



power contactor, AC-3e/AC-3 150 A, 75 kW / 400 V AC (50-60 Hz) / DC U<sub>c</sub>: 220-240 V 3-pole, auxiliary contacts 2 NO + 2 NC drive: conventional main circuit: busbar control and auxiliary circuit: screw terminal

<b>product brand name</b>	SIRIUS
<b>product designation</b>	Power contactor
<b>product type designation</b>	3RT1
<b>General technical data</b>	
<b>size of contactor</b>	S6
<b>product extension</b>	
• function module for communication	No
• auxiliary switch	Yes
<b>power loss [W] for rated value of the current</b>	
• at AC in hot operating state	27 W
• at AC in hot operating state per pole	9 W
• without load current share typical	5.2 W
<b>insulation voltage</b>	
• of main circuit with degree of pollution 3 rated value	1 000 V
• of auxiliary circuit with degree of pollution 3 rated value	500 V
<b>surge voltage resistance</b>	
• of main circuit rated value	8 kV
• of auxiliary circuit rated value	6 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	8,5g / 5 ms, 4,2g / 10 ms
• at DC	8,5g / 5 ms, 4,2g / 10 ms
<b>shock resistance with sine pulse</b>	
• at AC	13,4g / 5 ms, 6,5g / 10 ms
• at DC	13,4g / 5 ms, 6,5g / 10 ms
<b>mechanical service life (operating cycles)</b>	
• of contactor typical	10 000 000
• of the contactor with added electronically optimized auxiliary switch block typical	5 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
<b>reference code according to IEC 81346-2</b>	Q
<b>Substance Prohibition (Date)</b>	05/01/2012
<b>SVHC substance name</b>	Blei - 7439-92-1
<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>relative humidity minimum</b>	10 %
<b>relative humidity at 55 °C according to IEC 60068-2-30</b>	95 %

<b>maximum</b>	
<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>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>	
• at AC-1 at 400 V at ambient temperature 40 °C rated value	185 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	185 A
— up to 690 V at ambient temperature 60 °C rated value	160 A
— up to 1000 V at ambient temperature 40 °C rated value	90 A
— up to 1000 V at ambient temperature 60 °C rated value	90 A
• at AC-3	
— at 400 V rated value	150 A
— at 500 V rated value	150 A
— at 690 V rated value	150 A
— at 1000 V rated value	65 A
• at AC-3e	
— at 400 V rated value	150 A
— at 500 V rated value	150 A
— at 690 V rated value	150 A
— at 1000 V rated value	65 A
• at AC-4 at 400 V rated value	132 A
• at AC-5a up to 690 V rated value	162 A
• at AC-5b up to 400 V rated value	124 A
• at AC-6a	
— up to 230 V for current peak value n=20 rated value	150 A
— up to 400 V for current peak value n=20 rated value	150 A
— up to 500 V for current peak value n=20 rated value	150 A
— up to 690 V for current peak value n=20 rated value	150 A
— up to 1000 V for current peak value n=20 rated value	65 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	105 A
— up to 400 V for current peak value n=30 rated value	105 A
— up to 500 V for current peak value n=30 rated value	105 A
— up to 690 V for current peak value n=30 rated value	105 A
— up to 1000 V for current peak value n=30 rated value	65 A
minimum cross-section in main circuit at maximum AC-1 rated value	95 mm <sup>2</sup>
<b>operational current for approx. 200000 operating cycles at AC-4</b>	
• at 400 V rated value	68 A
• at 690 V rated value	57 A
<b>operational current</b>	
• <b>at 1 current path at DC-1</b>	
— at 24 V rated value	160 A
— at 60 V rated value	160 A
— at 110 V rated value	18 A
— at 220 V rated value	3.4 A
— at 440 V rated value	0.8 A
— at 600 V rated value	0.5 A
• <b>with 2 current paths in series at DC-1</b>	
— at 24 V rated value	160 A
— at 60 V rated value	160 A

