



2NO+2NC CONTACTOR, AC3: 7.5KW AC 110V 50HZ 4-POLE,  
2NO+2NC, SZ: S00, SCREW TERMINAL

product brand name	SIRIUS
Product designation	3RT2 contactor
<b>General technical data:</b>	
Product expansion function module for communication	No
Insulation voltage	
• Rated value	690 V
maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1	400 V
Degree of pollution	3
Shock resistance	
• at rectangular impulse	
— with AC	7,3g / 5 ms, 4,7g / 10 ms
• with sine pulse	
— with AC	11,4g / 5 ms, 7,3g / 10 ms
Surge voltage resistance Rated value	6 kV
Mechanical service life (switching cycles)	
• of the contactor typical	30 000 000
• of the contactor with added electronics-compatible auxiliary switch block typical	5 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
Protection class IP	
• on the front	IP20
Equipment marking	

- acc. to DIN EN 61346-2
- acc. to DIN EN 81346-2

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#### Main circuit:

<b>Number of poles for main current circuit</b>	4
<b>Number of NC contacts for main contacts</b>	2
<b>Number of NO 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 22 A</li> <li>— up to 690 V at ambient temperature 60 °C Rated value 20 A</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 16 A</li> <li>— per NC contact Rated value 9 A</li> </ul> </li> </ul>	
<b>Operating current with 1 current path</b>	
<ul style="list-style-type: none"> <li>• at DC-1           <ul style="list-style-type: none"> <li>— at 24 V Rated value 20 A</li> <li>— at 110 V Rated value 2.1 A</li> <li>— at 220 V Rated value 0.8 A</li> <li>— at 440 V Rated value 0.6 A</li> </ul> </li> <li>• at DC-3 at DC-5           <ul style="list-style-type: none"> <li>— at 24 V per NC contact Rated value 20 A</li> <li>— at 24 V per NO contact Rated value 20 A</li> <li>— at 110 V per NC contact Rated value 0.075 A</li> <li>— at 110 V per NO contact Rated value 0.15 A</li> <li>— at 220 V per NC contact Rated value 0.375 A</li> <li>— at 220 V per NO contact Rated value 0.75 A</li> </ul> </li> </ul>	
<b>Operating current with 2 current paths in series</b>	
<ul style="list-style-type: none"> <li>• at DC-1           <ul style="list-style-type: none"> <li>— at 24 V Rated value 20 A</li> <li>— at 110 V Rated value 12 A</li> <li>— at 220 V Rated value 1.6 A</li> <li>— at 440 V Rated value 0.8 A</li> </ul> </li> <li>• at DC-3 at DC-5           <ul style="list-style-type: none"> <li>— at 110 V per NC contact Rated value 0.175 A</li> <li>— at 110 V per NO contact Rated value 0.35 A</li> <li>— at 24 V per NC contact Rated value 20 A</li> <li>— at 24 V per NO contact Rated value 20 A</li> </ul> </li> </ul>	
<b>Operating power</b>	
<ul style="list-style-type: none"> <li>• at AC-2 at AC-3</li> </ul>	

— 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>Active power loss at AC-3 at 400 V for rated value of the operating current per conductor</b>	2.2 W
<b>Operating frequency</b>	
• at AC-1 maximum	1 000 1/h
<b>No-load switching frequency</b>	
• with AC	10 000 1/h
• for DC	10 000 1/h

Control circuit/ Control:	
<b>Type of voltage of the control supply voltage</b>	AC
<b>Control supply voltage with AC</b>	
• at 50 Hz Rated value	110 V
• at 60 Hz Rated value	110 V
<b>Operating range factor control supply voltage rated value of the magnet coil with AC</b>	
• at 50 Hz	0.8 ... 1.1
• at 60 Hz	0.85 ... 1.1
<b>Closing delay</b>	
• with AC	8 ... 33 ms
<b>Opening delay</b>	
• with 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>	
• with AC at 230 V maximum permissible	0.004 A

Auxiliary circuit:	
<b>Number of NC contacts</b>	
• for auxiliary contacts	
— instantaneous contact	0
<b>Number of NO contacts</b>	
• for auxiliary contacts	
— instantaneous contact	0
<b>Product expansion Auxiliary switch</b>	Yes
<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 60 V Rated value	6 A

<ul style="list-style-type: none"> <li>• at 110 V Rated value</li> <li>• at 125 V Rated value</li> <li>• at 220 V Rated value</li> <li>• at 600 V Rated value</li> </ul>	<p>3 A</p> <p>2 A</p> <p>1 A</p> <p>0.15 A</p>
<b>Operating current at DC-13</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 600 V Rated value</li> </ul>	<p>10 A</p> <p>2 A</p> <p>1 A</p> <p>0.3 A</p> <p>0.1 A</p>
<b>Contact reliability of the auxiliary contacts</b>	<p>1 faulty switching per 100 million (17 V, 1 mA)</p>

#### 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>	<p>1 hp</p> <p>2 hp</p>
<b>Contact rating of the auxiliary contacts acc. to UL</b>	<p>A600 / Q600</p>

#### Short-circuit:

<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 assignment 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>	<p>gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A</p> <p>gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20 A</p> <p>fuse gL/gG: 10 A</p>
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#### Installation/ mounting/ dimensions:

