



power contactor, AC-3e/AC-3 225 A, 110 kW / 400 V AC (50-60 Hz) / DC  
Uc: 21-27.3 V PLC input 24 V DC 3-pole, auxiliary contacts 2 NO + 2 NC  
drive: electronic main circuit: busbar control and auxiliary circuit: screw terminal

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT1

### General technical data

size of contactor	S10
product extension	
<ul style="list-style-type: none"> <li>function module for communication</li> <li>auxiliary switch</li> </ul>	No Yes
power loss [W] for rated value of the current	
<ul style="list-style-type: none"> <li>at AC in hot operating state</li> <li>at AC in hot operating state per pole</li> <li>without load current share typical</li> </ul>	51 W 17 W 3.4 W
insulation voltage	
<ul style="list-style-type: none"> <li>of main circuit with degree of pollution 3 rated value</li> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>	1 000 V 500 V
surge voltage resistance	
<ul style="list-style-type: none"> <li>of main circuit rated value</li> <li>of auxiliary circuit rated value</li> </ul>	8 kV 6 kV
maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1	690 V
shock resistance at rectangular impulse	
<ul style="list-style-type: none"> <li>at AC</li> <li>at DC</li> </ul>	8,5g / 5 ms, 4,2g / 10 ms 8,5g / 5 ms, 4,2g / 10 ms
shock resistance with sine pulse	
<ul style="list-style-type: none"> <li>at AC</li> <li>at DC</li> </ul>	13,4g / 5 ms, 6,5g / 10 ms 13,4g / 5 ms, 6,5g / 10 ms
mechanical service life (operating cycles)	
<ul style="list-style-type: none"> <li>of contactor typical</li> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> <li>of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000 5 000 000 10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibition (Date)	05/01/2012