— at 110 V rated value	160 A
— at 220 V rated value	20 A
— at 440 V rated value	3.2 A
— at 600 V rated value	1.6 A
<b>● with 3 current paths in series at DC-1</b>	
— at 24 V rated value	160 A
— at 60 V rated value	160 A
— at 110 V rated value	160 A
— at 220 V rated value	160 A
— at 440 V rated value	11.5 A
— at 600 V rated value	4 A
<b>● at 1 current path at DC-3 at DC-5</b>	
— at 24 V rated value	160 A
— at 60 V rated value	7.5 A
— at 220 V rated value	0.6 A
— at 440 V rated value	0.17 A
— at 600 V rated value	0.12 A
<b>● with 2 current paths in series at DC-3 at DC-5</b>	
— at 24 V rated value	160 A
— at 60 V rated value	160 A
— at 110 V rated value	160 A
— at 220 V rated value	2.5 A
— at 440 V rated value	0.65 A
— at 600 V rated value	0.37 A
<b>● with 3 current paths in series at DC-3 at DC-5</b>	
— at 24 V rated value	160 A
— at 60 V rated value	160 A
— at 110 V rated value	160 A
— at 220 V rated value	160 A
— at 440 V rated value	1.4 A
— at 600 V rated value	0.75 A
<b>operating power</b>	
<b>● at AC-3</b>	
— at 230 V rated value	45 kW
— at 400 V rated value	75 kW
— at 500 V rated value	90 kW
— at 690 V rated value	132 kW
— at 1000 V rated value	90 kW
<b>● at AC-3e</b>	
— at 230 V rated value	45 kW
— at 400 V rated value	75 kW
— at 500 V rated value	90 kW
— at 690 V rated value	132 kW
— at 1000 V rated value	90 kW
<b>operating power for approx. 200000 operating cycles at AC-4</b>	
<b>● at 400 V rated value</b>	38 kW
<b>● at 690 V rated value</b>	55 kW
<b>operating apparent power at AC-6a</b>	
<b>● up to 230 V for current peak value n=20 rated value</b>	60 000 kVA
<b>● up to 400 V for current peak value n=20 rated value</b>	100 000 VA
<b>● up to 500 V for current peak value n=20 rated value</b>	130 000 VA
<b>● up to 690 V for current peak value n=20 rated value</b>	170 000 VA
<b>● up to 1000 V for current peak value n=20 rated value</b>	110 000 VA
<b>operating apparent power at AC-6a</b>	
<b>● up to 230 V for current peak value n=30 rated value</b>	40 000 VA
<b>● up to 400 V for current peak value n=30 rated value</b>	70 000 VA
<b>● up to 500 V for current peak value n=30 rated value</b>	90 000 VA
<b>● up to 690 V for current peak value n=30 rated value</b>	120 000 VA
<b>● up to 1000 V for current peak value n=30 rated value</b>	110 000 VA
<b>short-time withstand current in cold operating state up to</b>	

<b>40 °C</b>	<ul style="list-style-type: none"> <li>limited to 1 s switching at zero current maximum</li> <li>limited to 5 s switching at zero current maximum</li> <li>limited to 10 s switching at zero current maximum</li> <li>limited to 30 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> </ul>	2 727 A; Use minimum cross-section acc. to AC-1 rated value 1 831 A; Use minimum cross-section acc. to AC-1 rated value 1 300 A; Use minimum cross-section acc. to AC-1 rated value 850 A; Use minimum cross-section acc. to AC-1 rated value 703 A; Use minimum cross-section acc. to AC-1 rated value
<b>no-load switching frequency</b>	<ul style="list-style-type: none"> <li>at AC</li> <li>at DC</li> </ul>	2 000 1/h 2 000 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-3e maximum</li> <li>at AC-4 maximum</li> </ul>	800 1/h 300 1/h 750 1/h 750 1/h 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> <li>at 60 Hz rated value</li> </ul>	220 ... 240 V 220 ... 240 V
<b>control supply voltage at DC rated value</b>	<ul style="list-style-type: none"> <li></li> </ul>	220 ... 240 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> <li>full-scale value</li> </ul>	0.8 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 0.8 ... 1.1
<b>design of the surge suppressor</b>		with varistor
<b>apparent pick-up power</b>	<ul style="list-style-type: none"> <li><b>at minimum rated control supply voltage at AC</b> <ul style="list-style-type: none"> <li>at 50 Hz</li> <li>at 60 Hz</li> </ul> </li> <li><b>at maximum rated control supply voltage at AC</b> <ul style="list-style-type: none"> <li>at 60 Hz</li> <li>at 50 Hz</li> </ul> </li> </ul>	250 VA 250 VA 300 VA 300 VA
<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>	300 VA 300 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</b>	<ul style="list-style-type: none"> <li>at minimum rated control supply voltage at DC</li> <li>at maximum rated control supply voltage at DC</li> </ul>	4.3 VA 5.2 VA
<b>apparent holding power</b>	<ul style="list-style-type: none"> <li><b>at minimum rated control supply voltage at AC</b> <ul style="list-style-type: none"> <li>at 50 Hz</li> <li>at 60 Hz</li> </ul> </li> <li><b>at maximum rated control supply voltage at AC</b> <ul style="list-style-type: none"> <li>at 50 Hz</li> <li>at 60 Hz</li> </ul> </li> </ul>	4.8 VA 4.8 VA 5.8 VA 5.8 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>	0.8 0.8
<b>closing power of magnet coil at DC</b>		360 W
<b>holding power of magnet coil at DC</b>		5.2 W
<b>closing delay</b>	<ul style="list-style-type: none"> <li>at AC</li> </ul>	20 ... 95 ms

