



power contactor, AC-3e/AC-3 400 A, 200 kW / 400 V without operating mechanism 3-pole, auxiliary contacts 2 NO + 2 NC 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>	S12
<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	105 W
• at AC in hot operating state per pole	35 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 safe isolation 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>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 maximum</b>	95 %

## Main circuit

<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	430 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	430 A
— up to 690 V at ambient temperature 60 °C rated value	400 A
— up to 1000 V at ambient temperature 40 °C rated value	200 A
— up to 1000 V at ambient temperature 60 °C rated value	200 A
• at AC-3	
— at 400 V rated value	400 A
— at 500 V rated value	400 A
— at 690 V rated value	400 A
— at 1000 V rated value	180 A
• at AC-3e	
— at 400 V rated value	400 A
— at 500 V rated value	400 A
— at 690 V rated value	400 A
— at 1000 V rated value	180 A
• at AC-4 at 400 V rated value	350 A
• at AC-5a up to 690 V rated value	378 A
• at AC-5b up to 400 V rated value	332 A
• at AC-6a	
— up to 230 V for current peak value n=20 rated value	395 A
— up to 400 V for current peak value n=20 rated value	395 A
— up to 500 V for current peak value n=20 rated value	395 A
— up to 690 V for current peak value n=20 rated value	395 A
— up to 1000 V for current peak value n=20 rated value	180 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	264 A
— up to 400 V for current peak value n=30 rated value	264 A
— up to 500 V for current peak value n=30 rated value	264 A
— up to 690 V for current peak value n=30 rated value	264 A
— up to 1000 V for current peak value n=30 rated value	180 A
minimum cross-section in main circuit at maximum AC-1 rated value	300 mm <sup>2</sup>
<b>operational current for approx. 200000 operating cycles at AC-4</b>	
• at 400 V rated value	150 A
• at 690 V rated value	135 A
<b>operational current</b>	
• <b>at 1 current path at DC-1</b>	
— at 24 V rated value	400 A
— at 60 V rated value	330 A
— at 110 V rated value	33 A
— at 220 V rated value	3.8 A
— at 440 V rated value	0.9 A
— at 600 V rated value	0.6 A

<ul style="list-style-type: none"> <li>● <b>with 2 current paths in series at DC-1</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 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>● <b>with 3 current paths in series at DC-1</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 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>● <b>at 1 current path at DC-3 at DC-5</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 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>● <b>with 2 current paths in series at DC-3 at DC-5</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 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>● <b>with 3 current paths in series at DC-3 at DC-5</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 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>	<p>400 A 400 A 400 A 400 A 4 A 2 A</p> <p>400 A 400 A 400 A 400 A 11 A 5.2 A</p> <p>400 A 11 A 0.6 A 0.18 A 0.125 A</p> <p>400 A 400 A 400 A 2.5 A 0.65 A 0.37 A</p> <p>400 A 400 A 400 A 400 A 1.4 A 0.75 A</p>
<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> <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>	<p>132 kW 200 kW 250 kW 400 kW 250 kW</p> <p>132 kW 200 kW 250 kW 400 kW 250 kW</p>
<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>	<p>85 kW 133 kW</p>
<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>	<p>150 000 kVA 270 000 VA 340 000 VA 470 000 VA 310 000 VA</p>
<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>	<p>100 000 VA 180 000 VA 220 000 VA 310 000 VA 310 000 VA</p>

**short-time withstand current in cold operating state up to 40 °C**

- limited to 1 s switching at zero current maximum
- limited to 5 s switching at zero current maximum
- limited to 10 s switching at zero current maximum
- limited to 30 s switching at zero current maximum
- limited to 60 s switching at zero current maximum

6 600 A; Use minimum cross-section acc. to AC-1 rated value  
 5 761 A; Use minimum cross-section acc. to AC-1 rated value  
 4 143 A; Use minimum cross-section acc. to AC-1 rated value  
 2 635 A; Use minimum cross-section acc. to AC-1 rated value  
 2 088 A; Use minimum cross-section acc. to AC-1 rated value

**no-load switching frequency**

- at AC
- at DC

2 000 1/h  
 2 000 1/h

**operating frequency**

- at AC-1 maximum
- at AC-2 maximum
- at AC-3 maximum
- at AC-3e maximum
- at AC-4 maximum

