



CONTACTOR, AC-3, 3KW/400V, 1NO, AC 230V, 50/60 HZ, 3-POLE, SZ S00 SCREW TERMINAL

product brand name	SIRIUS
Product designation	3RT2 contactor
<b>General technical data:</b>	
Size of contactor	S00
Product expansion	No
<ul style="list-style-type: none"> <li>function module for communication</li> <li>Auxiliary switch</li> </ul>	Yes
Insulation voltage	690 V
<ul style="list-style-type: none"> <li>Rated value</li> </ul>	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	IP20
<ul style="list-style-type: none"> <li>on the front</li> <li>of the terminal</li> </ul>	IP20
Degree of pollution	3
Shock resistance	
<ul style="list-style-type: none"> <li>at rectangular impulse                             <ul style="list-style-type: none"> <li>at AC</li> </ul> </li> <li>with sine pulse                             <ul style="list-style-type: none"> <li>at AC</li> </ul> </li> </ul>	6,7g / 5 ms, 4,2g / 10 ms
	10,5g / 5 ms, 6,6g / 10 ms
Mechanical service life (switching cycles)	
<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> </ul>	30 000 000 5 000 000

• of the contactor with added auxiliary switch block typical	10 000 000
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#### Ambient conditions:

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

#### 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>	
• at AC-3 Rated value maximum	690 V
<b>Operating current</b>	
• at AC-1 at 400 V	
— at ambient temperature 40 °C Rated value	18 A
• at AC-1 up to 690 V	
— at ambient temperature 40 °C Rated value	18 A
— at ambient temperature 60 °C Rated value	16 A
• at AC-2 at 400 V Rated value	7 A
• at AC-3	
— at 400 V Rated value	7 A
— at 500 V Rated value	6 A
— at 690 V Rated value	4.9 A
<b>Connectable conductor cross-section in main circuit at AC-1</b>	
• at 60 °C minimum permissible	2.5 mm <sup>2</sup>
• at 40 °C minimum permissible	2.5 mm <sup>2</sup>
<b>Operating current for ≥ 200000 operating cycles at AC-4</b>	
• at 400 V Rated value	2.6 A
• at 690 V Rated value	1.8 A
<b>Operating current</b>	
• with 1 current path at DC-1	
— at 24 V Rated value	15 A
— at 110 V Rated value	1.5 A
— at 220 V Rated value	0.6 A
— at 440 V Rated value	0.42 A
— at 600 V Rated value	0.42 A
• with 2 current paths in series at DC-1	
— at 24 V Rated value	15 A
— at 110 V Rated value	8.4 A

— at 220 V Rated value	1.2 A
— at 440 V Rated value	0.6 A
— at 600 V Rated value	0.5 A
• with 3 current paths in series at DC-1	
— at 24 V Rated value	15 A
— at 110 V Rated value	15 A
— at 220 V Rated value	15 A
— at 440 V Rated value	0.9 A
— at 600 V Rated value	0.7 A
<b>Operating current</b>	
• with 1 current path at DC-3 at DC-5	
— at 24 V Rated value	15 A
— at 110 V Rated value	0.1 A
• with 2 current paths in series at DC-3 at DC-5	
— at 110 V Rated value	0.25 A
— at 24 V Rated value	15 A
• with 3 current paths in series at DC-3 at DC-5	
— at 110 V Rated value	15 A
— at 220 V Rated value	1.2 A
— at 24 V Rated value	15 A
— at 440 V Rated value	0.14 A
— at 600 V Rated value	0.14 A
<b>Operating power</b>	
• at AC-1	
— at 230 V Rated value	6.3 kW
— at 230 V at 60 °C Rated value	6 kW
— at 400 V Rated value	11 kW
— at 400 V at 60 °C Rated value	10.5 kW
— at 690 V Rated value	19 kW
— at 690 V at 60 °C Rated value	18 kW
• at AC-2 at 400 V Rated value	3 kW
• at AC-3	
— at 230 V Rated value	1.5 kW
— at 400 V Rated value	3 kW
— at 690 V Rated value	4 kW
<b>Operating power for <math>\geq 200000</math> operating cycles at AC-4</b>	
• at 400 V Rated value	1.15 kW
• at 690 V Rated value	1.15 kW
<b>Thermal short-time current restricted to 10 s</b>	56 A
<b>Active power loss at AC-3 at 400 V for rated value of the operating current per conductor</b>	0.4 W

<b>No-load switching frequency</b>	
<ul style="list-style-type: none"> <li>• at AC</li> </ul>	10 000 1/h
<b>Operating frequency</b>	
<ul style="list-style-type: none"> <li>• at AC-1 maximum</li> <li>• at AC-2 maximum</li> <li>• at AC-3 maximum</li> <li>• at AC-4 maximum</li> </ul>	1 000 1/h 750 1/h 750 1/h 250 1/h

#### Control circuit/ Control:

<b>Type of voltage of the control supply voltage</b>	AC
<b>Control supply voltage at AC</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz Rated value</li> <li>• at 60 Hz Rated value</li> </ul>	230 V 230 V
<b>Operating range factor control supply voltage rated value of the magnet coil at AC</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>	0.8 ... 1.1 0.85 ... 1.1
<b>Apparent pick-up 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>	27 V·A 31.7 V·A
<b>Inductive power factor with closing power of the coil</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>	0.8 0.81
<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>	4.2 V·A 4.8 V·A
<b>Inductive power factor with the holding power of the coil</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>	0.25 0.25
<b>Closing delay</b>	
<ul style="list-style-type: none"> <li>• at AC</li> </ul>	9 ... 35 ms
<b>Arcing time</b>	10 ... 15 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>	3 mA 10 mA