<ul style="list-style-type: none"> <li>• at DC</li> </ul>	20 ... 95 ms
<b>opening delay</b>	
<ul style="list-style-type: none"> <li>• at AC</li> </ul>	40 ... 60 ms
<ul style="list-style-type: none"> <li>• at DC</li> </ul>	40 ... 60 ms
<b>arcing time</b>	10 ... 15 ms
<b>control version of the switch operating mechanism</b>	Standard A1 - A2
<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> </ul>	6 A
<ul style="list-style-type: none"> <li>• at 400 V rated value</li> </ul>	3 A
<ul style="list-style-type: none"> <li>• at 500 V rated value</li> </ul>	2 A
<ul style="list-style-type: none"> <li>• at 690 V rated value</li> </ul>	1 A
<b>operational current at DC-12</b>	
<ul style="list-style-type: none"> <li>• at 24 V rated value</li> </ul>	10 A
<ul style="list-style-type: none"> <li>• at 48 V rated value</li> </ul>	6 A
<ul style="list-style-type: none"> <li>• at 60 V rated value</li> </ul>	6 A
<ul style="list-style-type: none"> <li>• at 110 V rated value</li> </ul>	3 A
<ul style="list-style-type: none"> <li>• at 125 V rated value</li> </ul>	2 A
<ul style="list-style-type: none"> <li>• at 220 V rated value</li> </ul>	1 A
<ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>	0.15 A
<b>operational current at DC-13</b>	
<ul style="list-style-type: none"> <li>• at 24 V rated value</li> </ul>	10 A
<ul style="list-style-type: none"> <li>• at 48 V rated value</li> </ul>	2 A
<ul style="list-style-type: none"> <li>• at 60 V rated value</li> </ul>	2 A
<ul style="list-style-type: none"> <li>• at 110 V rated value</li> </ul>	1 A
<ul style="list-style-type: none"> <li>• at 125 V rated value</li> </ul>	0.9 A
<ul style="list-style-type: none"> <li>• at 220 V rated value</li> </ul>	0.3 A
<ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>	0.1 A
<b>contact reliability of auxiliary contacts</b>	1 faulty switching per 100 million (17 V, 1 mA)
<b>UL/CSA ratings</b>	
<b>full-load current (FLA) for 3-phase AC motor</b>	
<ul style="list-style-type: none"> <li>• at 480 V rated value</li> </ul>	156 A
<ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>	144 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 230 V rated value</li> </ul> </li> </ul>	30 hp
<ul style="list-style-type: none"> <li>• for 3-phase AC motor <ul style="list-style-type: none"> <li>— at 200/208 V rated value</li> </ul> </li> </ul>	50 hp
<ul style="list-style-type: none"> <li>— at 220/230 V rated value</li> </ul>	60 hp
<ul style="list-style-type: none"> <li>— at 460/480 V rated value</li> </ul>	125 hp
<ul style="list-style-type: none"> <li>— at 575/600 V rated value</li> </ul>	150 hp
<b>contact rating of auxiliary contacts according to UL</b>	A600 / Q600
<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 assignment 2 required</li> </ul> </li> </ul>	gG: 355 A (690 V, 100 kA) gG: 315 A (690 V, 100 kA), aM: 200 A (690 V, 50 kA), BS88: 315 A (415 V, 50 kA)
<ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>	gG: 10 A (500 V, 1 kA)
<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
<ul style="list-style-type: none"> <li>• <b>fastening method</b></li> </ul>	screw fixing
<ul style="list-style-type: none"> <li>• fastening method side-by-side mounting</li> </ul>	Yes
<b>height</b>	172 mm
<b>width</b>	120 mm

