



Contactor DC 24 V AC3 18,5 kW 400 V 3 pole, mod. S2 screw terminal

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT5
<b>General technical data</b>	
size of contactor	S2
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
• at AC in hot operating state per pole	2.6 W
• without load current share typical	13.3 W
type of calculation of power loss depending on pole	quadratic
insulation voltage rated value	690 V
degree of pollution	3
surge voltage resistance rated value	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at DC	10g / 5 ms, 5g / 10 ms
shock resistance with sine pulse	
• at DC	15g / 5 ms, 8g / 10 ms
mechanical service life (operating cycles)	
• of contactor typical	10 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
Substance Prohibition (Date)	03/01/2017
SVHC substance name	Lead - 7439-92-1
Net Weight	1.405 kg
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
• during operation	-25 ... +60 °C
• during storage	-55 ... +80 °C
<b>Main circuit</b>	
number of poles for main current circuit	3
number of NO contacts for main contacts	3
number of NC contacts for main contacts	0
operating voltage	
• at AC-3 rated value maximum	690 V
• at AC-3e rated value maximum	690 V
operational current	
• at AC-1 up to 690 V	

— at ambient temperature 40 °C rated value	60 A
— at ambient temperature 60 °C rated value	55 A
● at AC-3	
— at 400 V rated value	40 A
— at 690 V rated value	24 A
● at AC-3e	
— at 400 V rated value	40 A
— at 690 V rated value	24 A
<b>connectable conductor cross-section in main circuit at AC-1</b>	
● at 60 °C minimum permissible	16 mm <sup>2</sup>
● at 40 °C minimum permissible	16 mm <sup>2</sup>
<b>operational current for approx. 200000 operating cycles at AC-4</b>	
● at 400 V rated value	18.5 A
● at 690 V rated value	12.6 A
<b>operating power</b>	
● at AC-1	
— at 230 V at 60 °C rated value	22 kW
— at 400 V at 60 °C rated value	38 kW
— at 690 V at 60 °C rated value	66 kW
● at AC-3	
— at 230 V rated value	11 kW
— at 400 V rated value	18.5 kW
— at 500 V rated value	22 kW
— at 690 V rated value	22 kW
● at AC-3e	
— at 230 V rated value	11 kW
— at 400 V rated value	18.5 kW
— at 500 V rated value	22 kW
— at 690 V rated value	22 kW
<b>operating power for approx. 200000 operating cycles at AC-4</b>	
● at 400 V rated value	9.5 kW
● at 690 V rated value	11.4 kW
<b>no-load switching frequency</b>	
● at DC	1 500 1/h
<b>operating frequency</b>	
● at AC-1 maximum	1 200 1/h
● at AC-3 maximum	1 000 1/h
● at AC-3e maximum	1 000 1/h
● at AC-4 maximum	300 1/h
<b>Control circuit/ Control</b>	
<b>type of voltage of the control supply voltage</b>	DC
<b>control supply voltage at DC rated value</b>	24 V
<b>operating range factor control supply voltage rated value of magnet coil at DC</b>	
● initial value	0.8
● full-scale value	1.1
<b>closing power of magnet coil at DC</b>	13.3 W
<b>holding power of magnet coil at DC</b>	13.3 W
<b>Auxiliary circuit</b>	
number of NC contacts for auxiliary contacts instantaneous contact	0
number of NO contacts for auxiliary contacts instantaneous contact	0
operational current at AC-12 maximum	10 A
<b>operational current at AC-15</b>	
● at 230 V rated value	6 A
● at 400 V rated value	3 A
<b>operational current at DC-12</b>	

<ul style="list-style-type: none"> <li>• at 110 V rated value</li> <li>• at 220 V rated value</li> </ul>	3 A 1 A
<b>operational current at DC-13</b>	
<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> </ul>	6 A 1 A 0.3 A
<b>contact reliability of auxiliary contacts</b>	1 faulty switching per 100 million (17 V, 1 mA)

