



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

<b>product brand name</b>	SIRIUS
<b>product designation</b>	Power contactor
<b>product type designation</b>	3RT5
<b>General technical data</b>	
<b>size of contactor</b>	S12
product extension auxiliary switch	Yes
<b>power loss [W] for rated value of the current</b>	
• at AC in hot operating state per pole	35 W
• without load current share typical	8.5 W
<b>type of calculation of power loss current-dependent</b>	quadratic
<b>insulation voltage rated value</b>	1 000 V
<b>degree of pollution</b>	3
<b>surge voltage resistance rated value</b>	8 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	690 V
<b>shock resistance at rectangular impulse</b>	
• at AC	8,5 g / 5 ms, 4,2 g / 10 ms
• at DC	8,5 g / 5 ms, 4,2 g / 10 ms
<b>shock resistance with sine pulse</b>	
• at AC	13,4 g / 5 ms, 6,5 g / 10 ms
• at DC	13,4 g / 5 ms, 6,5 g / 10 ms
<b>mechanical service life (operating cycles)</b>	
• of contactor typical	10 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
<b>Substance Prohibitance (day/month/year)</b>	03/01/2017
<b>SVHC substance name</b>	Lead CAS-No. 7439-92-1
<b>Net Weight</b>	10.3 kg
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
<b>ambient temperature</b>	
• during operation	-25 ... +60 °C
• during storage	-55 ... +80 °C
<b>Main circuit</b>	
<b>number of poles for main current circuit</b>	3
<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	1 000 V
• at AC-3e rated value maximum	1 000 V

<b>operational current</b>	
<ul style="list-style-type: none"> <li>● at AC-1 at 400 V rated value</li> </ul>	550 A
<ul style="list-style-type: none"> <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> </ul>	430 A 400 A
<ul style="list-style-type: none"> <li>● at AC-3 <ul style="list-style-type: none"> <li>— at 400 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul>	400 A 400 A
<ul style="list-style-type: none"> <li>● at AC-3e <ul style="list-style-type: none"> <li>— at 400 V rated value</li> <li>— at 690 V rated value</li> <li>— at 1000 V rated value</li> </ul> </li> </ul>	400 A 400 A 180 A
<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> </ul>	240 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>● at 40 °C minimum permissible</li> </ul>	300 mm <sup>2</sup>
<b>operational current for approx. 200000 operating cycles at AC-4</b>	
<ul style="list-style-type: none"> <li>● at 400 V rated value</li> </ul>	150 A
<ul style="list-style-type: none"> <li>● at 690 V rated value</li> </ul>	135 A
<b>operating power</b>	
<ul style="list-style-type: none"> <li>● at AC-1 <ul style="list-style-type: none"> <li>— at 230 V at 60 °C rated value</li> <li>— at 400 V at 60 °C rated value</li> <li>— at 690 V at 60 °C rated value</li> </ul> </li> </ul>	151 kW 263 kW 454 kW
<ul style="list-style-type: none"> <li>● at AC-3 <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> </li> </ul>	132 kW 231 kW 250 kW 400 kW
<ul style="list-style-type: none"> <li>● at AC-3e <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> <li>— at 1000 V rated value</li> </ul> </li> </ul>	132 kW 200 kW 250 kW 400 kW 250 kW
<b>operating power for approx. 200000 operating cycles at AC-4</b>	
<ul style="list-style-type: none"> <li>● at 400 V rated value</li> </ul>	85 kW
<ul style="list-style-type: none"> <li>● at 690 V rated value</li> </ul>	133 kW
<b>no-load switching frequency</b>	
<ul style="list-style-type: none"> <li>● at AC</li> </ul>	2 000 1/h
<ul style="list-style-type: none"> <li>● at DC</li> </ul>	2 000 1/h
<b>operating frequency</b>	
<ul style="list-style-type: none"> <li>● at AC-1 maximum</li> </ul>	700 1/h
<ul style="list-style-type: none"> <li>● at AC-3 maximum</li> </ul>	500 1/h
<ul style="list-style-type: none"> <li>● at AC-3e maximum</li> </ul>	500 1/h
<ul style="list-style-type: none"> <li>● at AC-4 maximum</li> </ul>	130 1/h
<b>Control circuit/ Control</b>	
<b>type of voltage of the control supply voltage</b>	AC/DC
<b>control supply voltage at AC</b>	
<ul style="list-style-type: none"> <li>● at 50 Hz rated value</li> </ul>	42 ... 48 V
<ul style="list-style-type: none"> <li>● at 60 Hz rated value</li> </ul>	42 ... 48 V
<b>control supply voltage at DC rated value</b>	42 ... 48 V
<b>operating range factor control supply voltage rated value of magnet coil at DC</b>	
<ul style="list-style-type: none"> <li>● initial value</li> </ul>	0.8
<ul style="list-style-type: none"> <li>● full-scale value</li> </ul>	1.1
<b>operating range factor control supply voltage rated value of 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
<ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>	0.8 ... 1.1
<b>design of the surge suppressor</b>	with varistor
<b>apparent pick-up power of magnet coil at AC</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>	830 VA
	830 VA
<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>	0.9
	0.9
<b>apparent holding power of magnet coil at AC</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>	9.2 VA
	9.2 VA
<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>	0.9
	0.9
<b>closing power of magnet coil at DC</b>	920 W
<b>holding power of magnet coil at DC</b>	10 W
<b>Auxiliary circuit</b>	
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
<b>operational 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> </ul>	6 A
	3 A
<b>operational current at DC-12</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
	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>UL/CSA ratings</b>	
yielded mechanical performance [hp] for 3-phase AC motor at 460/480 V rated value	300 hp
<b>Short-circuit protection</b>	
<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: 630 A fuse gL/gG: 500 A fuse gL/gG: 10 A
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	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
<b>fastening method</b>	screw fixing
<b>height</b>	214 mm
<b>width</b>	160 mm
<b>depth</b>	225 mm
<b>Connections/ Terminals</b>	
<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
<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 mm²), 2x (0.75 ... 2.5 mm²) 2x (20 ... 16), 2x (18 ... 14), 1x 12
<b>Safety related data</b>	

