

CONTACTOR,AC3:30KW/400V, 1NO+1NC, 20-33V AC/DC, WITH VARISTOR, 3-POLE, SIZE S2, SCREW TERMINAL



Figure similar

product brand name	SIRIUS
Product designation	3RT2 contactor

General technical data:

Size of contactor	S2
Product expansion	
• function module for communication	No
• Auxiliary switch	Yes
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	IP00
• of the terminal	IP00
Degree of pollution	3
Shock resistance	
• at rectangular impulse	
— at AC	7.7g / 5 ms, 4.5g / 10 ms

<ul style="list-style-type: none"> <li>— at DC</li> <li>• with sine pulse</li> <li>— at AC</li> <li>— at DC</li> </ul>	<p>7.7g / 5 ms, 4.5g / 10 ms</p> <p>12g / 5 ms, 7g / 10 ms</p> <p>12g / 5 ms, 7g / 10 ms</p>
<b>Mechanical service life (switching cycles)</b> <ul style="list-style-type: none"> <li>• of the 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>	<p>10 000 000</p> <p>5 000 000</p> <p>10 000 000</p>

**Ambient conditions:**

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

**Main circuit:**

<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> <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> <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>	<p>80 A</p> <p>80 A</p> <p>70 A</p> <p>65 A</p> <p>65 A</p> <p>65 A</p> <p>47 A</p>
<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>	<p>25 mm<sup>2</sup></p> <p>25 mm<sup>2</sup></p>
<b>Operating current for ≥ 200000 operating cycles at AC-4</b>	
<ul style="list-style-type: none"> <li>• at 400 V Rated value</li> <li>• at 690 V Rated value</li> </ul>	<p>28 A</p> <p>22 A</p>
<b>Operating current</b>	
<ul style="list-style-type: none"> <li>• at 1 current path at DC-1</li> </ul>	

— at 24 V Rated value	55 A
— at 110 V Rated value	4.5 A
— at 220 V Rated value	1 A
— at 440 V Rated value	0.4 A
— at 600 V Rated value	0.25 A
• with 2 current paths in series at DC-1	
— at 24 V Rated value	55 A
— at 110 V Rated value	45 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	55 A
— at 110 V Rated value	55 A
— at 220 V Rated value	45 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	35 A
— at 110 V Rated value	2.5 A
— at 220 V Rated value	1 A
— at 440 V Rated value	0.1 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	25 A
— at 220 V Rated value	5 A
— at 24 V Rated value	55 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	55 A
— at 220 V Rated value	25 A
— at 24 V Rated value	55 A
— at 440 V Rated value	0.6 A
— at 600 V Rated value	0.35 A
<b>Operating power</b>	
• at AC-1	
— at 230 V Rated value	30 kW
— at 230 V at 60 °C Rated value	26 kW
— at 400 V Rated value	53 kW

— at 400 V at 60 °C Rated value	46 kW
— at 690 V Rated value	91 kW
— at 690 V at 60 °C Rated value	79 kW
• at AC-2 at 400 V Rated value	30 kW
• at AC-3	
— at 230 V Rated value	18.5 kW
— at 400 V Rated value	30 kW
— at 500 V Rated value	37 kW
— at 690 V Rated value	37 kW
<b>Operating power for <math>\geq 200000</math> operating cycles at AC-4</b>	
• at 400 V Rated value	14.7 kW
• at 690 V Rated value	20 kW
<b>Thermal short-time current limited to 10 s</b>	520 A
<b>Active power loss at AC-3 at 400 V for rated value of the operating current per conductor</b>	3.8 W
<b>No-load switching frequency</b>	
• at AC	1 500 1/h
• at DC	1 500 1/h
<b>Operating frequency</b>	
• at AC-1 maximum	800 1/h
• at AC-2 maximum	400 1/h
• at AC-3 maximum	700 1/h
• at AC-4 maximum	200 1/h

<b>Control circuit/ Control:</b>	
<b>Type of voltage of the control supply voltage</b>	AC/DC
<b>Control supply voltage at AC</b>	
• at 50 Hz Rated value	20 ... 33 V
• at 60 Hz Rated value	20 ... 33 V
<b>Control supply voltage at DC</b>	
• Rated value	20 ... 33 V
<b>Operating range factor control supply voltage rated value of the magnet coil at AC</b>	
• at 50 Hz	0.8 ... 1.1
• at 60 Hz	0.8 ... 1.1
<b>Operating range factor control supply voltage rated value of the magnet coil at DC</b>	0.8 ... 1.1
<b>Design of the surge suppressor</b>	with varistor
<b>Apparent pick-up power of the magnet coil at AC</b>	
• at 50 Hz	40 V·A
• at 60 Hz	40 V·A
<b>Apparent holding power of the magnet coil at AC</b>	

<ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>	2 V·A 2 V·A
<b>Closing power of the magnet coil at DC</b>	23 W
<b>Holding power of the magnet coil at DC</b>	1 W
<b>Closing delay</b>	
<ul style="list-style-type: none"> <li>• at AC</li> <li>• at DC</li> </ul>	45 ... 70 ms 45 ... 60 ms
<b>Opening delay</b>	
<ul style="list-style-type: none"> <li>• at AC</li> <li>• at DC</li> </ul>	35 ... 55 ms 35 ... 55 ms
<b>Arcing time</b>	10 ... 20 ms
<b>Residual current of the electronics for control with signal &lt;0&gt;</b>	
<ul style="list-style-type: none"> <li>• at AC at 230 V maximum permissible</li> <li>• at DC at 24 V maximum permissible</li> </ul>	20 mA 20 mA

#### Auxiliary circuit:

<b>Number of NC 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>	1
<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>	1
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>	10 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> </ul>	10 A 2 A 2 A 1 A 0.9 A

<ul style="list-style-type: none"> <li>• at 220 V Rated value</li> </ul>	0.3 A
<ul style="list-style-type: none"> <li>• at 600 V Rated value</li> </ul>	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> </ul>	65 A
<ul style="list-style-type: none"> <li>• at 600 V Rated value</li> </ul>	52 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>	5 hp 10 hp  20 hp 20 hp 50 hp 50 hp
<b>Contact rating of the auxiliary contacts acc. 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 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>	gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 250 A gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 125 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>	114 mm
<b>Width</b>	55 mm
<b>Depth</b>	130 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> </ul>	0 mm 0 mm 0 mm 0 mm 0 mm

- for grounded parts
  - forwards 0 mm
  - Backwards 0 mm
  - upwards 50 mm
  - at the side 6 mm
  - downwards 50 mm
- for live parts
  - forwards 0 mm
  - Backwards 0 mm
  - upwards 50 mm
  - downwards 50 mm
  - at the side 6 mm

0 mm  
0 mm  
50 mm  
6 mm  
50 mm  
0 mm  
0 mm  
50 mm  
50 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>	<p>screw-type terminals</p> <p>screw-type terminals</p>
<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> <li>— finely stranded with core end processing</li> </ul> </li> <li>• for AWG conductors for main contacts</li> </ul>	<p>2x (1 ... 35 mm<sup>2</sup>), 1x (1 ... 50 mm<sup>2</sup>)</p> <p>2x (1 ... 25 mm<sup>2</sup>), 1x (1 ... 35 mm<sup>2</sup>)</p> <p>2x (18 ... 2), 1x (18 ... 1)</p>
<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>	<p>2x (0,5 ... 1,5 mm<sup>2</sup>), 2x (0,75 ... 2,5 mm<sup>2</sup>)</p> <p>2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)</p> <p>2x (20 ... 16), 2x (18 ... 14)</p>

#### Safety related data:

<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>

#### Certificates/ approvals:

General Product Approval			Declaration of Conformity	Test Certificates
			<a href="#">sonstig</a>	<a href="#">Typprüfbescheinigung/Werkszeugnis</a>
CSA		UL		
				
			EG-Konf.	

other
<a href="#">Bestätigungen</a> <a href="#">Umweltbestätigung</a>

### Further information

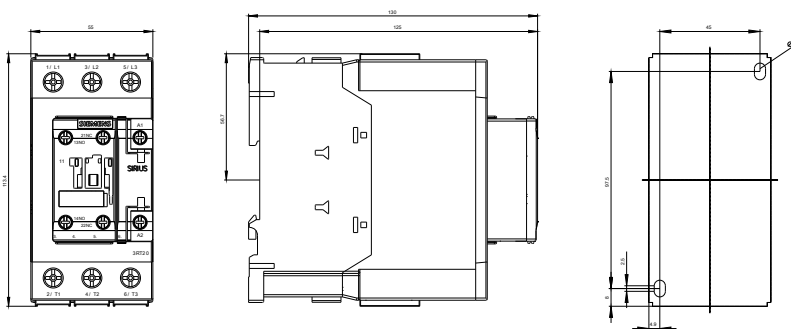
**Information- and Downloadcenter (Catalogs, Brochures,...)**  
<http://www.siemens.com/industrial-controls/catalogs>

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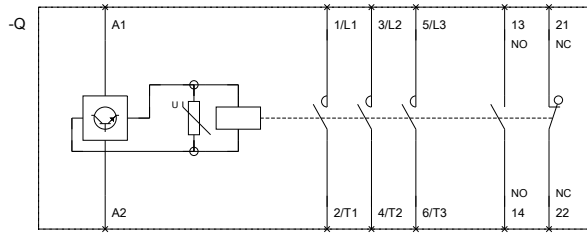
**Cax online generator**  
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT20371NB30>

**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**  
<https://support.industry.siemens.com/cs/ww/en/ps/3RT20371NB30>

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[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT20371NB30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT20371NB30&lang=en)







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