

CONTACTOR, AC-3, 15KW/400V, 2NO+2NC, AC 230V 50HZ, 3-POLE, SZ S0 SCREW TERMINAL REMOVABLE AUX. SWITCH



product brand name	SIRIUS
Product designation	3RT2 contactor
<b>General technical data:</b>	
Size of contactor	S0
Product expansion	
• function module for communication	No
• Auxiliary switch	No
Insulation voltage	
• Rated value	690 V
Surge voltage resistance 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
Degree of pollution	3
Shock resistance	
• at rectangular impulse	
— at AC	8,3g / 5 ms, 5,3g / 10 ms

<ul style="list-style-type: none"> <li>• with sine pulse               <ul style="list-style-type: none"> <li>— at AC</li> </ul> </li> </ul>	13,5g / 5 ms, 8,3g / 10 ms
<b>Mechanical service life (switching cycles)</b>	
<ul style="list-style-type: none"> <li>• of the contactor typical</li> </ul>	10 000 000
<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>Ambient conditions:</b>	
<b>Installation altitude at height above sea level maximum</b>	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
<b>Main circuit:</b>	
<b>Number of NO contacts for main contacts</b>	3
<b>Number of NC contacts for main contacts</b>	0
<b>Operating voltage</b>	
<ul style="list-style-type: none"> <li>• at AC-3 Rated value maximum</li> </ul>	690 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> </ul>	50 A
<ul style="list-style-type: none"> <li>• at AC-1 up to 690 V               <ul style="list-style-type: none"> <li>— at ambient temperature 40 °C Rated value</li> <li>— at ambient temperature 60 °C Rated value</li> </ul> </li> </ul>	50 A 42 A
<ul style="list-style-type: none"> <li>• at AC-2 at 400 V Rated value</li> </ul>	32 A
<ul style="list-style-type: none"> <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>	32 A 32 A 21 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> </ul>	10 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>• at 40 °C minimum permissible</li> </ul>	10 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> <li>— at 600 V Rated value</li> </ul> </li> </ul>	35 A 4.5 A 1 A 0.4 A 0.25 A
<ul style="list-style-type: none"> <li>• with 2 current paths in series at DC-1</li> </ul>	

— at 24 V Rated value	35 A
— at 110 V Rated value	35 A
— at 220 V Rated value	5 A
— at 440 V Rated value	1 A
— at 600 V Rated value	0.8 A
• with 3 current paths in series at DC-1	
— at 24 V Rated value	35 A
— at 110 V Rated value	35 A
— at 220 V Rated value	35 A
— at 440 V Rated value	2.9 A
— at 600 V Rated value	1.4 A
<b>Operating current</b>	
• at 1 current path at DC-3 at DC-5	
— at 24 V Rated value	20 A
— at 110 V Rated value	2.5 A
— at 220 V Rated value	1 A
— at 440 V Rated value	0.09 A
— at 600 V Rated value	0.06 A
• with 2 current paths in series at DC-3 at DC-5	
— at 110 V Rated value	15 A
— at 220 V Rated value	3 A
— at 24 V Rated value	35 A
— at 440 V Rated value	0.27 A
— at 600 V Rated value	0.16 A
• with 3 current paths in series at DC-3 at DC-5	
— at 110 V Rated value	35 A
— at 220 V Rated value	10 A
— at 24 V Rated value	35 A
— at 440 V Rated value	0.6 A
— at 600 V Rated value	0.6 A
<b>Operating power</b>	
• at AC-1	
— at 230 V Rated value	16 kW
— at 230 V at 60 °C Rated value	15.5 kW
— at 400 V Rated value	28 kW
— at 400 V at 60 °C Rated value	27.5 kW
— at 690 V Rated value	48 kW
— at 690 V at 60 °C Rated value	47.5 kW
• at AC-2 at 400 V Rated value	15 kW
• at AC-3	
— at 230 V Rated value	7.5 kW

— at 400 V Rated value	15 kW
— at 690 V Rated value	18.5 kW
<b>Thermal short-time current limited to 10 s</b>	260 A
<b>Active power loss at AC-3 at 400 V for rated value of the operating current per conductor</b>	2.7 W
<b>No-load switching frequency</b>	
• at AC	5 000 1/h
<b>Operating frequency</b>	
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	750 1/h
• at AC-3 maximum	750 1/h
• at AC-4 maximum	250 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	230 V
<b>Operating range factor control supply voltage rated value of the magnet coil at AC</b>	
• at 50 Hz	0.8 ... 1.1
<b>Apparent pick-up power of the magnet coil at AC</b>	
• at 50 Hz	77 V·A
<b>Inductive power factor with closing power of the coil</b>	
• at 50 Hz	0.82
<b>Apparent holding power of the magnet coil at AC</b>	
• at 50 Hz	9.8 V·A
<b>Inductive power factor with the holding power of the coil</b>	
• at 50 Hz	0.25
<b>Closing delay</b>	
• at AC	8 ... 40 ms
<b>Opening delay</b>	
• at AC	4 ... 16 ms
<b>Arcing time</b>	10 ... 10 ms
<b>Residual current of the electronics for control with signal &lt;0&gt;</b>	
• at AC at 230 V maximum permissible	7 mA
• at DC at 24 V maximum permissible	16 mA

Auxiliary circuit:	
<b>Number of NC contacts</b>	
• for auxiliary contacts	
— instantaneous contact	2
<b>Number of NO contacts</b>	

