



power contactor, AC-3, 12 A, 5.5 kW / 400 V, 4-pole, 42 V AC, 50/60 Hz, main contacts: 2 NO + 2 NC, screw terminal, size: S00

|  |                            |
|--|----------------------------|
| product brand name   | SIRIUS                     |
| product designation  | contactor                  |
| product type designation   | 3RT25                      |
| <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 per pole  | 0.5 W                      |
| • without load current share typical   | 1.5 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  | 7,3g / 5 ms, 4,7g / 10 ms  |
| shock resistance with sine pulse   |                            |
| • at AC  | 11,4g / 5 ms, 7,3g / 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   | 0.233 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 %                       |
| <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>   |   |
| number of poles for main current circuit  | 4   |
| number of NO contacts for main contacts   | 2   |
| number of NC contacts for main contacts   | 2   |
| operational current   |   |
| • at AC-1 up to 690 V   |   |
| — at ambient temperature 40 °C rated value  | 22 A  |
| — at ambient temperature 60 °C rated value  | 20 A  |
| • at AC-2 at AC-3 at 400 V  |   |
| — per NO contact rated value  | 12 A  |
| — per NC contact rated value  | 9 A   |
| minimum cross-section in main circuit at maximum AC-1 rated value                         | 4 mm <sup>2</sup>   |
| operational current   |   |
| • 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   |
| • 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 1 current path at DC-3 at DC-5   |   |
| — at 24 V per NC contact rated value  | 20 A  |
| — at 24 V per NO contact rated value  | 20 A  |
| — at 110 V per NC contact rated value   | 0.075 A   |
| — at 110 V per NO contact rated value   | 0.15 A  |
| — at 220 V per NC contact rated value   | 0.375 A   |
| — at 220 V per NO contact rated value   | 0.75 A  |
| • with 2 current paths in series at DC-3 at DC-5  |   |
| — at 24 V per NC contact rated value  | 20 A  |
| — at 24 V per NO contact rated value  | 20 A  |
| — at 110 V per NC contact rated value   | 0.175 A   |
| — at 110 V per NO contact rated value   | 0.35 A  |
| operating power at AC-2 at AC-3   |   |
| • at 230 V per NC contact rated value   | 2.2 kW  |
| • at 230 V per NO contact rated value   | 3 kW  |
| • at 400 V per NC contact rated value   | 4 kW  |
| • at 400 V per NO contact rated value   | 5.5 kW  |
| short-time withstand current in cold operating state up to 40 °C                          |   |
| • limited to 1 s switching at zero current maximum  | 125 A; Use minimum cross-section acc. to AC-1 rated value |
| • limited to 5 s switching at zero current maximum  | 123 A; Use minimum cross-section acc. to AC-1 rated value |
| • limited to 10 s switching at zero current maximum                                       | 96 A; Use minimum cross-section acc. to AC-1 rated value  |
| • limited to 30 s switching at zero current maximum                                       | 74 A; Use minimum cross-section acc. to AC-1 rated value  |
| • limited to 60 s switching at zero current maximum                                       | 61 A; Use minimum cross-section acc. to AC-1 rated value  |
| power loss [W] at AC-3 at 400 V for rated value of the operational current per conductor  | 0.5 W   |
| power loss [W] at AC-3e at 400 V for rated value of the operational current per conductor | 0.5 W   |
| no-load switching frequency   |   |
| • at AC   | 10 000 1/h  |
| • at DC   | 10 000 1/h  |
| operating frequency   |   |
| • at AC-1 maximum   | 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  | 42 V  |
| • at 60 Hz rated value  | 42 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                                    |   |
| — 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 |
| <b>fastening method side-by-side mounting</b> | Yes  |
| <b>fastening method</b>                       | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022   |
| <b>height</b>                                 | 57.5 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  | screw-type terminals  |
| • for auxiliary and control 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 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup> |
| — solid or stranded   | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup> |
| — finely stranded with core end processing  | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )                       |
| • for AWG cables for main contacts  | 2x (20 ... 16), 2x (18 ... 14), 2x 12   |
| <b>type of connectable conductor cross-sections</b>                                   |   |
| • for auxiliary contacts  |   |
| — solid   | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup> |
| — solid or stranded   | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup> |
| — finely stranded with core end processing  | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )                       |
| • for AWG cables for auxiliary contacts   | 2x (20 ... 16), 2x (18 ... 14), 2x 12   |
| <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>  |  |
| • mirror contact according to IEC 60947-4-1                    | Yes; with 3RH29                                  |
| • positively driven operation according to IEC 60947-5-1       | No   |
| <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

