



Contactore DC 48 V AC3 18,5 kW 400 V 3-pole, size S2 screw terminal

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT5
General technical data	
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 current-dependent	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	10 g / 5 ms, 5 g / 10 ms
shock resistance with sine pulse	
• at DC	15 g / 5 ms, 8 g / 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 (day/month/year)	03/01/2017
SVHC substance name	Lead CAS-No. 7439-92-1
Net Weight	1.45 kg
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
• during operation	-25 ... +60 °C
• during storage	-55 ... +80 °C
Main circuit	
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
connectable conductor cross-section in main circuit at AC-1	
● at 60 °C minimum permissible	16 mm ²
● at 40 °C minimum permissible	16 mm ²
operational current for approx. 200000 operating cycles at AC-4	
● at 400 V rated value	18.5 A
● at 690 V rated value	12.6 A
operating power	
● 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
operating power for approx. 200000 operating cycles at AC-4	
● at 400 V rated value	9.5 kW
● at 690 V rated value	11.4 kW
no-load switching frequency	
● at DC	1 500 1/h
operating frequency	
● 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
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage at DC rated value	48 V
operating range factor control supply voltage rated value of magnet coil at DC	
● initial value	0.8
● full-scale value	1.1
closing power of magnet coil at DC	13.3 W
holding power of magnet coil at DC	13.3 W
Auxiliary circuit	
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
operational current at AC-15	
● at 230 V rated value	6 A
● at 400 V rated value	3 A
operational current at DC-12	

<ul style="list-style-type: none"> • at 110 V rated value • at 220 V rated value 	<p>3 A</p> <p>1 A</p>
operational current at DC-13 <ul style="list-style-type: none"> • at 24 V rated value • at 110 V rated value • at 220 V rated value 	<p>6 A</p> <p>1 A</p> <p>0.3 A</p>
contact reliability of auxiliary contacts	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

design of the fuse link <ul style="list-style-type: none"> • for short-circuit protection of the main circuit <ul style="list-style-type: none"> — with type of coordination 1 required — with type of coordination 2 required • for short-circuit protection of the auxiliary switch required 	<p>fuse gL/gG: 125 A</p> <p>fuse gL/gG: 63 A</p> <p>fuse gL/gG: 10 A</p>
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Installation/ mounting/ dimensions

mounting position	+/-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
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022
height	112 mm
width	55 mm
depth	130 mm

Connections/ Terminals

type of electrical connection <ul style="list-style-type: none"> • for main current circuit • for auxiliary and control circuit 	<p>screw-type terminals</p> <p>screw-type terminals</p>
type of connectable conductor cross-sections for main contacts <ul style="list-style-type: none"> • solid or stranded • finely stranded with core end processing • finely stranded without core end processing 	<p>2x (0.75 ... 16 mm²)</p> <p>2x (0.75 ... 16 mm²)</p> <p>2x (0.75 ... 16 mm²)</p>
type of connectable conductor cross-sections <ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — finely stranded with core end processing • for AWG cables for auxiliary contacts 	<p>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)</p> <p>2x (20 ... 16), 2x (18 ... 14), 1x 12</p>

Safety related data

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

Approvals Certificates

General Product Approval	EMV
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[Confirmation](#)



Maritime application	other	Environment
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[CCS \(China Classification Society\)](#)

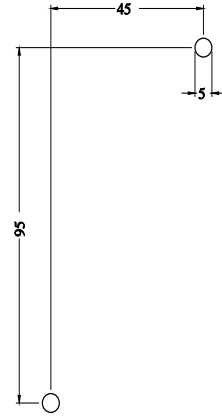
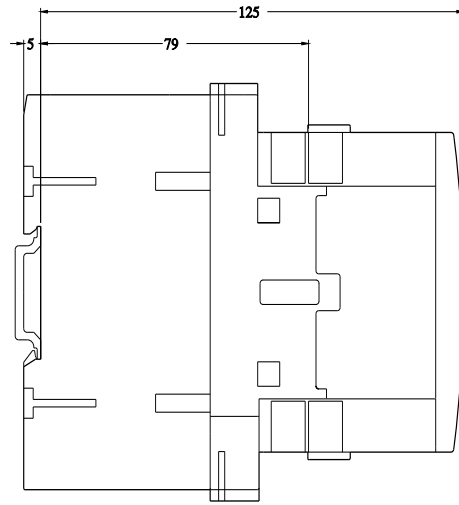
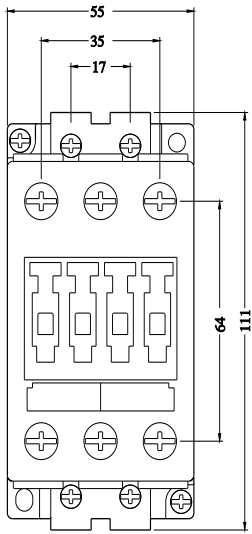
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Further information

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





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