### Ambient conditions

installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul style="list-style-type: none"> <li>during operation</li> <li>during storage</li> </ul>	-25 ... +60 °C -55 ... +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	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	275 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	275 A
— up to 690 V at ambient temperature 60 °C rated value	250 A
— up to 1000 V at ambient temperature 40 °C rated value	100 A
— up to 1000 V at ambient temperature 60 °C rated value	100 A
• at AC-3	
— at 400 V rated value	225 A
— at 500 V rated value	225 A
— at 690 V rated value	225 A
— at 1000 V rated value	68 A
• at AC-3e	
— at 400 V rated value	225 A
— at 500 V rated value	225 A
— at 1000 V rated value	68 A
• at AC-4 at 400 V rated value	195 A
• at AC-5a up to 690 V rated value	242 A
• at AC-5b up to 400 V rated value	186 A
• at AC-6a	
— up to 230 V for current peak value n=20 rated value	225 A
— up to 400 V for current peak value n=20 rated value	225 A
— up to 500 V for current peak value n=20 rated value	225 A
— up to 690 V for current peak value n=20 rated value	225 A
— up to 1000 V for current peak value n=20 rated value	68 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	172 A
— up to 400 V for current peak value n=30 rated value	172 A
— up to 500 V for current peak value n=30 rated value	172 A
— up to 690 V for current peak value n=30 rated value	172 A
— up to 1000 V for current peak value n=30 rated value	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>	
• at 400 V rated value	96 A
• at 690 V rated value	85 A
<b>operational current</b>	
• <b>at 1 current path at DC-1</b>	
— at 24 V rated value	200 A
— at 60 V rated value	200 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	200 A
— at 60 V rated value	200 A
— at 110 V rated value	200 A
— at 220 V rated value	20 A
— at 440 V rated value	3.2 A
— at 600 V rated value	1.6 A
● with 3 current paths in series at DC-1	
— at 24 V rated value	200 A
— at 60 V rated value	200 A
— at 110 V rated value	200 A
— at 220 V rated value	200 A
— at 440 V rated value	11 A
— at 600 V rated value	4 A
● at 1 current path at DC-3 at DC-5	
— at 24 V rated value	200 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
● with 2 current paths in series at DC-3 at DC-5	
— at 24 V rated value	200 A
— at 60 V rated value	200 A
— at 110 V rated value	200 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
● with 3 current paths in series at DC-3 at DC-5	
— at 24 V rated value	200 A
— at 60 V rated value	200 A
— at 110 V rated value	200 A
— at 220 V rated value	200 A
— at 440 V rated value	1.4 A
— at 600 V rated value	0.75 A
<b>operating power</b>	
● at AC-3	
— at 230 V rated value	55 kW
— at 400 V rated value	110 kW
— at 500 V rated value	160 kW
— at 690 V rated value	200 kW
— at 1000 V rated value	90 kW
● at AC-3e	
— at 230 V rated value	55 kW
— at 400 V rated value	110 kW
— at 500 V rated value	160 kW
— at 1000 V rated value	90 kW
<b>operating power for approx. 200000 operating cycles at AC-4</b>	
● at 400 V rated value	54 kW
● at 690 V rated value	82 kW
<b>operating apparent power at AC-6a</b>	
● up to 230 V for current peak value n=20 rated value	90 000 kVA
● up to 400 V for current peak value n=20 rated value	150 000 VA
● up to 500 V for current peak value n=20 rated value	190 000 VA
● up to 690 V for current peak value n=20 rated value	260 000 VA
● up to 1000 V for current peak value n=20 rated value	110 000 VA
<b>operating apparent power at AC-6a</b>	
● up to 230 V for current peak value n=30 rated value	60 000 VA
● up to 400 V for current peak value n=30 rated value	110 000 VA
● up to 500 V for current peak value n=30 rated value	140 000 VA
● up to 690 V for current peak value n=30 rated value	200 000 VA
● up to 1000 V for current peak value n=30 rated value	110 000 VA
<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> <li>• at DC</li> </ul>	1 000 1/h 1 000 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>	750 1/h 250 1/h 500 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>	21 ... 27.3 V 21 ... 27.3 V
<b>control supply voltage at DC</b>	
<ul style="list-style-type: none"> <li>• rated value</li> </ul>	21 ... 27.3 V
<b>type of PLC-control input according to IEC 60947-1</b>	Type 2
<b>consumed current at PLC-control input according to IEC 60947-1 maximum</b>	20 mA
<b>voltage at PLC-control input rated value</b>	24 V
<b>operating range factor of the voltage at PLC-control input</b>	0.8 ... 1.1
<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> <li>• at 60 Hz</li> </ul>	530 VA 530 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>	0.8 0.8
<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>	8.5 VA 8.5 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>	0.4 0.4
<b>closing power of magnet coil at DC</b>	580 W
<b>holding power of magnet coil at DC</b>	3.4 W
<b>closing delay</b>	
<ul style="list-style-type: none"> <li>• at AC</li> <li>• at DC</li> </ul>	45 ... 80 ms 45 ... 80 ms
<b>opening delay</b>	
<ul style="list-style-type: none"> <li>• at AC</li> <li>• at DC</li> </ul>	80 ... 100 ms 80 ... 100 ms
<b>arcing time</b>	10 ... 15 ms
<b>control version of the switch operating mechanism</b>	PLC-IN or Standard A1 - A2 (adjustable)
<b>Auxiliary circuit</b>	
number of NC contacts for auxiliary contacts	2
instantaneous contact	
number of NO contacts for auxiliary contacts	2
instantaneous contact	
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

180 A  
192 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

60 hp  
75 hp  
150 hp  
200 hp

**contact rating of auxiliary contacts according to UL**

A600 / Q600

**Short-circuit protection****design of the fuse link**

- for short-circuit protection of the main circuit
  - with type of coordination 1 required
  - with type of assignment 2 required
- for short-circuit protection of the auxiliary switch required

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)

**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**

screw fixing

- side-by-side mounting

Yes

**height**

210 mm

**width**

145 mm

**depth**

202 mm

**required spacing**

- with side-by-side mounting
  - forwards
  - upwards
  - downwards
  - at the side
- for grounded parts
  - forwards
  - upwards
  - at the side
  - downwards
- for live parts
  - forwards
  - upwards
  - downwards

20 mm  
10 mm  
10 mm  
0 mm  
  
20 mm  
10 mm  
10 mm  
10 mm  
  
20 mm  
10 mm  
10 mm

— at the side

10 mm

## Connections/ Terminals

### type of electrical connection

- for main current circuit
- for auxiliary and control circuit
- at contactor for auxiliary contacts
- of magnet coil

### width of connection bar

### thickness of connection bar

### diameter of holes

### number of holes

### connectable conductor cross-section for main contacts

- stranded

### connectable conductor cross-section for auxiliary contacts

- solid or stranded
- finely stranded with core end processing

### type of connectable conductor cross-sections

- for auxiliary contacts
  - solid
  - solid or stranded
  - finely stranded with core end processing
- at AWG cables for auxiliary contacts

### AWG number as coded connectable conductor cross section

- for auxiliary contacts

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

## Safety related data

### product function

- mirror contact according to IEC 60947-4-1
- positively driven operation according to IEC 60947-5-1

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

Yes

No

1 000 000

20 a

IP00; IP20 with box terminal/cover

finger-safe, for vertical contact from the front with box terminal/cover

Yes

## Certificates/ approvals

### General Product Approval



[Confirmation](#)



[KC](#)



EMC	Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates
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[Type Examination Certificate](#)



EG-Konf.

