



Contactor 42...48 V AC/DC AC3 2 kW 400 V AC (50...60 Hz) / DC operation
 auxiliary contacts 2 NO + 2 NC, 3-pole, size S12 bar connections conventional
 operating mechan. screw terminal

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT5
General technical data	
size of contactor	S12
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
• at AC in hot operating state per pole	55 W
• without load current share typical	10 W
type of calculation of power loss current-dependent	quadratic
insulation voltage rated value	1 000 V
degree of pollution	3
surge voltage resistance rated value	8 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	690 V
shock resistance at rectangular impulse	
• at AC	8,5 g / 5 ms, 4,2 g / 10 ms
• at DC	8,5 g / 5 ms, 4,2 g / 10 ms
shock resistance with sine pulse	
• at AC	13,4 g / 5 ms, 6,5 g / 10 ms
• at DC	13,4 g / 5 ms, 6,5 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 Prohibitance (day/month/year)	03/01/2017
SVHC substance name	Lead CAS-No. 7439-92-1
Net Weight	10.39 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	1 000 V
• at AC-3e rated value maximum	1 000 V

operational current	
<ul style="list-style-type: none"> ● at AC-1 at 400 V rated value 	700 A
<ul style="list-style-type: none"> ● at AC-1 up to 690 V <ul style="list-style-type: none"> — at ambient temperature 40 °C rated value — at ambient temperature 60 °C rated value 	610 A 550 A
<ul style="list-style-type: none"> ● at AC-3 <ul style="list-style-type: none"> — at 400 V rated value — at 690 V rated value 	500 A 450 A
<ul style="list-style-type: none"> ● at AC-3e <ul style="list-style-type: none"> — at 400 V rated value — at 690 V rated value — at 1000 V rated value 	500 A 450 A 180 A
connectable conductor cross-section in main circuit at AC-1	
<ul style="list-style-type: none"> ● at 60 °C minimum permissible 	370 mm ²
<ul style="list-style-type: none"> ● at 40 °C minimum permissible 	370 mm ²
operational current for approx. 200000 operating cycles at AC-4	
<ul style="list-style-type: none"> ● at 400 V rated value 	175 A
<ul style="list-style-type: none"> ● at 690 V rated value 	150 A
operating power	
<ul style="list-style-type: none"> ● at AC-1 <ul style="list-style-type: none"> — at 230 V at 60 °C rated value — at 400 V at 60 °C rated value — at 690 V at 60 °C rated value 	151 kW 362 kW 624 kW
<ul style="list-style-type: none"> ● at AC-3 <ul style="list-style-type: none"> — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value 	160 kW 291 kW 355 kW 400 kW
<ul style="list-style-type: none"> ● at AC-3e <ul style="list-style-type: none"> — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value — at 1000 V rated value 	160 kW 250 kW 355 kW 400 kW 250 kW
operating power for approx. 200000 operating cycles at AC-4	
<ul style="list-style-type: none"> ● at 400 V rated value 	98 kW
<ul style="list-style-type: none"> ● at 690 V rated value 	148 kW
no-load switching frequency	
<ul style="list-style-type: none"> ● at AC 	2 000 1/h
<ul style="list-style-type: none"> ● at DC 	2 000 1/h
operating frequency	
<ul style="list-style-type: none"> ● at AC-1 maximum 	500 1/h
<ul style="list-style-type: none"> ● at AC-3 maximum 	420 1/h
<ul style="list-style-type: none"> ● at AC-3e maximum 	420 1/h
<ul style="list-style-type: none"> ● at AC-4 maximum 	130 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
<ul style="list-style-type: none"> ● at 50 Hz rated value 	42 ... 48 V
<ul style="list-style-type: none"> ● at 60 Hz rated value 	42 ... 48 V
control supply voltage at DC rated value	42 ... 48 V
operating range factor control supply voltage rated value of magnet coil at DC	
<ul style="list-style-type: none"> ● initial value 	0.8
<ul style="list-style-type: none"> ● full-scale value 	1.1
operating range factor control supply voltage rated value of magnet coil at AC	

<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	0.8 ... 1.1
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	0.8 ... 1.1
design of the surge suppressor	with varistor
apparent pick-up power of magnet coil at AC	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	830 VA
	830 VA
inductive power factor with closing power of the coil	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	0.9
	0.9
apparent holding power of magnet coil at AC	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	9.2 VA
	9.2 VA
inductive power factor with the holding power of the coil	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	0.9
	0.9
closing power of magnet coil at DC	920 W
holding power of magnet coil at DC	10 W
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous contact	2
number of NO contacts for auxiliary contacts instantaneous contact	2
operational current at AC-12 maximum	10 A
operational current at AC-15	
<ul style="list-style-type: none"> • at 230 V rated value • at 400 V rated value 	6 A
	3 A
operational current at DC-12	
<ul style="list-style-type: none"> • at 24 V rated value • at 110 V rated value • at 220 V rated value 	6 A
	3 A
	1 A
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 	6 A
	1 A
	0.3 A
UL/CSA ratings	
yielded mechanical performance [hp] for 3-phase AC motor at 460/480 V rated value	400 hp
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 	fuse gL/gG: 630 A fuse gL/gG: 500 A fuse gL/gG: 10 A
Installation/ mounting/ dimensions	
mounting position	with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back
fastening method side-by-side mounting	Yes
fastening method	screw fixing
height	214 mm
width	160 mm
depth	225 mm
Connections/ Terminals	
type of electrical connection	
<ul style="list-style-type: none"> • for main current circuit • for auxiliary and control circuit 	screw-type terminals screw-type terminals
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 	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) 2x (20 ... 16), 2x (18 ... 14), 1x 12
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	IP00; IP20 with box terminal/cover
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front with box terminal/cover
Approvals Certificates	
General Product Approval	EMV



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

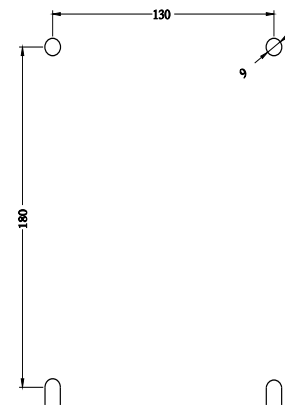
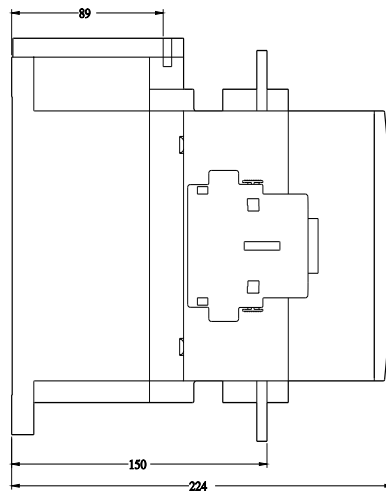
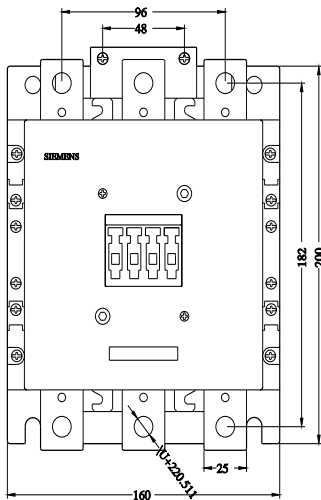
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<https://support.industry.siemens.com/cs/products?pnid=16027&lc=en-CN>



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