<b>depth</b>	170 mm
<b>required spacing</b>	
<ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards 20 mm</li> <li>— upwards 10 mm</li> <li>— downwards 10 mm</li> <li>— at the side 0 mm</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards 20 mm</li> <li>— upwards 10 mm</li> <li>— at the side 10 mm</li> <li>— downwards 10 mm</li> </ul> </li> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards 20 mm</li> <li>— upwards 10 mm</li> <li>— downwards 10 mm</li> <li>— at the side 10 mm</li> </ul> </li> </ul>	
<b>Connections/ Terminals</b>	
<b>type of electrical connection</b>	
<ul style="list-style-type: none"> <li>• for main current circuit Connection bar</li> <li>• for auxiliary and control circuit screw-type terminals</li> <li>• at contactor for auxiliary contacts Screw-type terminals</li> <li>• of magnet coil Screw-type terminals</li> </ul>	
<b>width of connection bar</b>	17 mm
<b>thickness of connection bar</b>	3 mm
<b>diameter of holes</b>	9 mm
<b>number of holes</b>	1
<b>type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>• for AWG cables for main contacts 4 ... 250 kcmil</li> </ul>	
<b>connectable conductor cross-section for main contacts</b>	
<ul style="list-style-type: none"> <li>• stranded 25 ... 120 mm<sup>2</sup></li> </ul>	
<b>connectable conductor cross-section for auxiliary contacts</b>	
<ul style="list-style-type: none"> <li>• solid or stranded 0.5 ... 4 mm<sup>2</sup></li> <li>• finely stranded with core end processing 0.5 ... 2.5 mm<sup>2</sup></li> </ul>	
<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>— solid 2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>), max. 2x (0.75 ... 4 mm<sup>2</sup>)</li> <li>— solid or stranded 2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>), max. 2x (0.75 ... 4 mm<sup>2</sup>)</li> <li>— finely stranded with core end processing 2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)</li> </ul> </li> <li>• for AWG cables for auxiliary contacts 2x (20 ... 16), 2x (18 ... 14), 1x 12</li> </ul>	
<b>AWG number as coded connectable conductor cross section</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts 18 ... 14</li> </ul>	
<b>Safety related data</b>	
<b>product function</b>	
<ul style="list-style-type: none"> <li>• mirror contact according to IEC 60947-4-1 Yes</li> <li>• positively driven operation according to IEC 60947-5-1 No</li> </ul>	
suitability for use safety-related switching OFF	Yes; applies only to contactor operating mechanism
<b>B10 value with high demand rate according to SN 31920</b>	1 000 000
IEC 61508	
<b>T1 value</b>	
<ul style="list-style-type: none"> <li>• for proof test interval or service life according to IEC 61508 20 a</li> </ul>	
Electrical Safety	
<b>protection class IP on the front according to IEC 60529</b>	IP00; IP20 with box terminal/cover
<b>touch protection on the front according to IEC 60529</b>	finger-safe, for vertical contact from the front with box terminal/cover
<b>Approvals Certificates</b>	
General Product Approval	



[Confirmation](#)



General Product Approval	Functional Safety	Test Certificates			
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[KC](#)



[Type Examination Certificate](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

[Miscellaneous](#)

Marine / Shipping	other				
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[Miscellaneous](#)

other	Railway		Environment	
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[Confirmation](#)

[Confirmation](#)

[Miscellaneous](#)

[Special Test Certificate](#)



Further information
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Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1055-6AP36>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1055-6AP36>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1055-6AP36>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1055-6AP36&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1055-6AP36&lang=en)

Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1055-6AP36/char>

Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1055-6AP36&objecttype=14&gridview=view1>