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

Marine / Shipping

other



[Miscellaneous](#)

other

Railway

[Confirmation](#)

[Miscellaneous](#)

[Confirmation](#)

[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=3RT1064-6NB36>

### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1064-6NB36>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1064-6NB36>

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

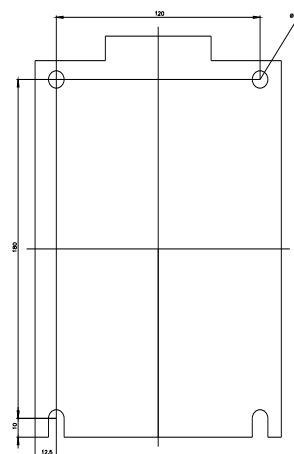
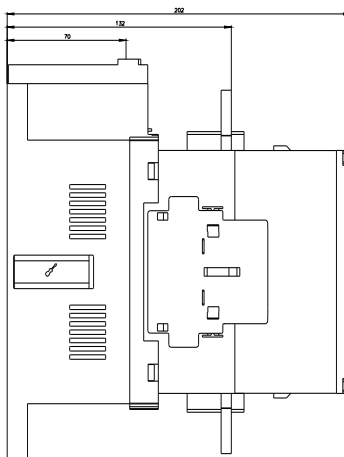
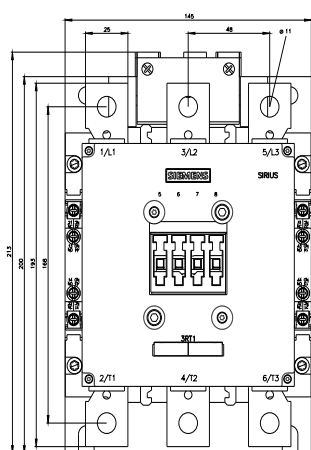
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1064-6NB36&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1064-6NB36&lang=en)

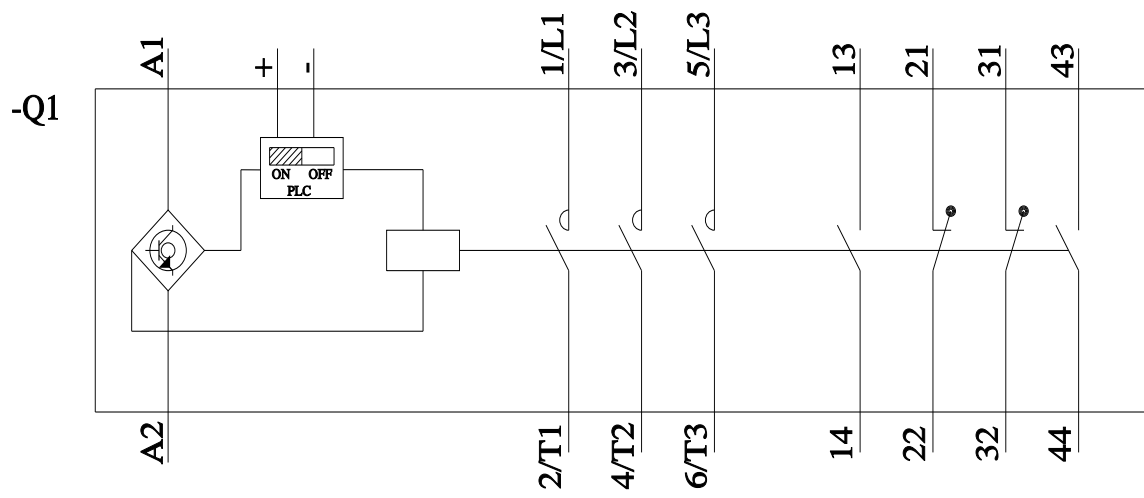
### Characteristic: Tripping characteristics, $I^2t$ , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1064-6NB36/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1064-6NB36&objecttype=14&gridview=view1>





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