



power contactor, AC-3, 16 A, 7.5 kW / 400 V, 4-pole, 220 V DC, 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  | 1 W                        |
| • without load current share typical   | 4 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 DC  | 7.3g / 5 ms, 4.7g / 10 ms  |
| shock resistance with sine pulse   |                            |
| • at DC  | 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   | 0.297 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  | 153 kg  |
| global warming potential [CO2 eq] during manufacturing   | 1.42 kg   |
| global warming potential [CO2 eq] during operation   | 152 kg  |
| global warming potential [CO2 eq] after end of life  | -0.305 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>   |   |
| • 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   | 16 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>   |
| <b>operational current</b>   |   |
| • <b>at 1 current path at DC-1</b>   |   |
| — 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   |
| • <b>with 2 current paths in series at DC-1</b>  |   |
| — 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   |
| • <b>at 1 current path at DC-3 at DC-5</b>   |   |
| — 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  |
| • <b>with 2 current paths in series at DC-3 at DC-5</b>  |   |
| — 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  |
| <b>operating power at AC-2 at AC-3</b>   |   |
| • at 230 V per NC contact rated value  | 2.2 kW  |
| • at 230 V per NO contact rated value  | 4 kW  |
| • at 400 V per NC contact rated value  | 4 kW  |
| • at 400 V per NO contact rated value  | 7.5 kW  |
| <b>short-time withstand current in cold operating state up to 40 °C</b>                          |   |
| • limited to 1 s switching at zero current maximum   | 165 A; Use minimum cross-section acc. to AC-1 rated value |
| • limited to 5 s switching at zero current maximum   | 165 A; Use minimum cross-section acc. to AC-1 rated value |
| • limited to 10 s switching at zero current maximum  | 128 A; Use minimum cross-section acc. to AC-1 rated value |
| • limited to 30 s switching at zero current maximum  | 92 A; Use minimum cross-section acc. to AC-1 rated value  |
| • limited to 60 s switching at zero current maximum  | 74 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>  | 1 W   |
| <b>power loss [W] at AC-3e at 400 V for rated value of the operational current per conductor</b> | 1 W   |
| <b>no-load switching frequency</b>   |   |
| • at AC  | 10 000 1/h  |
| • at DC  | 10 000 1/h  |
| <b>operating frequency</b>   |   |
| • at AC-1 maximum  | 1 000 1/h   |

|  |  |
|--|--|
| <b>Control circuit/ Control</b>  |  |
| type of voltage of the control supply voltage                                  | DC   |
| control supply voltage at DC rated value                                       | 220 V  |
| operating range factor control supply voltage rated value of magnet coil at DC |  |
| • initial value  | 0.8  |
| • full-scale value   | 1.1  |
| closing power of magnet coil at DC   | 4 W  |
| holding power of magnet coil at DC   | 4 W  |
| closing delay  |  |
| • at DC  | 30 ... 100 ms  |
| opening delay  |  |
| • at DC  | 7 ... 13 ms  |
| arcing time  | 10 ... 15 ms   |
| <b>Auxiliary circuit</b>   |  |
| 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   |
| operational current at AC-15   |  |
| • at 230 V rated value   | 10 A   |
| • at 400 V rated value   | 3 A  |
| operational current at DC-12   |  |
| • 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   |
| operational current at DC-13   |  |
| • 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  |
| contact reliability of auxiliary contacts                                      | 1 faulty switching per 100 million (17 V, 1 mA)  |
| <b>UL/CSA ratings</b>  |  |
| yielded mechanical performance [hp]  |  |
| • 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   |
| contact rating of auxiliary contacts according to UL                           | A600 / Q600  |
| <b>Short-circuit protection</b>  |  |
| design of the fuse link  |  |
| • for short-circuit protection of the main circuit                             |  |
| — with type of coordination 1 required   | gG: 35 A (690 V, 100 kA)   |
| — with type of assignment 2 required   | gG: 20 A (690 V, 100 kA)   |
| <b>Installation/ mounting/ dimensions</b>                                      |  |
| mounting position  | +/-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  |
| fastening method   | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022   |
| height   | 57.5 mm  |
| width  | 45 mm  |
| depth  | 73 mm  |
| required spacing   |  |
| • 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 for main contacts</b>     |   |
| • 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> )                       |
| <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   |
| AWG number as coded connectable conductor cross section for main contacts | 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              |

#### 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> | EMV |
|---------------------------------|-----|



|                          |                          |
|--------------------------|--------------------------|
| <b>Test Certificates</b> | <b>Marine / Shipping</b> |
|--------------------------|--------------------------|

[Special Test Certificate](#)

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|                          |              |                |
|--------------------------|--------------|----------------|
| <b>Marine / Shipping</b> | <b>other</b> | <b>Railway</b> |
|--------------------------|--------------|----------------|



[Confirmation](#)

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[Special Test Certificate](#)

[Transport Information](#)

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#### 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=3RT2518-1BM40>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2518-1BM40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2518-1BM40>

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

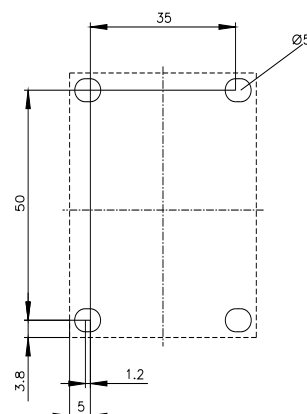
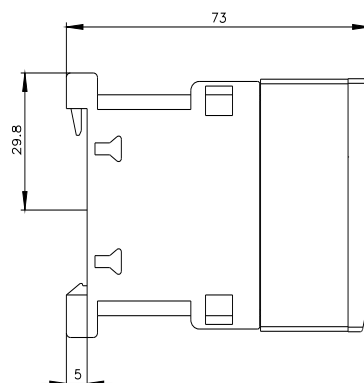
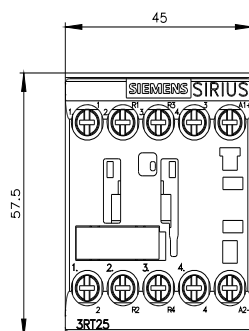
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2518-1BM40&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2518-1BM40&lang=en)

