

Contactor AC1: 690A/ 690 V Coil DC 72 V x (0,7...1,25) PLC input  
 DC 24...110 V auxiliary contacts: 2 NO + 2 NC 3-pole Size S12  
 busbar connections coil terminals: spring loaded spring-type



Figure similar

<b>Product brand name</b>	SIRIUS
<b>Product type designation</b>	3RT14
<b>General technical data</b>	
<b>Size of contactor</b>	S12
<b>Product extension</b>	
• Auxiliary switch	Yes
<b>Surge voltage resistance rated value</b>	8 kV
<b>maximum permissible voltage for safe isolation</b>	
• between coil and main contacts acc. to EN 60947-1	690 V
<b>Protection class IP</b>	
• on the front	IP00; IP20 on the front with cover / box terminal
• of the terminal	IP00
<b>Shock resistance</b>	
• for railway applications acc. to DIN EN 61373	Category 1, Class B
<b>Shock resistance at rectangular impulse</b>	
• at DC	8,5g / 5 ms, 4,2g / 10 ms

<b>Shock resistance with sine pulse</b>	
<ul style="list-style-type: none"> <li>• at DC</li> </ul>	13,4g / 5 ms, 6,5g / 10 ms
<b>Mechanical service life (switching cycles)</b>	
<ul style="list-style-type: none"> <li>• of contactor typical</li> </ul>	10 000 000
<ul style="list-style-type: none"> <li>• of the contactor with added electronics-compatible auxiliary switch block typical</li> </ul>	5 000 000
<ul style="list-style-type: none"> <li>• of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000

### Ambient conditions

<b>Installation altitude at height above sea level</b>	
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	2 000 m
<b>Ambient temperature</b>	
<ul style="list-style-type: none"> <li>• during operation</li> </ul>	-40 ... +70 °C
<ul style="list-style-type: none"> <li>• during storage</li> </ul>	-55 ... +80 °C

### 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>Operating voltage</b>	
<ul style="list-style-type: none"> <li>• at AC-3 rated value maximum</li> </ul>	1 000 V
<b>Operating current</b>	
<ul style="list-style-type: none"> <li>• at AC-1 at 400 V <ul style="list-style-type: none"> <li>— at ambient temperature 40 °C rated value</li> </ul> </li> </ul>	690 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>	690 A
<ul style="list-style-type: none"> <li>— up to 690 V at ambient temperature 60 °C rated value</li> </ul>	600 A
<ul style="list-style-type: none"> <li>• at AC-2 at 400 V rated value</li> </ul>	170 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>	170 A
<ul style="list-style-type: none"> <li>— at 500 V rated value</li> </ul>	170 A
<ul style="list-style-type: none"> <li>— at 690 V rated value</li> </ul>	170 A
<b>Connectable conductor cross-section in main circuit at AC-1</b>	
<ul style="list-style-type: none"> <li>• at 60 °C minimum permissible</li> </ul>	480 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>• at 40 °C minimum permissible</li> </ul>	480 mm <sup>2</sup>
<b>Operating 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>	500 A
<ul style="list-style-type: none"> <li>— at 110 V rated value</li> </ul>	33 A
<ul style="list-style-type: none"> <li>— at 220 V rated value</li> </ul>	3.8 A

— at 440 V rated value	0.9 A
— at 600 V rated value	0.6 A
• with 2 current paths in series at DC-1	
— at 24 V rated value	500 A
— at 110 V rated value	500 A
— at 220 V rated value	500 A
— at 440 V rated value	4 A
— at 600 V rated value	2 A
• with 3 current paths in series at DC-1	
— at 24 V rated value	500 A
— at 110 V rated value	500 A
— at 220 V rated value	500 A
— at 440 V rated value	11 A
— at 600 V rated value	5.2 A
<b>Operating current</b>	
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	500 A
— at 110 V rated value	3 A
— at 220 V rated value	0.6 A
— at 440 V rated value	0.18 A
— at 600 V rated value	0.125 A
• with 2 current paths in series at DC-3 at DC-5	
— at 24 V rated value	500 A
— at 110 V rated value	500 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	500 A
— at 110 V rated value	500 A
— at 220 V rated value	500 A
— at 440 V rated value	1.4 A
— at 600 V rated value	0.75 A
<b>Operating power</b>	
• at AC-1	
— at 230 V at 60 °C rated value	245 kW
— at 400 V rated value	430 kW
— at 400 V at 60 °C rated value	430 kW
— at 690 V rated value	740 kW
— at 690 V at 60 °C rated value	740 kW
• at AC-2 at 400 V rated value	90 kW

