <p>Spring-type terminals</p> |
| <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 2x (0.5 ... 4 mm<sup>2</sup>)</li> <li>— solid or stranded 2x (0,5 ... 4 mm<sup>2</sup>)</li> <li>— finely stranded with core end processing 2x (0.5 ... 2.5 mm<sup>2</sup>)</li> <li>— finely stranded without core end processing 2x (0.5 ... 2.5 mm<sup>2</sup>)</li> </ul> </li> <li>• for AWG cables for main contacts 2x (20 ... 12)</li> </ul>           |   |
| <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 2x (0.5 ... 4 mm<sup>2</sup>)</li> <li>— solid or stranded 2x (0,5 ... 4 mm<sup>2</sup>)</li> <li>— finely stranded with core end processing 2x (0.5 ... 2.5 mm<sup>2</sup>)</li> <li>— finely stranded without core end processing 2x (0.5 ... 2.5 mm<sup>2</sup>)</li> </ul> </li> <li>• for AWG cables for auxiliary contacts 2x (20 ... 12)</li> </ul> |   |
| <b>AWG number as coded connectable conductor cross section for main contacts</b>  | 20 ... 12   |
| <b>AWG number as coded connectable conductor cross section for auxiliary contacts</b>   | 20 ... 12   |

### Safety related data

|   |                                  |
|---|----------------------------------|
| <b>product function</b>   |                                  |
| <ul style="list-style-type: none"> <li>• mirror contact according to IEC 60947-4-1</li> <li>• positively driven operation according to IEC 60947-5-1</li> </ul> | <p>Yes; with 3RH29</p> <p>No</p> |

### Electrical Safety

|  |  |
|--|--|
| <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

|                                 |            |
|---------------------------------|------------|
| <b>General Product Approval</b> | <b>EMV</b> |
|---------------------------------|------------|



### Test Certificates

### Maritime application

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



### Maritime application

### other

### Railway



[Miscellaneous](#)



[Confirmation](#)

[Special Test Certificate](#)

### Environment



[Environmental Confirmations](#)

### Further information

Information on the packaging

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

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RT2517-2AP00>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2517-2AP00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2517-2AP00>

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

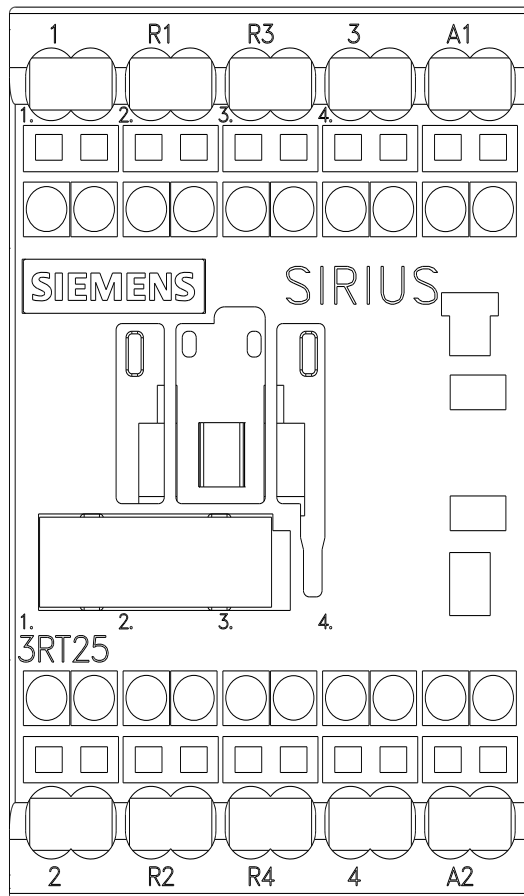
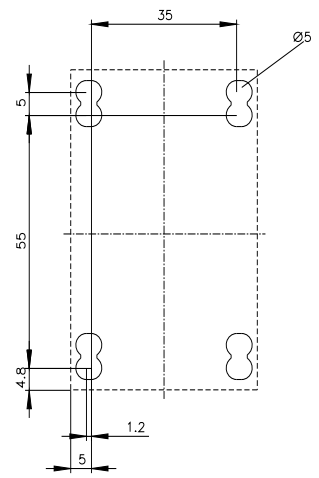
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2517-2AP00&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2517-2AP00&lang=en)

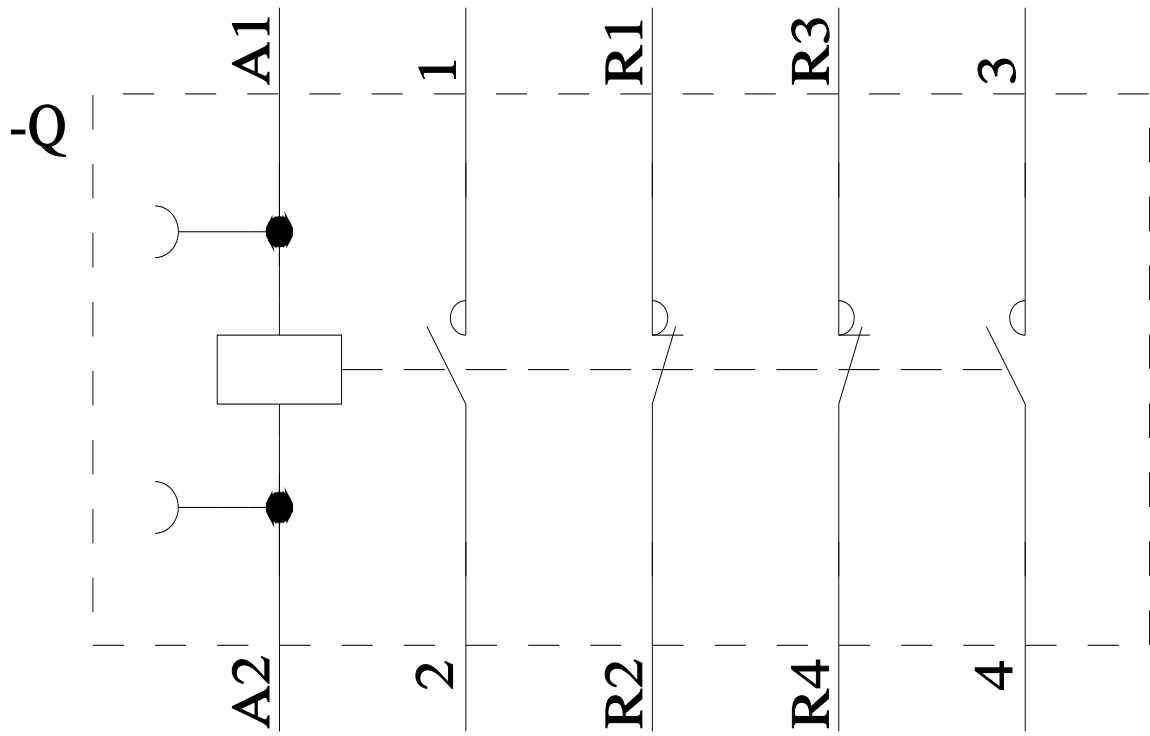
Characteristic: Tripping characteristics, I<sub>t</sub>, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2517-2AP00/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2517-2AP00&objecttype=14&gridview=view1>





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