700 1/h  
 200 1/h  
 500 1/h  
 500 1/h  
 130 1/h

**Control circuit/ Control****type of voltage of the control supply voltage**

AC/DC

**closing delay**

- at AC
- at DC

45 ... 100 ms  
 45 ... 100 ms

**opening delay**

- at AC
- at DC

60 ... 100 ms  
 60 ... 100 ms

**arcing time**

10 ... 15 ms

**control version of the switch operating mechanism**

Without operating mechanism

**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**

- at 230 V rated value
- at 400 V rated value
- at 500 V rated value
- at 690 V rated value

6 A  
 3 A  
 2 A  
 1 A

**operational current at DC-12**

- at 24 V rated value
- at 48 V rated value
- at 60 V rated value
- at 110 V rated value
- at 125 V rated value
- at 220 V rated value
- at 600 V rated value

10 A  
 6 A  
 6 A  
 3 A  
 2 A  
 1 A  
 0.15 A

**operational current at DC-13**

- at 24 V rated value
- at 48 V rated value
- at 60 V rated value
- at 110 V rated value
- at 125 V rated value
- at 220 V rated value
- at 600 V rated value

10 A  
 2 A  
 2 A  
 1 A  
 0.9 A  
 0.3 A  
 0.1 A

**contact reliability of auxiliary contacts**

1 faulty switching per 100 million (17 V, 1 mA)

**UL/CSA ratings****full-load current (FLA) for 3-phase AC motor**

- at 480 V rated value
- at 600 V rated value

361 A  
 382 A

**yielded mechanical performance [hp]**

- for 3-phase AC motor
  - at 200/208 V rated value
  - at 220/230 V rated value
  - at 460/480 V rated value
  - at 575/600 V rated value

125 hp  
 150 hp  
 300 hp  
 400 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: 630 A (690 V, 100 kA) gG: 500 A (690 V, 100 kA), aM: 400 A (690 V, 50 kA), BS88: 450 A (415 V, 50 kA) gG: 10 A (500 V, 1 kA)
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>  <b>fastening method</b> <ul style="list-style-type: none"> <li>• side-by-side mounting</li> </ul> <b>height</b> <b>width</b> <b>depth</b> <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>	with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back screw fixing Yes 214 mm 160 mm 225 mm  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>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> <b>width of connection bar</b> <b>thickness of connection bar</b> <b>diameter of holes</b> <b>number of holes</b> <b>connectable conductor cross-section for main contacts</b> <ul style="list-style-type: none"> <li>• stranded</li> </ul> <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> <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> <b>AWG number as coded connectable conductor cross section</b> <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>	Connection bar screw-type terminals Screw-type terminals Screw-type terminals 25 mm 6 mm 11 mm 1 70 ... 240 mm <sup>2</sup> 0.5 ... 4 mm <sup>2</sup> 0.5 ... 2.5 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> ), 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 18 ... 14
<b>Safety related data</b>	
<b>product function</b> <ul style="list-style-type: none"> <li>• mirror contact according to IEC 60947-4-1</li> <li>• positively driven operation according to IEC 60947-5-1</li> </ul>	Yes No

B10 value with high demand rate according to SN 31920  
 T1 value for proof test interval or service life according to IEC 61508  
**protection class IP on the front according to IEC 60529**  
**touch protection on the front according to IEC 60529**  
**suitability for use**

- safety-related switching OFF

1 000 000  
 20 a  
 IP00; IP20 with box terminal/cover  
 finger-safe, for vertical contact from the front with box terminal/cover  
 No

**Certificates/ approvals**

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



<b>Functional Safety/Safety of Machinery</b>	<b>Declaration of Conformity</b>	<b>Test Certificates</b>	<b>Marine / Shipping</b>
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[Type Examination Certificate](#)



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



<b>Marine / Shipping</b>	<b>other</b>
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[Confirmation](#)

[Miscellaneous](#)

