



CONTACTOR, AC-3, 4KW/400V, 1NC, DC 24V, 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	
• function module for communication	No
• Auxiliary switch	Yes
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	
— for DC	6,7g / 5 ms, 4,2g / 10 ms
• with sine pulse	
— for DC	10,5g / 5 ms, 6,6g / 10 ms
Surge voltage resistance Rated value	6 kV
Mechanical service life (switching cycles)	
• of the contactor typical	30 000 000
• 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
Protection class IP	

<ul style="list-style-type: none"> <li>• on the front</li> <li>• of the terminal</li> </ul>	IP20 IP20
<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

#### 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

#### Main circuit:

<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>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>	2.5 mm <sup>2</sup> 4 mm <sup>2</sup>
<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> <li>• at AC-4 at 400 V Rated value</li> </ul>	22 A 22 A 20 A 9 A 9 A 7.7 A 6.7 A 8.5 A
<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>	4.1 A 3.3 A
<b>Operating current</b>	
<ul style="list-style-type: none"> <li>• with 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> </ul> </li> </ul>	20 A 2.1 A

— at 220 V Rated value	0.8 A
— at 440 V Rated value	0.6 A
— at 600 V Rated value	0.6 A
• with 2 current paths in series at DC-1	
— at 24 V Rated value	20 A
— at 110 V Rated value	12 A
— at 220 V Rated value	1.6 A
— at 440 V Rated value	0.8 A
— at 600 V Rated value	0.7 A
• with 3 current paths in series at DC-1	
— at 24 V Rated value	20 A
— at 110 V Rated value	20 A
— at 220 V Rated value	20 A
— at 440 V Rated value	1.3 A
— at 600 V Rated value	1 A
<b>Operating current</b>	
• with 1 current path at DC-3 at DC-5	
— at 24 V Rated value	20 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	0.35 A
— at 24 V Rated value	20 A
• with 3 current paths in series at DC-3 at DC-5	
— at 110 V Rated value	20 A
— at 220 V Rated value	1.5 A
— at 24 V Rated value	20 A
— at 440 V Rated value	0.2 A
— at 600 V Rated value	0.2 A
<b>Operating power</b>	
• at AC-1	
— at 230 V at 60 °C Rated value	7.5 kW
— at 400 V at 60 °C Rated value	13 kW
— at 690 V at 60 °C Rated value	22 kW
<b>Operating power for ≥ 200000 operating cycles at AC-4</b>	
• at 400 V Rated value	2 kW
• at 690 V Rated value	2.5 kW
<b>Thermal short-time current restricted to 10 s</b>	72 A
<b>Active power loss at AC-3 at 400 V for rated value of the operating current per conductor</b>	0.7 W
<b>No-load switching frequency</b>	
• for DC	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>	<p>1 000 1/h</p> <p>750 1/h</p> <p>750 1/h</p> <p>250 1/h</p>

### Control circuit/ Control:

<b>Type of voltage of the control supply voltage</b>	DC
<b>Control supply voltage for DC</b>	
<ul style="list-style-type: none"> <li>• Rated value</li> </ul>	24 V
<b>Operating range factor control supply voltage rated value of the magnet coil for DC</b>	0.8 ... 1.1
<b>Closing power of the magnet coil for DC</b>	4 W
<b>Holding power of the magnet coil for DC</b>	4 W
<b>Closing delay</b>	
<ul style="list-style-type: none"> <li>• for DC</li> </ul>	30 ... 100 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>• with AC at 230 V maximum permissible</li> <li>• for DC at 24 V maximum permissible</li> </ul>	<p>3 mA</p> <p>10 mA</p>

### 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>	0
<b>Operating current at AC-12 maximum</b>	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>	<p>10 A</p> <p>3 A</p> <p>2 A</p> <p>1 A</p>
<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>	<p>10 A</p> <p>6 A</p> <p>6 A</p> <p>3 A</p> <p>2 A</p> <p>1 A</p> <p>0.15 A</p>
<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>	10 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>	7.6 A 9 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>	0.33 hp 1 hp 2 hp 3 hp 5 hp 7.5 hp
<b>Contact rating of the auxiliary contacts acc. to UL</b>	A600 / Q600

