



Power contactor, AC-3 225 A, 110 kW / 400 V AC (50-60 Hz) / DC operation 220-240 V UC Auxiliary contacts 2 NO + 2 NC 3-pole, Size S10 Busbar connections Drive: conventional 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>	S10
<b>product extension</b>	
• function module for communication	No
• auxiliary switch	Yes
<b>power loss [W] for rated value of the current at AC in hot operating state</b>	51 W
• per pole	17 W
<b>power loss [W] for rated value of the current without load current share typical</b>	7.4 W
<b>surge voltage resistance</b>	
• of main circuit rated value	8 kV
• of auxiliary circuit rated value	6 kV
<b>maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1</b>	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 (switching 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 acc. to IEC 81346-2</b>	Q
<b>Ambient conditions</b>	
<b>installation altitude at height above sea level maximum</b>	2 000 m
• ambient temperature during operation	-25 ... +60 °C
• ambient temperature 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

<ul style="list-style-type: none"> <li>operating voltage at AC-3 rated value maximum</li> </ul>	1 000 V
<b>operational current</b>	
<ul style="list-style-type: none"> <li>at AC-1 at 400 V at ambient temperature 40 °C rated value</li> </ul>	275 A
<ul style="list-style-type: none"> <li>at AC-1 <ul style="list-style-type: none"> <li>up to 690 V at ambient temperature 40 °C rated value</li> </ul> </li> </ul>	275 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>up to 690 V at ambient temperature 60 °C rated value</li> </ul> </li> </ul>	250 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>up to 1000 V at ambient temperature 40 °C rated value</li> </ul> </li> </ul>	100 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>up to 1000 V at ambient temperature 60 °C rated value</li> </ul> </li> </ul>	100 A
<ul style="list-style-type: none"> <li>at AC-3 <ul style="list-style-type: none"> <li>at 400 V rated value</li> </ul> </li> </ul>	225 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>at 500 V rated value</li> </ul> </li> </ul>	225 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>at 690 V rated value</li> </ul> </li> </ul>	225 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>at 1000 V rated value</li> </ul> </li> </ul>	68 A
<ul style="list-style-type: none"> <li>at AC-4 at 400 V rated value</li> </ul>	195 A
<ul style="list-style-type: none"> <li>at AC-5a up to 690 V rated value</li> </ul>	242 A
<ul style="list-style-type: none"> <li>at AC-5b up to 400 V rated value</li> </ul>	186 A
<ul style="list-style-type: none"> <li>at AC-6a <ul style="list-style-type: none"> <li>up to 230 V for current peak value n=20 rated value</li> </ul> </li> </ul>	225 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>up to 400 V for current peak value n=20 rated value</li> </ul> </li> </ul>	225 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>up to 500 V for current peak value n=20 rated value</li> </ul> </li> </ul>	225 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>up to 690 V for current peak value n=20 rated value</li> </ul> </li> </ul>	225 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>up to 1000 V for current peak value n=20 rated value</li> </ul> </li> </ul>	68 A
<ul style="list-style-type: none"> <li>at AC-6a <ul style="list-style-type: none"> <li>up to 230 V for current peak value n=30 rated value</li> </ul> </li> </ul>	172 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>up to 400 V for current peak value n=30 rated value</li> </ul> </li> </ul>	172 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>up to 500 V for current peak value n=30 rated value</li> </ul> </li> </ul>	172 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>up to 690 V for current peak value n=30 rated value</li> </ul> </li> </ul>	172 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>up to 1000 V for current peak value n=30 rated value</li> </ul> </li> </ul>	68 A
minimum cross-section in main circuit at maximum AC-1 rated value	150 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>	96 A
<ul style="list-style-type: none"> <li>at 690 V rated value</li> </ul>	85 A
<b>operational current</b>	
<ul style="list-style-type: none"> <li>at 1 current path at DC-1 <ul style="list-style-type: none"> <li>at 24 V rated value</li> </ul> </li> </ul>	200 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>at 110 V rated value</li> </ul> </li> </ul>	18 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>at 220 V rated value</li> </ul> </li> </ul>	3.4 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>at 440 V rated value</li> </ul> </li> </ul>	0.8 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>at 600 V rated value</li> </ul> </li> </ul>	0.5 A
<ul style="list-style-type: none"> <li>with 2 current paths in series at DC-1 <ul style="list-style-type: none"> <li>at 24 V rated value</li> </ul> </li> </ul>	200 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>at 110 V rated value</li> </ul> </li> </ul>	200 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>at 220 V rated value</li> </ul> </li> </ul>	20 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>at 440 V rated value</li> </ul> </li> </ul>	3.2 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>at 600 V rated value</li> </ul> </li> </ul>	1.6 A

