

Power contactor, AC-3 9 A, 4 kW / 400 V 2 NO + 2 NC 42 V AC, 50 Hz 4-pole Size S00 screw terminals



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
Surge voltage resistance	
• of main circuit rated value	6 kV
• of auxiliary circuit rated value	6 kV
maximum permissible voltage for safe isolation	
• between coil and main contacts acc. to EN 60947-1	400 V
Protection class IP	
• on the front	IP20
• of the terminal	IP20
Shock resistance at rectangular impulse	
• at AC	6,7g / 5 ms, 4,2g / 10 ms

<b>Shock resistance with sine pulse</b>	
<ul style="list-style-type: none"> <li>• at AC</li> </ul>	10,5g / 5 ms, 6,6g / 10 ms
<b>Mechanical service life (switching cycles)</b>	
<ul style="list-style-type: none"> <li>• of contactor typical</li> </ul>	30 000 000
<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 EN 81346-2</b>	Q

### Ambient conditions

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

### Main circuit

<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>Operating current</b>	
<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> <li>— up to 690 V at ambient temperature 60 °C rated value</li> </ul> </li> </ul>	18 A 16 A
<ul style="list-style-type: none"> <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>	9 A 9 A
<b>Connectable conductor cross-section in main circuit at AC-1</b>	
<ul style="list-style-type: none"> <li>• at 60 °C minimum permissible</li> <li>• at 40 °C minimum permissible</li> </ul>	2.5 mm <sup>2</sup> 2.5 mm <sup>2</sup>
<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> </ul> </li> <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> </ul> </li> </ul>	20 A 2.1 A 0.8 A 0.6 A 20 A 12 A 1.6 A

— at 440 V rated value	0.8 A
<b>Operating current</b>	
• at 1 current path at DC-3 at DC-5	
— at 24 V per NC contact rated value	16 A
— at 24 V per NO contact rated value	16 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	16 A
— at 24 V per NO contact rated value	16 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</b>	
• at AC-1	
— at 230 V rated value	6.5 kW
— at 400 V rated value	11 kW
• 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	2.2 kW
— at 400 V per NC contact rated value	4 kW
— at 400 V per NO contact rated value	4 kW
<b>Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor</b>	0.7 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>	
<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>	27 V·A
• at 50 Hz	27 V·A
• at 60 Hz	24.3 V·A

<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>	4.2 V·A
• at 50 Hz	4.2 V·A
• at 60 Hz	3.3 V·A
<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	3.5 ... 14 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	0.003 A

#### Auxiliary circuit

<b>Number of NC contacts for auxiliary contacts</b>	
• instantaneous contact	0
<b>Number of NO contacts for auxiliary contacts</b>	
• instantaneous contact	0
<b>Operating current at AC-12 maximum</b>	10 A
<b>Operating current at AC-15</b>	
• at 230 V rated value	10 A
• at 400 V rated value	3 A
<b>Operating 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>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 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> <ul style="list-style-type: none"><li>• for single-phase AC motor<ul style="list-style-type: none"><li>— at 110/120 V rated value</li><li>— at 230 V rated value</li></ul></li></ul>	0.33 hp 1 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: 35 A (690 V, 100 kA) gG: 20A (690V, 100kA) fuse gG: 10 A
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## 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>Mounting type</b> <ul style="list-style-type: none"><li>• Side-by-side mounting</li></ul>	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022 Yes
<b>Height</b>	57.5 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>— Backwards</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>— Backwards</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>— Backwards</li><li>— upwards</li><li>— downwards</li></ul></li></ul>	0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 6 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm

— at the side

6 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></ul>	screw-type terminals screw-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>— single or multi-stranded</li><li>— finely stranded with core end processing</li></ul></li><li>• at AWG conductors for main contacts</li></ul>	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup> 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup> 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) 2x (20 ... 16), 2x (18 ... 14), 2x 12
<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> ), 2x 4 mm <sup>2</sup> 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup> 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) 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> <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; with 3RH29 No
<b>T1 value for proof test interval or service life acc. to IEC 61508</b>	20 y
<b>Protection against electrical shock</b>	finger-safe

## Certificates/approvals

General Product Approval	Functional Safety/Safety of Machinery	Declaration of Conformity
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[Type Examination](#)



Test Certificates	Marine / Shipping
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[Type Test Certificates/Test Report](#)



Marine / Shipping	other
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[Confirmation](#)



#### Further information

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

<http://www.siemens.com/industrial-controls/catalogs>

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2516-1AD00>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2516-1AD00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2516-1AD00>