**UL/CSA ratings**

yielded mechanical performance [hp] for 3-phase AC motor at 460/480 V rated value	30 hp
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**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 coordination 1 required</li> <li>— with type of coordination 2 required</li> </ul> </li> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>	fuse gL/gG: 125 A fuse gL/gG: 63 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
fastening method side-by-side mounting	Yes
<b>fastening method</b>	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022
<b>height</b>	112 mm
<b>width</b>	55 mm
<b>depth</b>	130 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 circuit</li> </ul>	screw-type terminals screw-type terminals
type of connectable conductor cross-sections for main contacts	
<ul style="list-style-type: none"> <li>• solid or stranded</li> <li>• finely stranded with core end processing</li> <li>• finely stranded without core end processing</li> </ul>	2x (0.75 ... 16 mm <sup>2</sup> ) 2x (0.75 ... 16 mm <sup>2</sup> ) 2x (0.75 ... 16 mm <sup>2</sup> )
<b>type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> </ul> </li> <li>• for AWG cables for auxiliary contacts</li> </ul>	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) 2x (20 ... 16), 2x (18 ... 14), 1x 12

**Safety related data**

product function mirror contact according to IEC 60947-4-1	Yes
<b>Electrical Safety</b>	
<b>protection class IP on the front according to IEC 60529</b>	IP20
<b>touch protection on the front according to IEC 60529</b>	finger-safe, for vertical contact from the front

**Approvals Certificates**

<b>General Product Approval</b>	EMV
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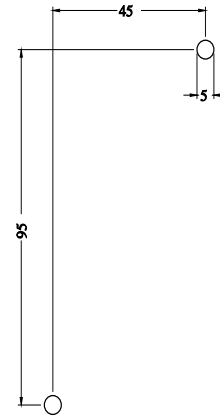
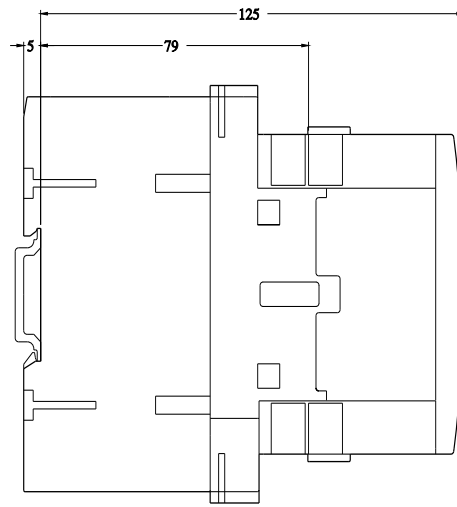
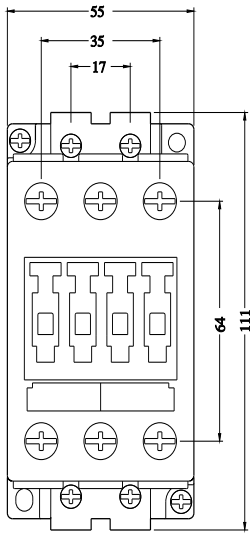

[Confirmation](#)

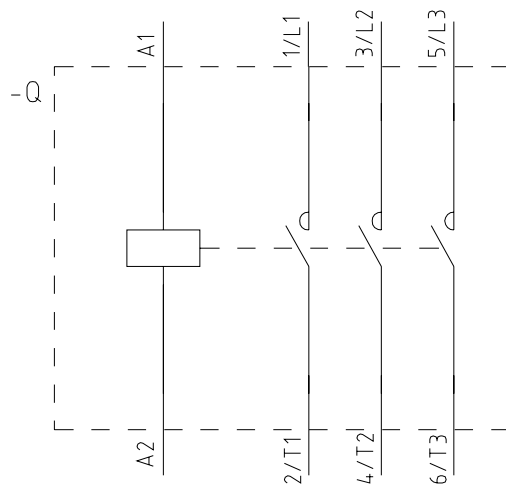

<b>Maritime application</b>	other	<b>Environment</b>
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[CCS \(China Classification Society\)](#)

[Confirmation](#)
[Environmental Conformations](#)
**Further information**

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)  
<https://support.industry.siemens.com/cs/products?pnid=16027&lc=en-CN>





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