

power contactor, AC-3 95 A, 45 kW / 400 V 1 NO + 1 NC, 24 V AC, 50 Hz 3-pole, 3 NO, Size S3 Spring-type terminal



Figure similar

<b>Product brand name</b>	SIRIUS
<b>Product designation</b>	Power contactor
<b>Product type designation</b>	3RT2
<b>General technical data</b>	
<b>Size of contactor</b>	S3
<b>Product extension</b>	
• function module for communication	No
• Auxiliary switch	Yes
<b>Insulation voltage</b>	
• rated value	1 000 V
<b>Degree of pollution</b>	3
<b>Surge voltage resistance rated value</b>	6 kV
<b>maximum permissible voltage for safe isolation</b>	
• between coil and main contacts acc. to EN 60947-1	690 V
<b>Protection class IP</b>	
• on the front	IP20

<ul style="list-style-type: none"> <li>• of the terminal</li> </ul>	IP00
<b>Shock resistance at rectangular impulse</b> <ul style="list-style-type: none"> <li>• at AC</li> </ul>	6.7 g / 5 ms, 4.0 g / 10 ms
<b>Shock resistance with sine pulse</b> <ul style="list-style-type: none"> <li>• at AC</li> </ul>	10.6 g / 5 ms, 6.3 g / 10 ms
<b>Mechanical service life (switching cycles)</b> <ul style="list-style-type: none"> <li>• of contactor typical</li> <li>• of the contactor with added electronics-compatible auxiliary switch block typical</li> <li>• of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000 5 000 000 10 000 000
Reference identifier acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750	K

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> <li>• during storage</li> </ul>	-25 ... +60 °C -55 ... +80 °C

Main circuit	
<b>Number of poles for main current circuit</b>	3
<b>Number of NO contacts for main contacts</b>	3
<b>Operating voltage</b> <ul style="list-style-type: none"> <li>• at AC-3 rated value maximum</li> </ul>	1 000 V
<b>Operating current</b> <ul style="list-style-type: none"> <li>• at AC-1 at 400 V <ul style="list-style-type: none"> <li>— at ambient temperature 40 °C rated value</li> </ul> </li> <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> <li>• at AC-2 at 400 V rated value</li> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul>	130 A 130 A 110 A 95 A 95 A 95 A 78 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>	35 mm <sup>2</sup> 50 mm <sup>2</sup>

<b>Operating current for approx. 200000 operating cycles at AC-4</b>	
• at 400 V rated value	42 A
• at 690 V rated value	30 A
<b>Operating current</b>	
• at 1 current path at DC-1	
— at 24 V rated value	100 A
— at 110 V rated value	9 A
— at 220 V rated value	2 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.4 A
• with 2 current paths in series at DC-1	
— at 24 V rated value	100 A
— at 110 V rated value	100 A
— at 220 V rated value	10 A
— at 440 V rated value	1.8 A
— at 600 V rated value	1 A
• with 3 current paths in series at DC-1	
— at 24 V rated value	100 A
— at 110 V rated value	100 A
— at 220 V rated value	80 A
— at 440 V rated value	4.5 A
— at 600 V rated value	2.6 A
<b>Operating current</b>	
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	40 A
— at 110 V rated value	2.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.15 A
— at 600 V rated value	0.06 A
• with 2 current paths in series at DC-3 at DC-5	
— at 24 V rated value	100 A
— at 110 V rated value	100 A
— at 220 V rated value	7 A
— at 440 V rated value	0.42 A
— at 600 V rated value	0.16 A
• with 3 current paths in series at DC-3 at DC-5	
— at 24 V rated value	100 A
— at 110 V rated value	100 A
— at 220 V rated value	35 A
— at 440 V rated value	0.8 A

— at 600 V rated value	0.35 A
<b>Operating power</b>	
• at AC-1	
— at 230 V rated value	49 kW
— at 230 V at 60 °C rated value	42 kW
— at 400 V rated value	86 kW
— at 400 V at 60 °C rated value	72 kW
— at 690 V rated value	148 kW
— at 690 V at 60 °C rated value	125 kW
• at AC-2 at 400 V rated value	45 kW
• at AC-3	
— at 230 V rated value	22 kW
— at 400 V rated value	45 kW
— at 500 V rated value	55 kW
— at 690 V rated value	75 kW
<b>Operating power for approx. 200000 operating cycles at AC-4</b>	
• at 400 V rated value	22 kW
• at 690 V rated value	27.4 kW
<b>Thermal short-time current limited to 10 s</b>	760 A
<b>Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor</b>	6.6 W
<b>No-load switching frequency</b>	
• at AC	5 000 1/h
<b>Operating frequency</b>	
• at AC-1 maximum	900 1/h
• at AC-2 maximum	350 1/h
• at AC-3 maximum	850 1/h
• at AC-4 maximum	250 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	24 V
<b>Operating range factor control supply voltage rated value of magnet coil at AC</b>	
• at 50 Hz	0.8 ... 1.1
<b>Apparent pick-up power of magnet coil at AC</b>	
• at 50 Hz	296 V·A
<b>Inductive power factor with closing power of the coil</b>	
• at 50 Hz	0.61
<b>Apparent holding power of magnet coil at AC</b>	
• at 50 Hz	19 V·A