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



| Test Certificates | Maritime application |
|-------------------|----------------------|
|-------------------|----------------------|

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



| Maritime application | other |
|----------------------|-------|
|----------------------|-------|



[Miscellaneous](#)



[Confirmation](#)

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

[Special Test Certificates](#)



[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=3RT2517-1AD00>

Cax online generator

<http://support.automation.siemens.com/WW/CAOrder/default.aspx?lang=en&mlfb=3RT2517-1AD00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2517-1AD00>

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

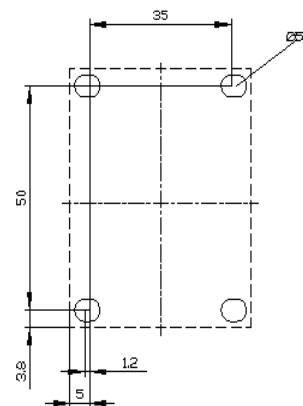
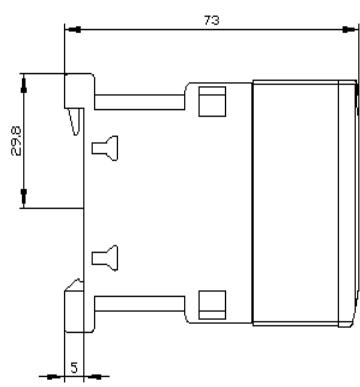
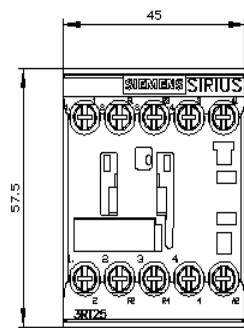
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2517-1AD00&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2517-1AD00&lang=en)

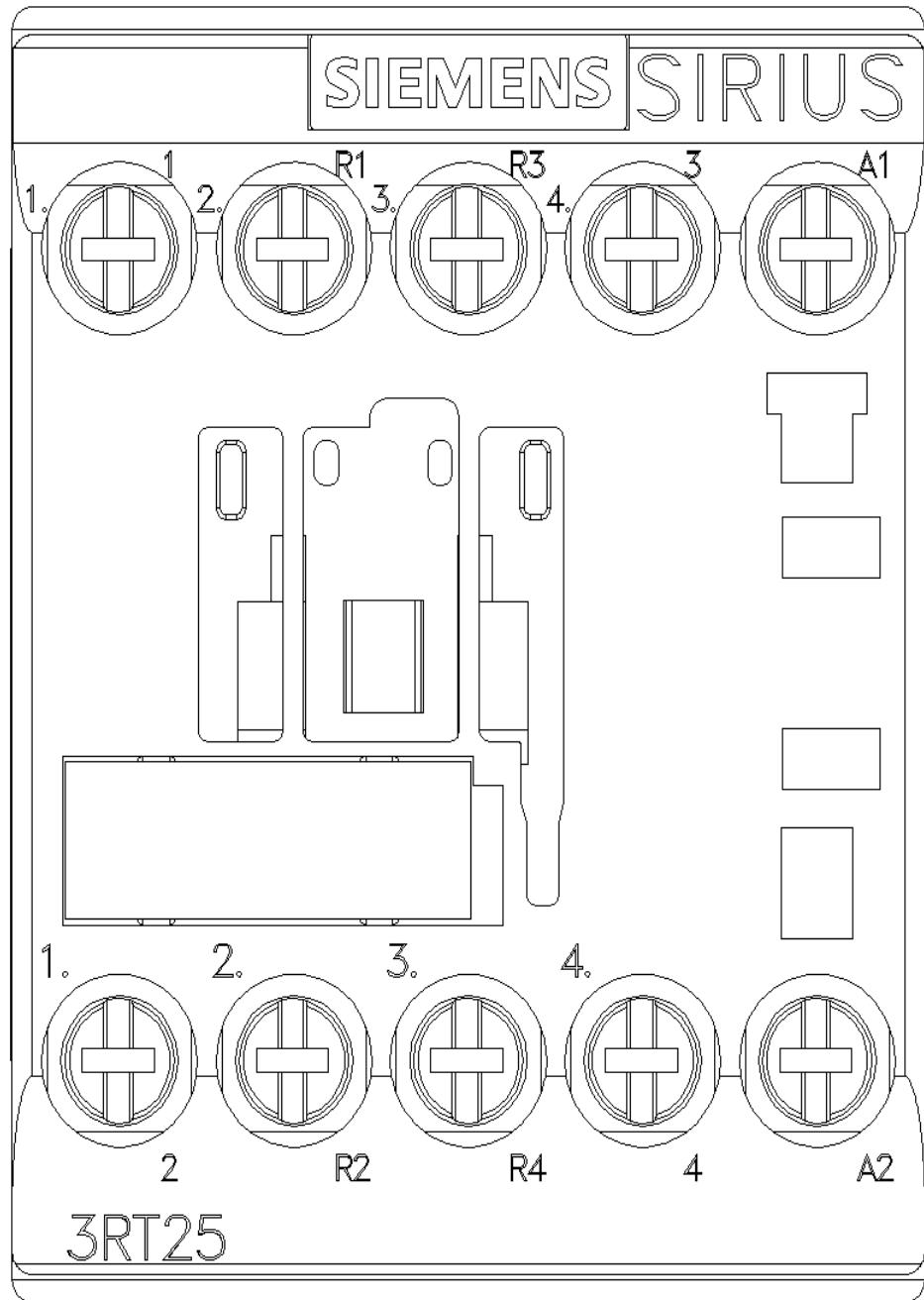
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