#### Auxiliary circuit:

<b>Number of NC contacts</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> <li>— instantaneous contact</li> </ul>	0
<b>Number of NO contacts</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>	

— instantaneous contact	1
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 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 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	4.8 A
• at 600 V Rated value	6.1 A
<b>yielded mechanical performance [hp]</b>	
• for single-phase AC motor	
— at 110/120 V Rated value	0.25 hp
— at 230 V Rated value	0.75 hp
• for three-phase AC motor	
— at 200/208 V Rated value	1.5 hp
— at 220/230 V Rated value	2 hp
— at 460/480 V Rated value	3 hp
— at 575/600 V Rated value	5 hp
<b>Contact rating of the auxiliary contacts acc. to UL</b>	A600 / Q600

#### Short-circuit:

<b>Design of the fuse link</b>	
• 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 LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A  
 gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20 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>	58 mm
<b>Width</b>	45 mm
<b>Depth</b>	73 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
<ul style="list-style-type: none"> <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> </ul>	0 mm 0 mm 0 mm 6 mm 0 mm
<ul style="list-style-type: none"> <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 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> </ul>	2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup> 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )

<ul style="list-style-type: none"> <li>• for AWG conductors for main contacts</li> </ul>	2x (20 ... 16), 2x (18 ... 14), 2x 12
<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 4 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), 2x 12

<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> </ul>	Yes; with 3RH29
<b>T1 value for proof test interval or service life acc. to IEC 61508</b>	20 y

Certificates/ approvals:

General Product Approval	Functional Safety/Safety of Machinery	Declaration of Conformity
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Test Certificates	Shipping Approval
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<http://www.siemens.com/industrial-controls/catalogs>

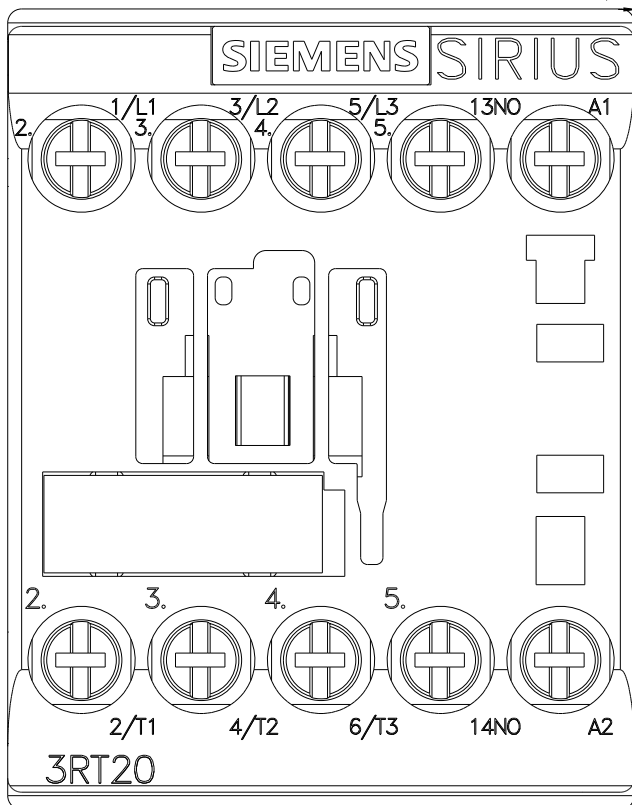
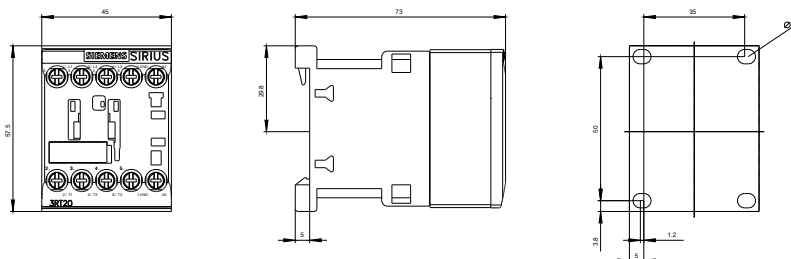
**Industry Mall (Online ordering system)**  
<http://www.siemens.com/industrymall>

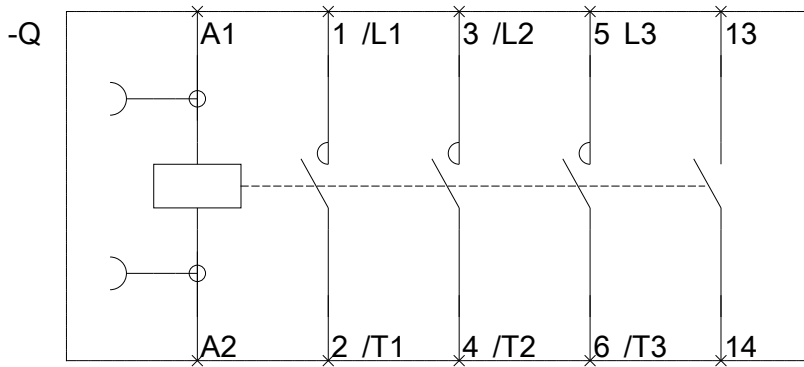
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<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RT20151AP01>

**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**  
<https://support.industry.siemens.com/cs/ww/en/ps/3RT20151AP01>

**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**  
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=3RT20151AP01&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RT20151AP01&lang=en)







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