<b>Inductive power factor with the holding power of the coil</b>	
• at 50 Hz	0.38
<b>Closing delay</b>	
• at AC	13 ... 50 ms
<b>Opening delay</b>	
• at AC	10 ... 21 ms
<b>Arcing time</b>	10 ... 20 ms

#### Auxiliary circuit

<b>Number of NC contacts</b>	
• for auxiliary contacts	
— instantaneous contact	1
<b>Number of NO contacts</b>	
• for auxiliary contacts	
— instantaneous contact	1
<b>Operating current at AC-12 maximum</b>	10 A
<b>Operating current at AC-15</b>	
• at 230 V rated value	6 A
• at 400 V rated value	3 A
• at 500 V rated value	2 A
• at 690 V rated value	1 A
<b>Operating current at DC-12</b>	
• at 24 V rated value	10 A
• 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 125 V rated value	0.9 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>Full-load current (FLA) for three-phase AC motor</b>	
• at 480 V rated value	96 A

<ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>	77 A
<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> <li>• for three-phase AC motor <ul style="list-style-type: none"> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> <li>— at 460/480 V rated value</li> <li>— at 575/600 V rated value</li> </ul> </li> </ul>	10 hp 20 hp 30 hp 30 hp 75 hp 75 hp
<b>Contact rating of auxiliary contacts according to UL</b>	A600 / P600

### 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>	gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 250 A gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 160 A fuse gG: 10 A

### 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>	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
<ul style="list-style-type: none"> <li>• Side-by-side mounting</li> </ul>	Yes
<b>Height</b>	140 mm
<b>Width</b>	70 mm
<b>Depth</b>	152 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</li> </ul>	0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 10 mm 10 mm 10 mm

— forwards	0 mm
— Backwards	0 mm
— upwards	10 mm
— downwards	10 mm
— at the side	10 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>	<p>screw-type terminals</p> <p>spring-loaded 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>— finely stranded with core end processing</li> </ul> </li> <li>• at AWG conductors for main contacts</li> </ul>	<p>2x (2.5 ... 35 mm<sup>2</sup>), 1x (2.5 ... 50 mm<sup>2</sup>)</p> <p>2x (10 ... 1/0), 1x (10 ... 2)</p>
<b>Connectable conductor cross-section for main contacts</b>	
<ul style="list-style-type: none"> <li>• solid</li> <li>• stranded</li> </ul>	<p>2.5 ... 16 mm<sup>2</sup></p> <p>6 ... 70 mm<sup>2</sup></p>
<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>— single or multi-stranded</li> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> </ul> </li> <li>• at AWG conductors for auxiliary contacts</li> </ul>	<p>2x (0,5 ... 2,5 mm<sup>2</sup>)</p> <p>2x (0.5 ... 1.5 mm<sup>2</sup>)</p> <p>2x (0.5 ... 2.5 mm<sup>2</sup>)</p> <p>2x (20 ... 16)</p>

## Safety related data

<b>B10 value</b>	
<ul style="list-style-type: none"> <li>• with high demand rate acc. to SN 31920</li> </ul>	1 000 000
<b>Proportion of dangerous failures</b>	
<ul style="list-style-type: none"> <li>• with low demand rate acc. to SN 31920</li> <li>• with high demand rate acc. to SN 31920</li> </ul>	<p>40 %</p> <p>73 %</p>
<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>	<p>Yes</p> <p>No</p>
<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 when touched vertically from front acc. to IEC 60529

## Certificates/approvals

General Product Approval				Declaration of Conformity	Test Certificates
 CCC	 CSA	 UL		 EG-Konf.	<a href="#">Type Test Certificates/Test Report</a>

Test Certificates	other	Railway
<a href="#">Special Test Certificate</a>	<a href="#">Confirmation</a>	<a href="#">Vibration and Shock</a>