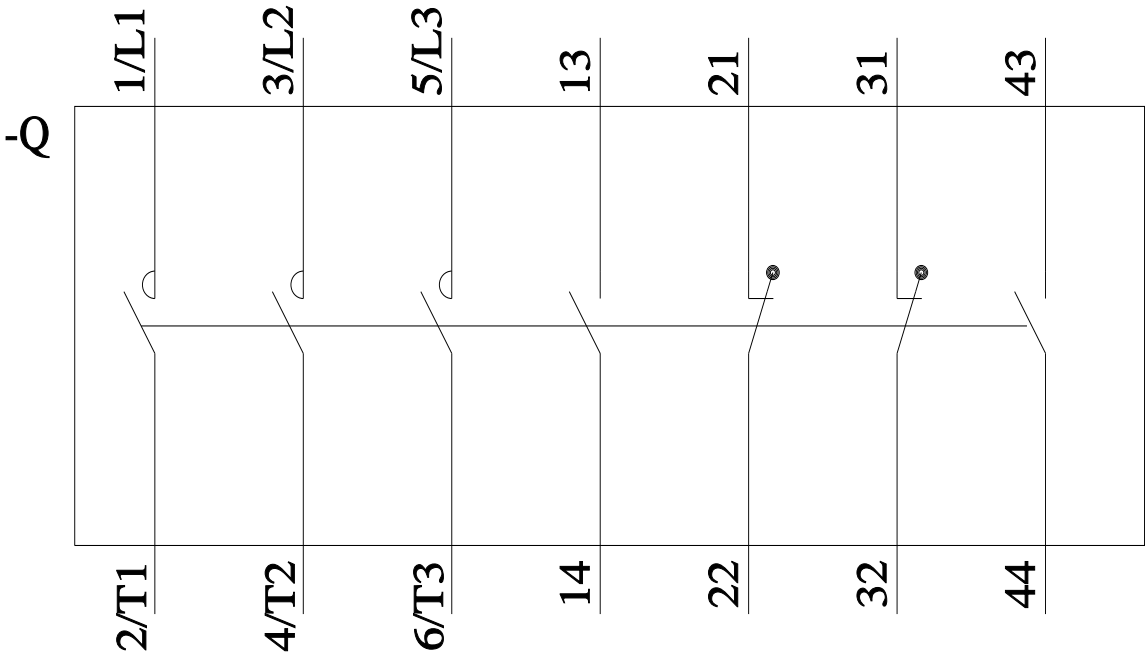
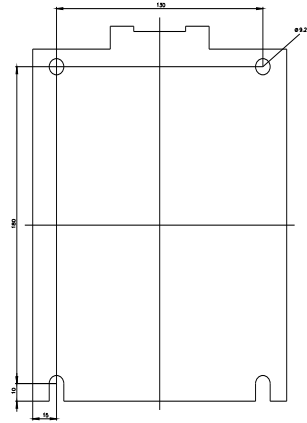
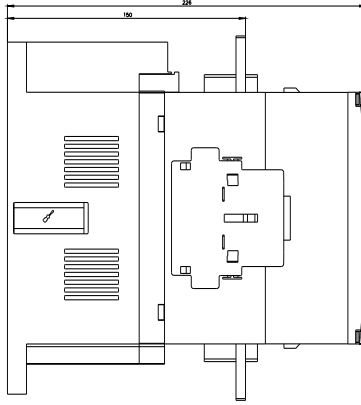
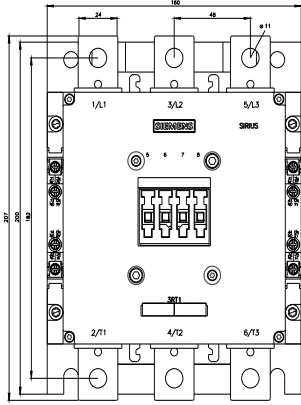
[Miscellaneous](#)

**Railway**

[Vibration and Shock](#) [Special Test Certificate](#)

**Further information**

- 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=3RT1075-6LA06>
- Cax online generator**  
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1075-6LA06>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**  
<https://support.industry.siemens.com/cs/ww/en/ps/3RT1075-6LA06>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**  
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1075-6LA06&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1075-6LA06&lang=en)
- Characteristic: Tripping characteristics, I<sub>t</sub>, Let-through current**  
<https://support.industry.siemens.com/cs/ww/en/ps/3RT1075-6LA06/char>
- Further characteristics (e.g. electrical endurance, switching frequency)**  
<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1075-6LA06&objecttype=14&gridview=view1>



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