<ul style="list-style-type: none"> <li>● with 3 current paths in series at DC-1 <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> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> </ul>	200 A 200 A 200 A 11 A 4 A
<b>operational current</b> <ul style="list-style-type: none"> <li>● at 1 current path at DC-3 at DC-5 <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> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> <li>● with 2 current paths in series at DC-3 at DC-5 <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> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> <li>● with 3 current paths in series at DC-3 at DC-5 <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> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> </ul>	200 A 2.5 A 0.6 A 0.17 A 0.12 A 200 A 200 A 2.5 A 0.65 A 0.37 A 200 A 200 A 200 A 1.4 A 0.75 A
<b>operating power</b> <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> <li>— at 1000 V rated value</li> </ul> </li> </ul>	55 kW 110 kW 160 kW 200 kW 90 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> <li>● at 690 V rated value</li> </ul>	54 kW 82 kW
<b>operating apparent power at AC-6a</b> <ul style="list-style-type: none"> <li>● up to 230 V for current peak value n=20 rated value</li> <li>● up to 400 V for current peak value n=20 rated value</li> <li>● up to 500 V for current peak value n=20 rated value</li> <li>● up to 690 V for current peak value n=20 rated value</li> <li>● up to 1000 V for current peak value n=20 rated value</li> </ul>	90 000 kV·A 150 000 V·A 190 000 V·A 260 000 V·A 110 000 V·A
<b>operating apparent power at AC-6a</b> <ul style="list-style-type: none"> <li>● up to 230 V for current peak value n=30 rated value</li> <li>● up to 400 V for current peak value n=30 rated value</li> <li>● up to 500 V for current peak value n=30 rated value</li> <li>● up to 690 V for current peak value n=30 rated value</li> <li>● up to 1000 V for current peak value n=30 rated value</li> </ul>	60 000 V·A 110 000 V·A 140 000 V·A 200 000 V·A 110 000 V·A
<b>short-time withstand current in cold operating state up to 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>	4 000 A; Use minimum cross-section acc. to AC-1 rated value 2 807 A; Use minimum cross-section acc. to AC-1 rated value 2 082 A; Use minimum cross-section acc. to AC-1 rated value 1 397 A; Use minimum cross-section acc. to AC-1 rated value 1 144 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> </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> <li>• at AC-2 maximum</li> <li>• at AC-3 maximum</li> <li>• at AC-4 maximum</li> </ul>	750 1/h 250 1/h 500 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</b>	
<ul style="list-style-type: none"> <li>• rated value</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 of magnet coil at AC</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>	590 V·A
<b>inductive power factor with closing power of the coil</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>	0.9
<b>apparent holding power of magnet coil at AC</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>	6.7 V·A
<b>inductive power factor with the holding power of the coil</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>	0.9
<b>closing power of magnet coil at DC</b>	650 W
<b>holding power of magnet coil at DC</b>	7.4 W
<b>closing delay</b>	
<ul style="list-style-type: none"> <li>• at AC</li> <li>• at DC</li> </ul>	30 ... 95 ms 30 ... 95 ms
<b>opening delay</b>	
<ul style="list-style-type: none"> <li>• at AC</li> <li>• at DC</li> </ul>	40 ... 80 ms 40 ... 80 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> <li>• at 400 V rated value</li> <li>• at 500 V rated value</li> <li>• at 690 V rated value</li> </ul>	6 A 3 A 2 A 1 A
<b>operational current at DC-12</b>	
<ul style="list-style-type: none"> <li>• at 24 V rated value</li> <li>• at 48 V rated value</li> <li>• at 60 V rated value</li> <li>• at 110 V rated value</li> <li>• at 125 V rated value</li> <li>• at 220 V rated value</li> </ul>	10 A 6 A 6 A 3 A 2 A 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> <li>• at 48 V rated value</li> <li>• at 60 V rated value</li> <li>• at 110 V rated value</li> <li>• at 125 V rated value</li> <li>• at 220 V rated value</li> <li>• at 600 V rated value</li> </ul>	10 A 2 A 2 A 1 A 0.9 A 0.3 A 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> <li>• at 600 V rated value</li> </ul>	180 A 192 A
<b>yielded mechanical performance [hp]</b>	
<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> <li>— at 220/230 V rated value</li> <li>— at 460/480 V rated value</li> <li>— at 575/600 V rated value</li> </ul> </li> </ul>	60 hp 75 hp 150 hp 200 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> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>	gG: 500 A (690 V, 100 kA) gG: 400 A (690 V, 100 kA), aM: 315 A (690 V, 50 kA), BS88: 400 A (415 V, 50 kA) 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
<b>fastening method</b>	screw fixing
<ul style="list-style-type: none"> <li>• side-by-side mounting</li> </ul>	Yes
<b>height</b>	210 mm
<b>width</b>	145 mm
<b>depth</b>	202 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</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> <li>• for grounded parts               <ul style="list-style-type: none"> <li>— forwards</li> <li>— upwards</li> <li>— at the side</li> <li>— downwards</li> </ul> </li> <li>• for live parts               <ul style="list-style-type: none"> <li>— forwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul>	20 mm 10 mm 10 mm 0 mm  20 mm 10 mm 10 mm 10 mm  20 mm 10 mm 10 mm 10 mm
<b>Connections/ Terminals</b>	
<b>width of connection bar</b>	25 mm
<b>thickness of connection bar</b>	6 mm
<b>diameter of holes</b>	11 mm
<b>number of holes</b>	1