<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> </ul> </li> </ul>	160 kW 90 kW 110 kW 160 kW
<b>Thermal short-time current limited to 10 s</b>	4 kA
<b>Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor</b>	55 W
<b>No-load switching frequency</b> <ul style="list-style-type: none"> <li>• at DC</li> </ul>	500 1/h
<b>Operating frequency</b> <ul style="list-style-type: none"> <li>• at AC-1 maximum</li> </ul>	500 1/h
<b>Operating frequency</b> <ul style="list-style-type: none"> <li>• at DC-1 maximum</li> </ul>	250 1/s

### Ratings for railway applications

<b>Thermal current (I<sub>th</sub>) up to 690 V</b> <ul style="list-style-type: none"> <li>• up to 40 °C according to IEC 60077 rated value</li> <li>• up to 70 °C according to IEC 60077 rated value</li> </ul>	690 A 520 A
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### Control circuit/ Control

<b>Type of voltage of the control supply voltage</b>	DC
<b>Control supply voltage at DC</b> <ul style="list-style-type: none"> <li>• rated value</li> </ul>	72 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>	0.7 1.25
<b>Design of the surge suppressor</b>	with varistor
<b>Closing power of magnet coil at DC</b>	800 W
<b>Holding power of magnet coil at DC</b>	3.6 W
<b>Closing delay</b> <ul style="list-style-type: none"> <li>• at DC</li> </ul>	60 ... 90 ms
<b>Opening delay</b> <ul style="list-style-type: none"> <li>• at DC</li> </ul>	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)

### Auxiliary circuit

<b>Number of NC contacts</b> <ul style="list-style-type: none"> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>— instantaneous contact</li> </ul> </li> </ul>	2
<b>Number of NO contacts</b> <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>	

— instantaneous contact	2
Operating current at AC-12 maximum	10 A
<b>Operating current at AC-15</b>	
• at 230 V rated value	6 A
• at 400 V rated value	3 A
• at 500 V rated value	2 A
<b>Operating current at DC-12</b>	
• at 24 V rated value	10 A
• at 48 V rated value	6 A
• at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 125 V rated value	2 A
• at 220 V rated value	1 A
• at 600 V rated value	0.15 A
<b>Operating current at DC-13</b>	
• at 24 V rated value	6 A
• at 48 V rated value	2 A
• at 60 V rated value	2 A
• at 110 V rated value	1 A
• at 125 V rated value	0.9 A
• at 220 V rated value	0.3 A
• at 600 V rated value	0.1 A
<b>Contact reliability of auxiliary contacts</b>	1 faulty switching per 100 million (17 V, 1 mA)

#### UL/CSA ratings

<b>Full-load current (FLA) for three-phase AC motor</b>	
• at 480 V rated value	180 A
• at 600 V rated value	192 A
<b>Yielded mechanical performance [hp]</b>	
• for three-phase AC motor	
— at 220/230 V rated value	75 hp
— at 460/480 V rated value	150 hp
— at 575/600 V rated value	200 hp
<b>Contact rating of auxiliary contacts according to UL</b>	A600 / Q600

#### Short-circuit protection

<b>Design of the fuse link</b>	
• for short-circuit protection of the main circuit	
— with type of coordination 1 required	Fuse gG: 800 A
— with type of assignment 2 required	fuse gR: 710 A
• for short-circuit protection of the auxiliary switch required	fuse gG: 10 A

#### Installation/ mounting/ dimensions

<b>Mounting position</b>	with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back
<b>Mounting type</b>	screw fixing
• Side-by-side mounting	Yes
<b>Height</b>	214 mm
<b>Width</b>	160 mm
<b>Depth</b>	225 mm
<b>Required spacing</b>	
• with side-by-side mounting	
— forwards	20 mm
— Backwards	0 mm
— upwards	10 mm
— downwards	10 mm
— at the side	10 mm
• for grounded parts	
— forwards	20 mm
— Backwards	0 mm
— upwards	10 mm
— at the side	10 mm
— downwards	10 mm
• for live parts	
— forwards	10 mm
— Backwards	0 mm
— upwards	10 mm
— downwards	10 mm
— at the side	10 mm

### Connections/Terminals

<b>Type of electrical connection</b>	
• for main current circuit	screw-type terminals
• for auxiliary and control current circuit	spring-loaded terminals
<b>Type of connectable conductor cross-sections</b>	
• for main contacts	
— stranded	2x (70 ... 240 mm <sup>2</sup> )
— single or multi-stranded	2x (70 ... 240 mm <sup>2</sup> )
• at AWG conductors for main contacts	2/0 ... 500 kcmil
<b>Type of connectable conductor cross-sections</b>	
• for auxiliary contacts	
— single or multi-stranded	2x (0,25 ... 2,5 mm <sup>2</sup> )
— finely stranded with core end processing	2x (0.25 ... 1.5 mm <sup>2</sup> )
— finely stranded without core end processing	2x (0.25 ... 2.5 mm <sup>2</sup> )
• at AWG conductors for auxiliary contacts	2x (24 ... 14)

## Safety related data

### Product function

- Mirror contact acc. to IEC 60947-4-1
- positively driven operation acc. to IEC 60947-5-1

Yes  
No

## Certificates/approvals

<b>General Product Approval</b>	<b>Functional Safety/Safety of Machinery</b>	<b>Declaration of Conformity</b>
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CCC



CSA



UL



[Type Examination Certificate](#)



EG-Konf.