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

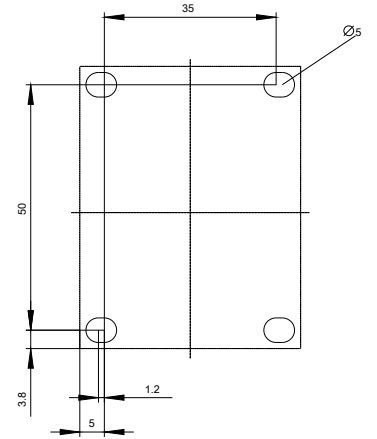
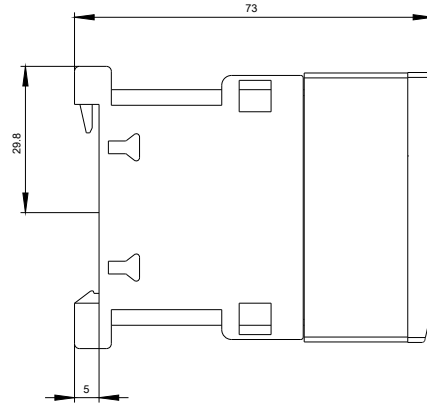
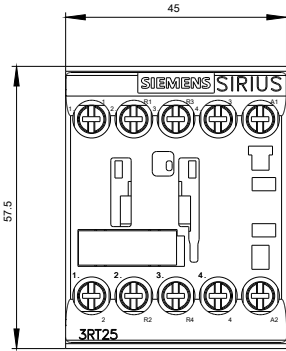
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2516-1AD00&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2516-1AD00&lang=en)

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

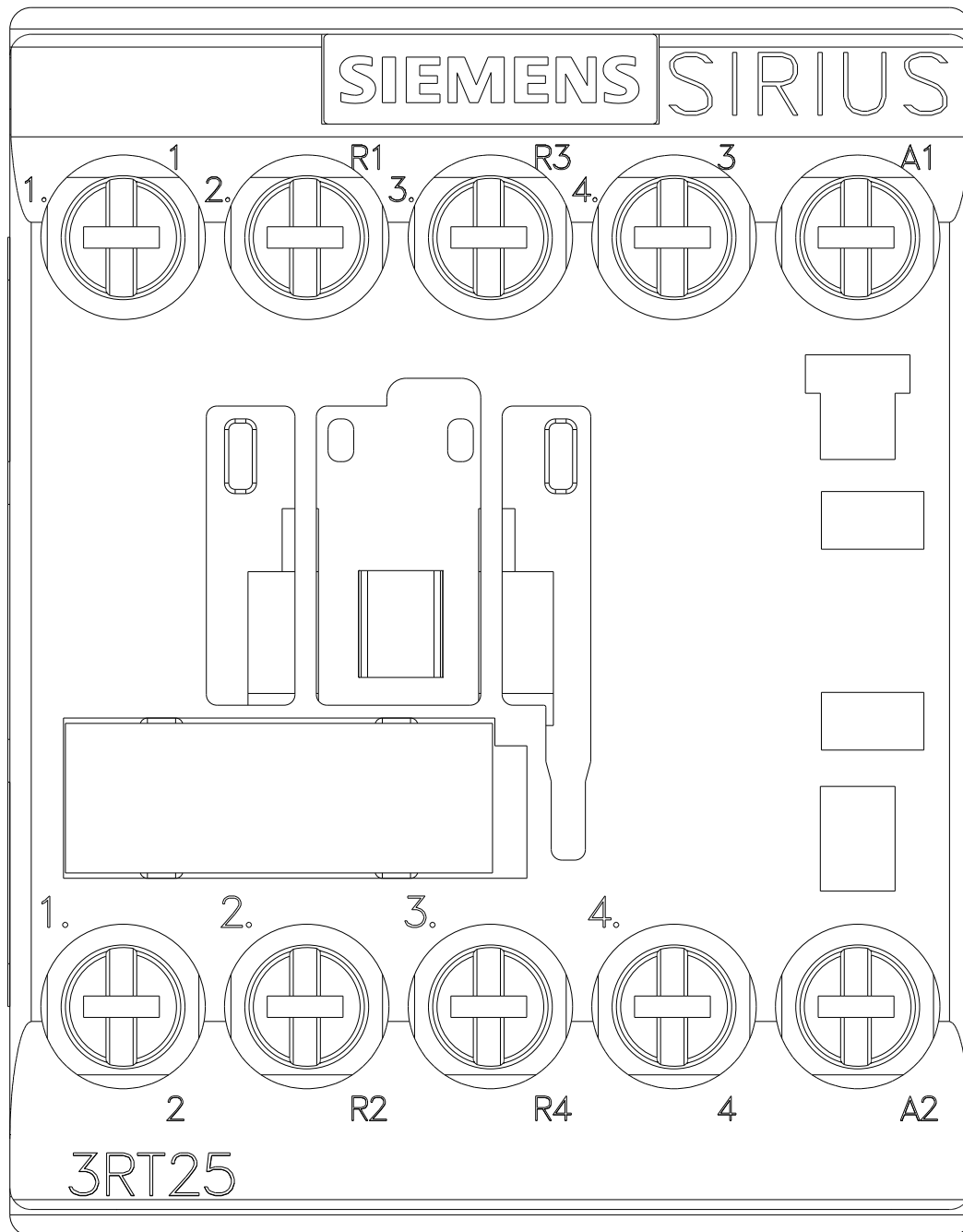
<https://support.industry.siemens.com/cs/ww/en/ps/3RT2516-1AD00/char>