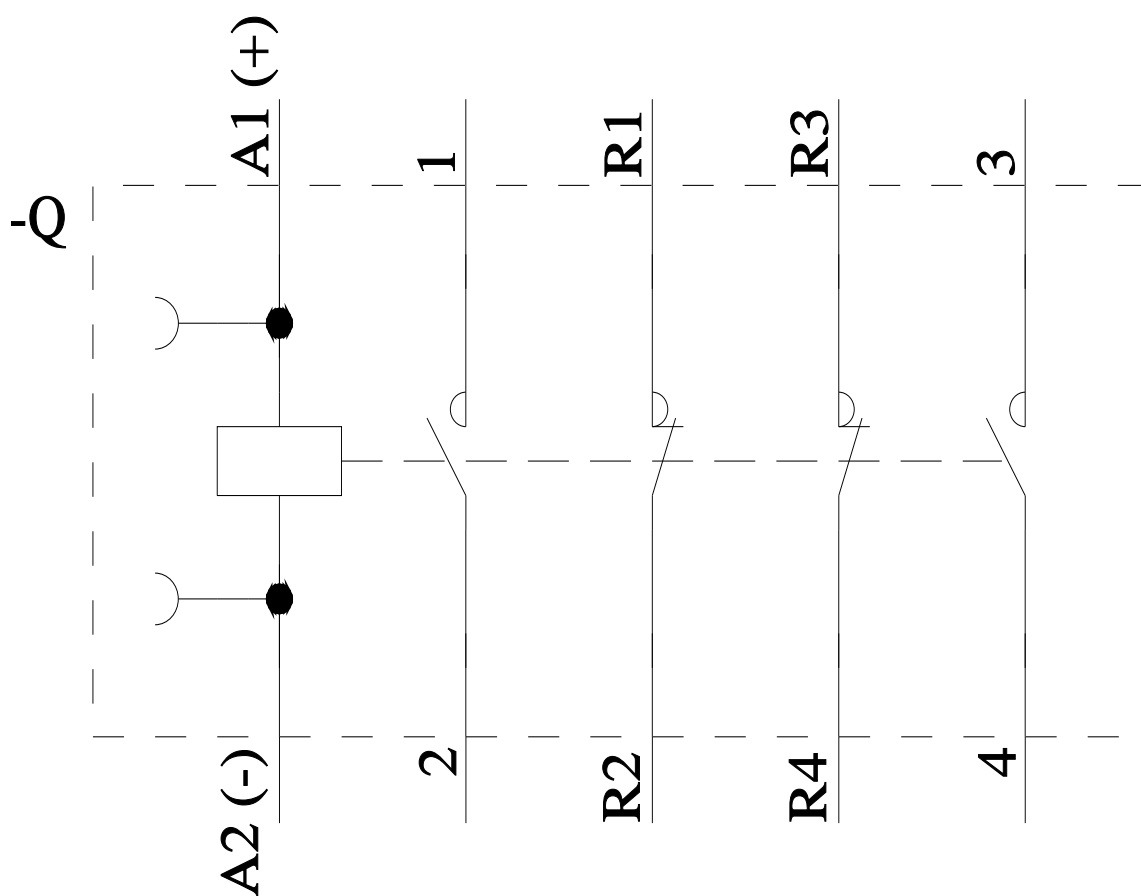
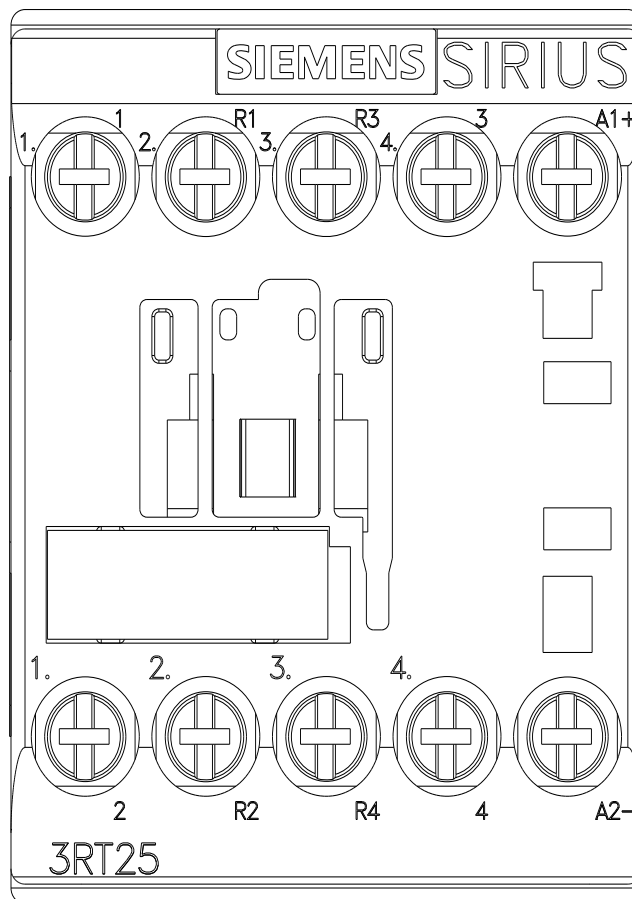
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2518-1BM40/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2518-1BM40&objecttype=14&gridview=view1>





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