<b>mounting position</b>	<p>+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface</p>
<b>Mounting type</b> <ul style="list-style-type: none"> <li>• Side-by-side mounting</li> </ul>	<p>screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022</p> <p>Yes</p>
<b>Height</b>	<p>57.5 mm</p>
<b>Width</b>	<p>45 mm</p>
<b>Depth</b>	<p>73 mm</p>
<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> </ul>	<p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p>

• 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 current circuit	screw-type terminals
<b>Type of connectable conductor cross-section</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>
— single or multi-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 conductors for main contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12
• 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>
— single or multi-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 conductors for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12

#### Safety related data:

<b>B10 value with high demand rate acc. to SN 31920</b>	1 000 000
<b>Proportion of dangerous failures</b>	
• with low demand rate acc. to SN 31920	40 %
• with high demand rate acc. to SN 31920	73 %
<b>Product function</b>	
• Mirror contact acc. to IEC 60947-4-1	Yes; with 3RH29
• positively driven operation acc. to IEC 60947-5-1	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

#### Mechanical data:






<b>Size of contactor</b>	S00
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### Ambient conditions:

Installation altitude at height above sea level maximum	2 000 m
Ambient temperature	
• during operation	-25 ... +60 °C
• during storage	-55 ... +80 °C

### Certificates/ approvals:

General Product Approval	Functional Safety/Safety of Machinery	Declaration of Conformity
 CCC	 CSA	 UL
 EAC		<a href="#">Type Examination</a>  EG-Konf.

Test Certificates	Shipping Approval
<a href="#">Special Test Certificate</a>	 ABS
	 BUREAU VERITAS
	 DNV
	 GL
	 LRS

Shipping Approval	other
 PRS	<a href="#">Environmental Confirmations</a>
 RINA	<a href="#">Confirmation</a>
 RMRS	 VDE

### Further information

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

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

**Industry Mall (Online ordering system)**

<http://www.siemens.com/industrymall>

**Cax online generator**

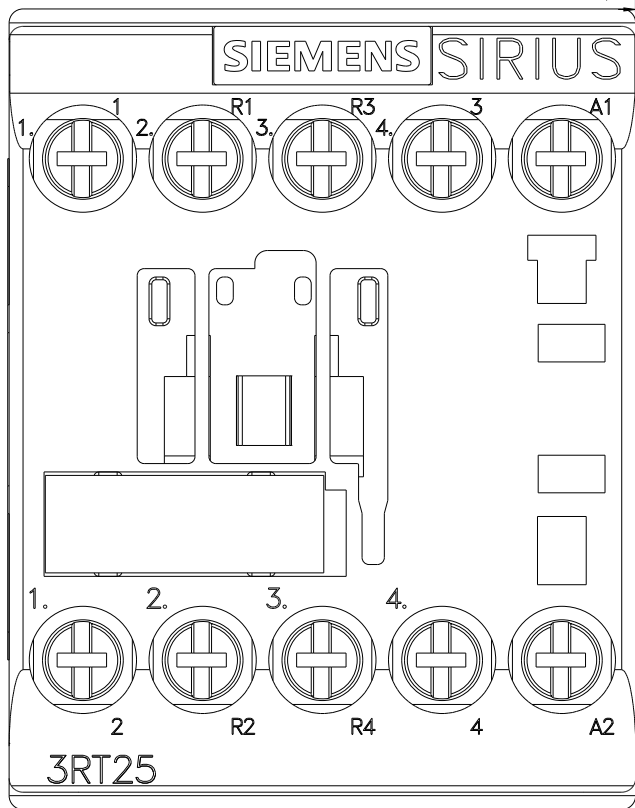
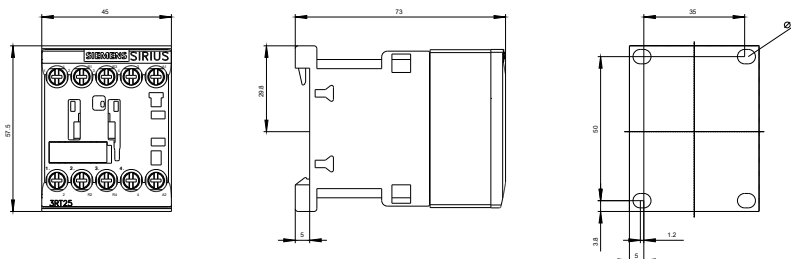
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT25181AF00>

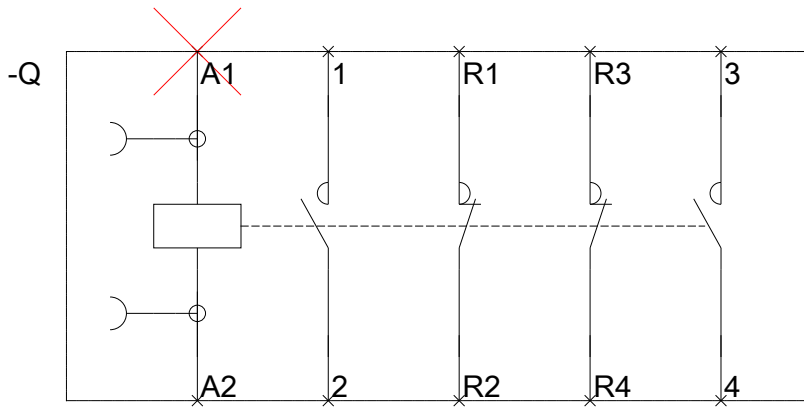
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RT25181AF00>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT25181AF00&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT25181AF00&lang=en)





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