<b>Test Certificates</b>	<b>Marine / Shipping</b>	<b>other</b>	<b>Railway</b>
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[Special Test Certificate](#)



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[Miscellaneous](#)

[Vibration and Shock](#)

[Confirmation](#)

## Further information

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

<http://www.siemens.com/industrial-controls/catalogs>

### Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1476-2XJ46-0LA2>

### Cax online generator

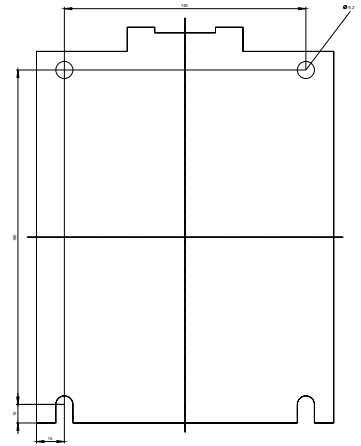
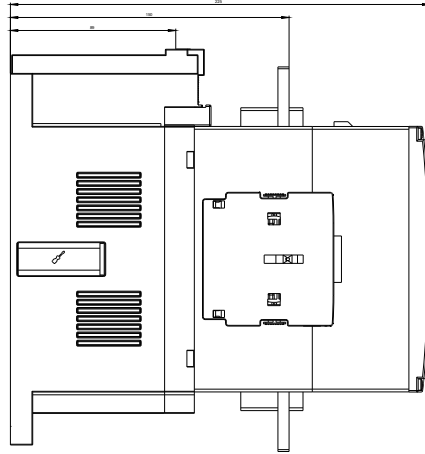
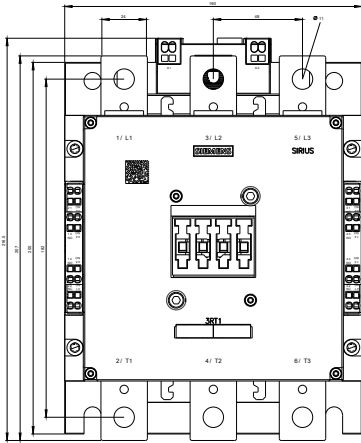
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1476-2XJ46-0LA2>

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

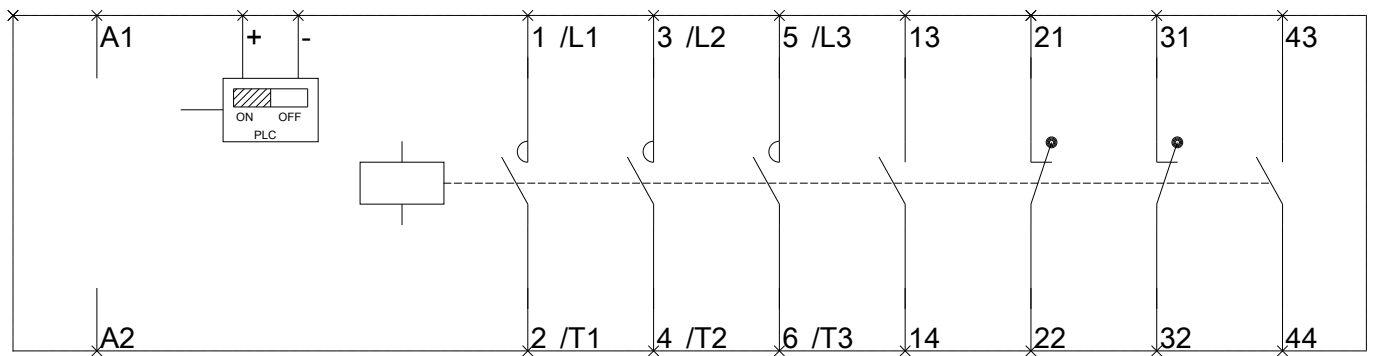
<https://support.industry.siemens.com/cs/ww/en/ps/3RT1476-2XJ46-0LA2>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1476-2XJ46-0LA2&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1476-2XJ46-0LA2&lang=en)







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