



power contactor AC-1 275 A / 690 V / 40 °C 3-pole, U<sub>c</sub>: 220-240 V AC(50-60 Hz) / DC drive: conventional auxiliary contacts 2 NO + 2 NC main circuit: busbar control and auxiliary circuit: screw terminal

product brand name	SIRIUS
product designation	Contacteur
product type designation	3RT14

### General technical data

size of contactor	S6
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>	86.4 W 28.8 W 5.2 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
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 Prohibitance (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>number of NC contacts for main contacts</b>	0
<b>type of voltage for main current circuit</b>	AC
<b>operational current</b>	
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	275 A
— up to 690 V at ambient temperature 55 °C rated value	250 A
— up to 690 V at ambient temperature 60 °C rated value	250 A
• at AC-3	
— at 400 V rated value	97 A
— at 690 V rated value	97 A
minimum cross-section in main circuit at maximum AC-1 rated value	140 mm <sup>2</sup>
<b>no-load switching frequency</b>	
• at AC	2 000 1/h
• at DC	2 000 1/h
operating frequency at AC-1 maximum	600 1/h

#### Control circuit/ Control

<b>type of voltage</b>	AC/DC
<b>type of voltage of the control supply voltage</b>	AC/DC
<b>control supply voltage at AC</b>	
• at 50 Hz rated value	220 ... 240 V
• at 60 Hz rated value	220 ... 240 V
<b>control supply voltage at DC</b>	
• rated value	220 ... 240 V
<b>operating range factor control supply voltage rated value of magnet coil at DC</b>	
• initial value	0.8
• full-scale value	1.1
<b>operating range factor control supply voltage rated value of magnet coil at AC</b>	
• at 50 Hz	0.8 ... 1.1
• at 60 Hz	0.8 ... 1.1
<b>design of the surge suppressor</b>	with varistor
<b>apparent pick-up power of magnet coil at AC</b>	
• at 50 Hz	300 VA
<b>inductive power factor with closing power of the coil</b>	
• at 50 Hz	0.9
<b>apparent holding power of magnet coil at AC</b>	
• at 50 Hz	5.8 VA
<b>inductive power factor with the holding power of the coil</b>	
• at 50 Hz	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>	
• at AC	20 ... 95 ms
• at DC	20 ... 95 ms
<b>opening delay</b>	
• at AC	40 ... 60 ms
• at DC	40 ... 60 ms
<b>arcing time</b>	10 ... 15 ms
<b>control version of the switch operating mechanism</b>	Standard A1 - A2

#### Auxiliary circuit

<b>number of NC contacts for auxiliary contacts</b>	2
• attachable	4
• instantaneous contact	2
<b>number of NO contacts for auxiliary contacts</b>	2
• attachable	4
• 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-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

design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required

gG: 10 A (230 V, 400 A)

**contact reliability of auxiliary contacts**

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

**Short-circuit protection****product function short circuit protection**

No

**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: 355 A (690 V, 100 kA)  
gR: 350 A (690 V, 100 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**

172 mm

**width**

120 mm

**depth**

170 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
  - at the side

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

Connection bar  
screw-type terminals  
Screw-type terminals  
Screw-type terminals

**width of connection bar**

17 mm

**thickness of connection bar**

3 mm

**diameter of holes**

9 mm

**number of holes**

1

**connectable conductor cross-section for main contacts**

- solid or stranded
- stranded

25 ... 120 mm<sup>2</sup>  
25 ... 120 mm<sup>2</sup>

**connectable conductor cross-section for auxiliary contacts**

<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>	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
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Safety related data	
<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> <b>protection class IP on the front according to IEC 60529</b> <b>touch protection on the front according to IEC 60529</b>	Yes No  IP00; IP20 with box terminal/cover  finger-safe, for vertical contact from the front with box terminal/cover

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](#)



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

Marine / Shipping	other
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[Confirmation](#)

other	Railway
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[Confirmation](#)

[Miscellaneous](#)

[Special Test Certificate](#)

[Vibration and Shock](#)

Further information
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Siemens has decided to exit the Russian market (see here).

<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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=3RT1456-6AP36>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1456-6AP36>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1456-6AP36>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1456-6AP36&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1456-6AP36&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1456-6AP36/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1456-6AP36&objecttype=14&gridview=view1>