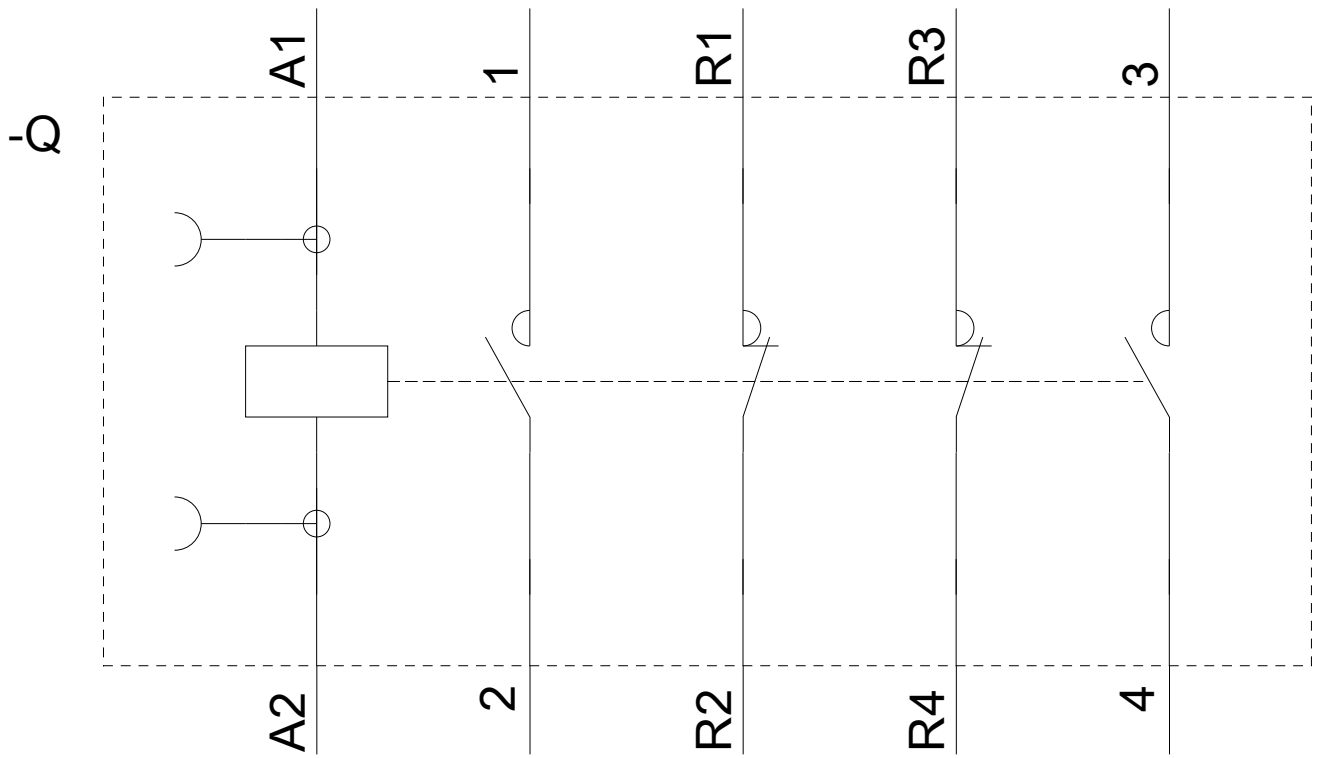
**Further characteristics (e.g. electrical endurance, switching frequency)**

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