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
<b>Approvals Certificates</b>	
General Product Approval	EMV



[Confirmation](#)



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

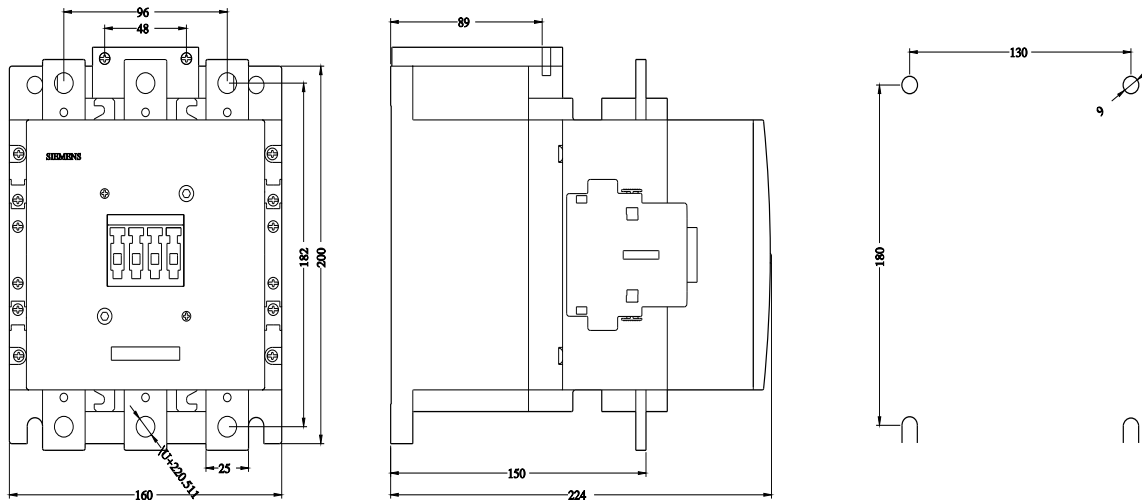
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**Further information**

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



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