



CONTACTOR,AC3:18.5KW/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
<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	7.7g / 5 ms, 4.5g / 10 ms
— for DC	7.7g / 5 ms, 4.5g / 10 ms
• with sine pulse	
— with AC	12g / 5 ms, 7g / 10 ms
— for DC	12g / 5 ms, 7g / 10 ms
Surge voltage resistance Rated value	6 kV
Mechanical service life (switching cycles)	
• of the contactor typical	10 000 000
• 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
Thermal short-time current restricted to 10 s	400 A

<b>Protection class IP</b>	
<ul style="list-style-type: none"> <li>• on the front</li> <li>• of the terminal</li> </ul>	IP00 IP00
<b>Equipment marking</b>	
<ul style="list-style-type: none"> <li>• acc. to DIN EN 61346-2</li> <li>• acc. to DIN EN 81346-2</li> </ul>	Q Q
<b>Main circuit:</b>	
<b>Number of poles for main current circuit</b>	3
<b>Number of NC contacts for main contacts</b>	0
<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>	690 V
<b>Operating current</b>	
<ul style="list-style-type: none"> <li>• at AC-1 <ul style="list-style-type: none"> <li>— at 400 V at ambient temperature 40 °C Rated value</li> <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> <li>• at AC-4 at 400 V Rated value</li> </ul>	60 A 60 A 55 A 40 A 40 A 40 A 24 A 35 A
<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</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> <li>• at DC-3 at DC-5 <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>	55 A 4.5 A 1 A 0.4 A 0.25 A 35 A 2.5 A 1 A 0.1 A 0.06 A
<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</li> </ul> </li> </ul>	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
• 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
<b>Operating current with 3 current paths in series</b>	
• 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
• 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	0.6 A
<b>Operating power</b>	
• at AC-1	
— at 230 V at 60 °C Rated value	21 kW
— at 400 V at 60 °C Rated value	36 kW
— at 690 V at 60 °C Rated value	62 kW
<b>Operating power for ≥ 200000 operating cycles at AC-4</b>	
• at 400 V Rated value	11.6 kW
• at 690 V Rated value	16.8 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	1 200 1/h
• at AC-2 maximum	750 1/h
• at AC-3 maximum	1 000 1/h
• at AC-4 maximum	300 1/h
<b>No-load switching frequency</b>	
• with AC	1 500 1/h
• for DC	1 500 1/h

Control circuit/ Control:	
Type of voltage of the control supply voltage	AC/DC
Control supply voltage with AC	
• at 50 Hz Rated value	20 ... 33 V
• at 60 Hz Rated value	20 ... 33 V
Control supply voltage for DC	
• Rated value	20 ... 33 V
Operating range factor control supply voltage rated value of the magnet coil with AC	
• at 50 Hz	0.8 ... 1.1
• at 60 Hz	0.8 ... 1.1
Operating range factor control supply voltage rated value of the magnet coil for DC	0.8 ... 1.1
Design of the surge suppressor	with varistor
Apparent pick-up power of the magnet coil with AC	
• at 50 Hz	40 V·A
• at 60 Hz	40 V·A
Apparent holding power of the magnet coil with AC	
• at 50 Hz	2 V·A
• at 60 Hz	2 V·A
Closing power of the magnet coil for DC	23 W
Holding power of the magnet coil for DC	1 W
Closing delay	
• with AC	45 ... 70 ms
• for DC	45 ... 60 ms
Opening delay	
• with AC	35 ... 55 ms
• for DC	35 ... 55 ms
Arcing time	10 ... 20 ms
Residual current of the electronics for control with signal <0>	
• with AC at 230 V maximum permissible	20 mA
• for DC at 24 V maximum permissible	20 mA
Auxiliary circuit:	
Number of NC contacts	
• for auxiliary contacts	
— instantaneous contact	1
Number of NO contacts	
• for auxiliary contacts	
— instantaneous contact	1
Product expansion Auxiliary switch	Yes
Operating current at AC-12 maximum	10 A

<b>Operating current at AC-15</b>	
• at 230 V Rated value	10 A
• at 400 V Rated value	3 A
• at 690 V Rated value	1 A
<b>Operating current at DC-12</b>	
• 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 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 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>	
• at 480 V Rated value	40 A
• at 600 V Rated value	41 A
<b>yielded mechanical performance [hp]</b>	
• for single-phase AC motor	
— at 110/120 V Rated value	3 hp
— at 230 V Rated value	7.5 hp
• for three-phase AC motor	
— at 200/208 V Rated value	10 hp
— at 220/230 V Rated value	15 hp
— at 460/480 V Rated value	30 hp
— at 575/600 V Rated value	40 hp
<b>Contact rating of the auxiliary contacts acc. to UL</b>	A600 / P600

#### Short-circuit:

<b>Design of the fuse link</b>	
• for short-circuit protection of the main circuit	
— with type of assignment 1 required	gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 160 A
— with type of assignment 2 required	gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 80 A
• for short-circuit protection of the auxiliary switch required	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>	113.4 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> <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 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>	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> <li>— finely stranded with core end processing</li> </ul> </li> <li>• for AWG conductors for main contacts</li> <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 (1 ... 35 mm <sup>2</sup> ), 1x (1 ... 50 mm <sup>2</sup> ) 2x (1 ... 25 mm <sup>2</sup> ), 1x (1 ... 35 mm <sup>2</sup> ) 2x (18 ... 2), 1x (18 ... 1)  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)

### 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>	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 No
<b>Protection against electrical shock</b>	finger-safe when touched vertically from front acc. to IEC 60529




### Mechanical data:

<b>Size of contactor</b>	S2
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### 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>	-25 ... +60 °C -55 ... +80 °C

### Certificates/ approvals:

General Product Approval	other
 CSA	
 UL	<a href="#">Confirmation</a> <a href="#">Environmental Confirmations</a>

### 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

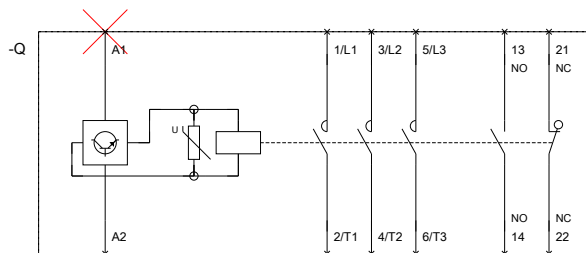
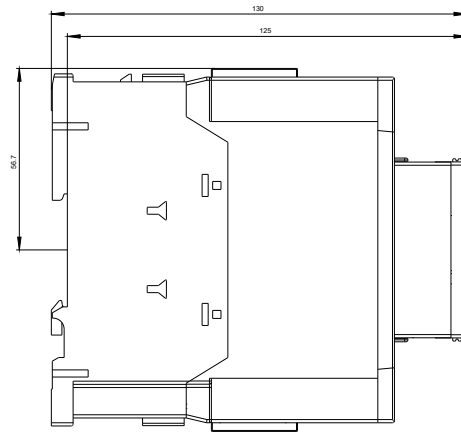
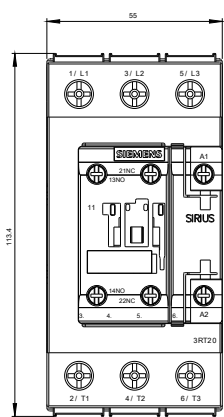
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RT20351NB30>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT20351NB30>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=3RT20351NB30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RT20351NB30&lang=en)



last modified:

14.05.2015