#### Short-circuit:

<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 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>	57.5 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</li> </ul>	

— forwards	0 mm
— Backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
• for grounded parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	0 mm
— at the side	6 mm
— downwards	0 mm
• for live parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	6 mm

#### Connections/ Terminals:

<b>Type of electrical connection</b>	
• for main current circuit	screw-type terminals
• for auxiliary and control current circuit	screw-type terminals
<b>Type of connectable conductor cross-section</b>	
• for main contacts	
— single or multi-stranded	2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup>
— finely stranded with core end processing	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )
• for AWG conductors for main contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12
<b>Type of connectable conductor cross-section</b>	
• for auxiliary contacts	
— single or multi-stranded	2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup>
— finely stranded with core end processing	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )
• for AWG conductors for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12

#### Safety related data:

<b>B10 value with high demand rate acc. to SN 31920</b>	1 000 000
<b>Proportion of dangerous failures</b>	
• with low demand rate acc. to SN 31920	40 %
• with high demand rate acc. to SN 31920	73 %
<b>Product function</b>	
• Mirror contact acc. to IEC 60947-4-1	Yes
<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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[Type Examination](#)



Test Certificates	Shipping Approval
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[Type Test Certificates/Test Report](#)

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Shipping Approval	other
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[Environmental Confirmations](#)

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Further information

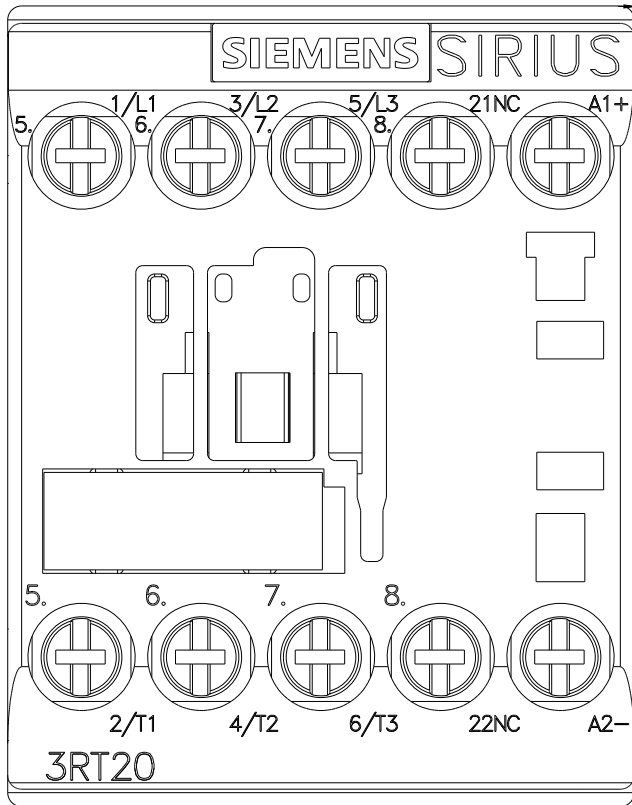
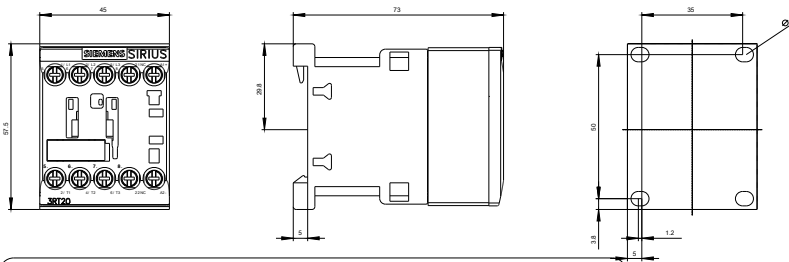
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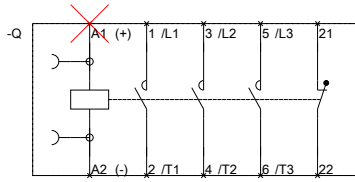
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