<ul style="list-style-type: none"> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>— instantaneous contact</li> </ul> </li> </ul>	2
Operating current at AC-12 maximum	10 A
<b>Operating current at AC-15</b>	
<ul style="list-style-type: none"> <li>• at 230 V Rated value</li> <li>• at 400 V Rated value</li> <li>• at 500 V Rated value</li> <li>• at 690 V Rated value</li> </ul>	6 A 3 A 2 A 1 A
<b>Operating current at DC-12</b>	
<ul style="list-style-type: none"> <li>• at 24 V Rated value</li> <li>• at 48 V Rated value</li> <li>• at 60 V Rated value</li> <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>	10 A 6 A 6 A 3 A 2 A 1 A 0.15 A
<b>Operating current at DC-13</b>	
<ul style="list-style-type: none"> <li>• at 24 V Rated value</li> <li>• at 48 V Rated value</li> <li>• at 60 V Rated value</li> <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>	6 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A
<b>Contact reliability of the 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>	
<ul style="list-style-type: none"> <li>• at 480 V Rated value</li> <li>• at 600 V Rated value</li> </ul>	27 A 27 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>	2 hp 5 hp 10 hp 10 hp 20 hp 25 hp
<b>Contact rating of the auxiliary contacts acc. to UL</b>	A600 / Q600

#### Short-circuit protection

<b>Design of the fuse link</b>	
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- for short-circuit protection of the main circuit
  - with type of assignment 1 required
  - with type of assignment 2 required
- for short-circuit protection of the auxiliary switch required

gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 125 A  
 gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 50 A  
 fuse gL/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 50022
<ul style="list-style-type: none"> <li>• Side-by-side mounting</li> </ul>	Yes
<b>Height</b>	85 mm
<b>Width</b>	45 mm
<b>Depth</b>	141 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> <li>— at the side</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 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-section</b>	
<ul style="list-style-type: none"> <li>• for main contacts           <ul style="list-style-type: none"> <li>— single or multi-stranded</li> </ul> </li> </ul>	2x (1 ... 2,5 mm <sup>2</sup> ), 2x (2,5 ... 10 mm <sup>2</sup> )

<ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> <li>• for AWG conductors for main contacts</li> </ul>	2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup> 2x (16 ... 12), 2x (14 ... 8)
<b>Type of connectable conductor cross-section</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> </ul> </li> <li>• for 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 (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) 2x (20 ... 16), 2x (18 ... 14)

<b>Safety related data:</b>	
<b>B10 value with high demand rate acc. to SN 31920</b>	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>	40 % 73 %
<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 Yes
<b>T1 value for proof test interval or service life acc. to IEC 61508</b>	20 y

**Certificates/ approvals:**

General Product Approval	EMC	Functional Safety/Safety of Machinery
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[Baumusterbescheinigung](#)

Declaration of Conformity	Test Certificates	Shipping Approval
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[Typprüfbescheinigung/Werkszeugnis](#)

[spezielle Prüfbescheinigung](#)



Shipping Approval	other
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[Umweltbestätigung](#)

other
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[Bestätigungen](#)



### 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=3RT20271AP04>

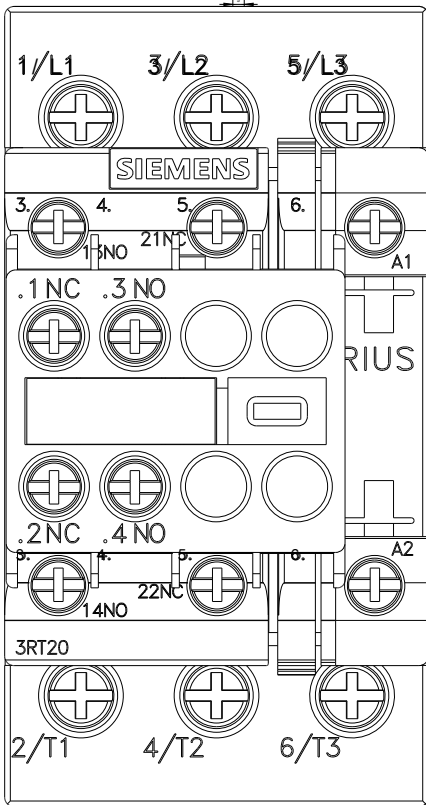
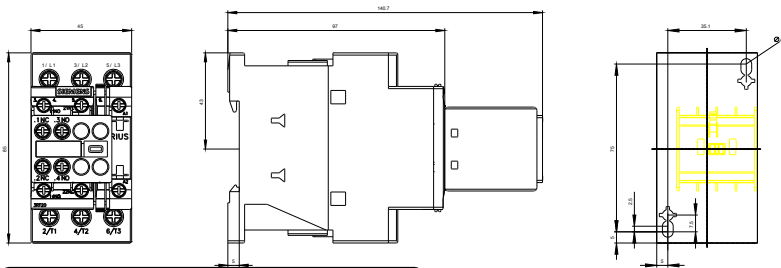
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

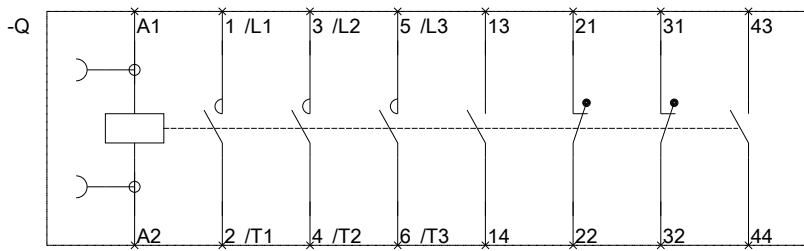
<https://support.industry.siemens.com/cs/ww/en/ps/3RT20271AP04>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT20271AP04&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT20271AP04&lang=en)







last modified:

29.09.2015