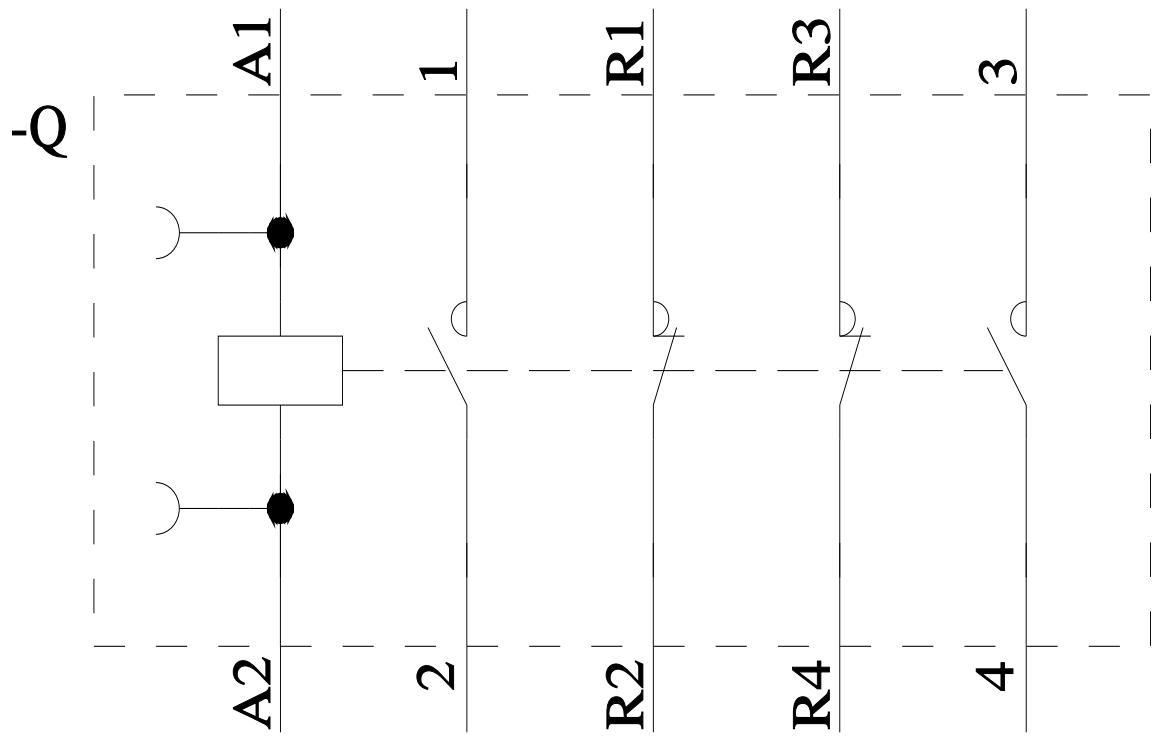
<https://support.industry.siemens.com/cs/ww/en/ps/3RT2517-1AD00/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2517-1AD00&objecttype=14&gridview=view1>







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