<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> <li>• at contactor for auxiliary contacts</li> <li>• of magnet coil</li> </ul>	Connection bar screw-type terminals Screw-type terminals Screw-type terminals
<b>type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>• at AWG cables for main contacts</li> </ul>	2/0 ... 500 kcmil
<b>connectable conductor cross-section for main contacts</b> <ul style="list-style-type: none"> <li>• stranded</li> </ul>	70 ... 240 mm <sup>2</sup>
<b>connectable conductor cross-section for auxiliary contacts</b> <ul style="list-style-type: none"> <li>• solid or stranded</li> <li>• finely stranded with core end processing</li> </ul>	0.5 ... 4 mm <sup>2</sup> 0.5 ... 2.5 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>— solid</li> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• at 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> ), max. 2x (0.75 ... 4 mm <sup>2</sup> ) 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> ) 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
<ul style="list-style-type: none"> <li>• AWG number as coded connectable conductor cross section for auxiliary contacts</li> </ul>	18 ... 14

Safety related data	
B10 value with high demand rate acc. to SN 31920	1 000 000
<b>product function</b> <ul style="list-style-type: none"> <li>• mirror contact acc. to IEC 60947-4-1</li> <li>• positively driven operation acc. to IEC 60947-5-1</li> </ul>	Yes No
<b>protection class IP on the front acc. to IEC 60529</b>	IP00; IP20 with box terminal/cover
<b>touch protection on the front acc. to IEC 60529</b>	finger-safe, for vertical contact from the front with box terminal/cover
suitability for use safety-related switching OFF	Yes

**Certificates/ approvals**

<b>General Product Approval</b>	<b>EMC</b>
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[KC](#)



<b>Declaration of Conformity</b>	<b>Test Certificates</b>	<b>Marine / Shipping</b>
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[Miscellaneous](#)



EG-Konf.

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

[Miscellaneous](#)



ABS

<b>Marine / Shipping</b>	<b>other</b>
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RMRS



DNV-GL

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<b>Railway</b>
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[Special Test](#)

## Further information

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

[siemens.com/ic10](https://www.siemens.com/ic10)

**Industry Mall (Online ordering system)**

[mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1064-6AP36](https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1064-6AP36)

**Cax online generator**

[support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1064-6AP36](https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1064-6AP36)

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

[support.industry.siemens.com/cs/ww/en/ps/3RT1064-6AP36](https://support.industry.siemens.com/cs/ww/en/ps/3RT1064-6AP36)

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

[automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1064-6AP36&lang=en](https://automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1064-6AP36&lang=en)

**Characteristic: Tripping characteristics,  $I^2t$ , Let-through current**

[support.industry.siemens.com/cs/ww/en/ps/3RT1064-6AP36/char](https://support.industry.siemens.com/cs/ww/en/ps/3RT1064-6AP36/char)

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

[automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1064-6AP36&objectype=14&gridview=view1](https://automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1064-6AP36&objectype=14&gridview=view1)