#### 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?mfb=3RT2046-3AB00>

**Cax online generator**

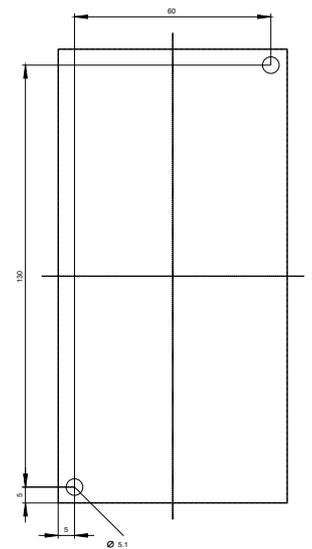
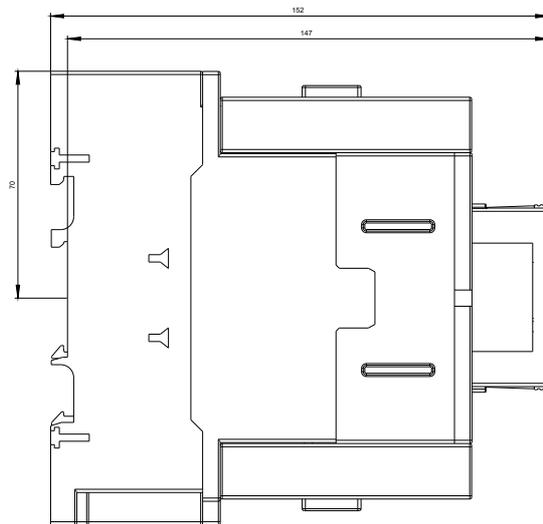
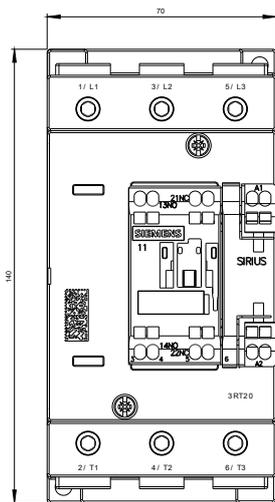
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RT2046-3AB00>

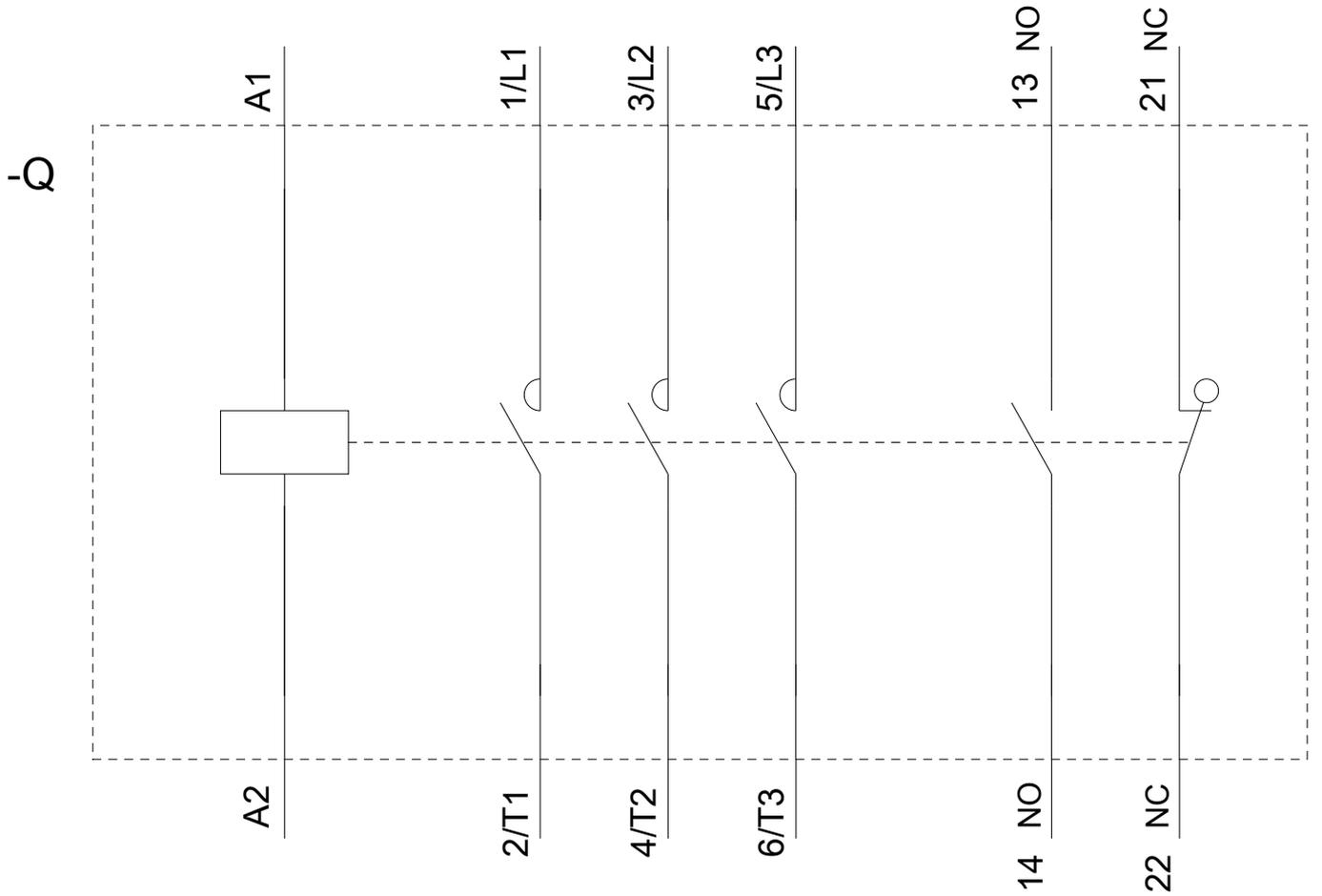
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2046-3AB00>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=3RT2046-3AB00&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RT2046-3AB00&lang=en)





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