

Contactor, AC-1, 690 A/690 V/40 °C, S12, 3-pole, 96-127 V AC/DC, F-PLC-IN with varistor, 2 NO+2 NC, Connection rail/ screw terminal



<b>Product brand name</b>	SIRIUS
<b>Product designation</b>	Contactor
<b>Product type designation</b>	3RT14
<b>General technical data</b>	
<b>Size of contactor</b>	S12
<b>Product extension</b>	
• function module for communication	No
• Auxiliary switch	Yes
<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	690 V
<b>Surge voltage resistance</b>	
• of main circuit rated value	8 kV
• of auxiliary circuit rated value	6 kV
<b>Protection class IP</b>	
• on the front	IP00; IP20 on the front with cover / box terminal
• of the terminal	IP00

<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 electronics-compatible auxiliary switch block typical	5 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
<b>Reference code acc. to DIN EN 81346-2</b>	Q

#### Ambient conditions

<b>Installation altitude at height above sea level</b>	
• maximum	2 000 m
Relative humidity during operation	0 ... 95 %

#### Main circuit

<b>Number of poles for main current circuit</b>	3
<b>Number of NO contacts for main contacts</b>	3
<b>Type of voltage for main current circuit</b>	AC
<b>Operating voltage</b>	
• at AC	
— at 50 Hz rated value	127 V
— at 60 Hz rated value	127 V
<b>Operating current</b>	
• at AC-1 at 400 V	
— rated value	600 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	690 A
— up to 690 V at ambient temperature 60 °C rated value	600 A
• at AC-3	
— at 400 V rated value	170 A
<b>Minimum cross-section in main circuit</b>	
• at maximum AC-1 rated value	480 mm <sup>2</sup>
<b>No-load switching frequency</b>	
• at AC	500 1/h
• at DC	500 1/h
<b>Operating frequency</b>	
• at AC-1 maximum	200 1/h

Control circuit/ Control	
Type of voltage	AC/DC
Type of voltage of the control supply voltage	AC/DC
Control supply voltage at AC	
• at 50 Hz rated value	96 ... 127 V
• at 60 Hz rated value	96 ... 127 V
Control supply voltage at DC	
• rated value	96 ... 127 V
Type of PLC-control input acc. to IEC 60947-1	Type 1
Consumed current at PLC-control input acc. to IEC 60947-1 maximum	30 mA
Operating range factor control supply voltage rated value of magnet coil at DC	
• initial value	0.8
• Full-scale value	1.1
Operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 ... 1.1
• at 60 Hz	0.8 ... 1.1
Design of the surge suppressor	with varistor
Apparent pick-up power of magnet coil at AC	
• at 50 Hz	750 V·A
Inductive power factor with closing power of the coil	
• at 50 Hz	0.8
Apparent holding power of magnet coil at AC	
• at 50 Hz	7 V·A
Inductive power factor with the holding power of the coil	
• at 50 Hz	0.8
Closing power of magnet coil at DC	800 W
Holding power of magnet coil at DC	3.6 W
Closing delay	
• at AC	60 ... 75 ms
• at DC	60 ... 75 ms
Opening delay	
• at AC	115 ... 130 ms
• at DC	115 ... 130 ms
Arcing time	10 ... 15 ms
Control version of the switch operating mechanism	Fail-safe PLC input (F-PLC-IN)
Auxiliary circuit	
Number of NC contacts for auxiliary contacts	2
• attachable	4

<ul style="list-style-type: none"> <li>instantaneous contact</li> </ul>	2
<b>Number of NO contacts for auxiliary contacts</b>	2
<ul style="list-style-type: none"> <li>attachable</li> </ul>	4
<ul style="list-style-type: none"> <li>instantaneous contact</li> </ul>	2
Operating current at AC-12 maximum	10 A
<b>Operating current at AC-15</b>	
<ul style="list-style-type: none"> <li>at 230 V rated value</li> </ul>	6 A
<ul style="list-style-type: none"> <li>at 400 V rated value</li> </ul>	3 A
<ul style="list-style-type: none"> <li>at 500 V rated value</li> </ul>	2 A
<ul style="list-style-type: none"> <li>at 690 V rated value</li> </ul>	1 A
<b>Operating current at DC-13</b>	
<ul style="list-style-type: none"> <li>at 24 V rated value</li> </ul>	10 A
<ul style="list-style-type: none"> <li>at 48 V rated value</li> </ul>	2 A
<ul style="list-style-type: none"> <li>at 60 V rated value</li> </ul>	2 A
<ul style="list-style-type: none"> <li>at 110 V rated value</li> </ul>	1 A
<ul style="list-style-type: none"> <li>at 125 V rated value</li> </ul>	0.9 A
<ul style="list-style-type: none"> <li>at 220 V rated value</li> </ul>	0.3 A
<ul style="list-style-type: none"> <li>at 600 V rated value</li> </ul>	0.1 A
<b>Design of the miniature circuit breaker</b>	
<ul style="list-style-type: none"> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	gG: 10 A (230 V, 400 A)
<b>Contact reliability of auxiliary contacts</b>	1 faulty switching per 100 million (17 V, 1 mA)

### Short-circuit protection

<b>Product function Short circuit protection</b>	No
<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: 800 A (690 V, 50 kA) gR: 710 A (690 V, 100 kA) gG: 10 A (500 V, 1 kA)

### 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
<ul style="list-style-type: none"> <li>Side-by-side mounting</li> </ul>	Yes
<b>Height</b>	214 mm
<b>Width</b>	160 mm
<b>Depth</b>	225 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> </ul> </li> </ul>	20 mm 10 mm

— downwards	10 mm
— at the side	0 mm
• for grounded parts	
— forwards	20 mm
— upwards	10 mm
— at the side	10 mm
— downwards	10 mm
• for live parts	
— forwards	20 mm
— upwards	10 mm
— downwards	10 mm
— at the side	10 mm

### Connections/ Terminals

<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>	
• for main current circuit	Connection bar
• for auxiliary and control current circuit	screw-type terminals
• at contactor for auxiliary contacts	Screw-type terminals
• of magnet coil	Screw-type terminals
<b>Type of connectable conductor cross-sections</b>	
• at AWG conductors for main contacts	2/0 ... 500 kcmil
<b>Connectable conductor cross-section for main contacts</b>	
• single or multi-stranded	70 ... 240 mm <sup>2</sup>
• stranded	70 ... 240 mm <sup>2</sup>
<b>Connectable conductor cross-section for auxiliary contacts</b>	
• single or multi-stranded	0.5 ... 4 mm <sup>2</sup>
• finely stranded with core end processing	0.5 ... 2.5 mm <sup>2</sup>
<b>Type of connectable conductor cross-sections</b>	
• for auxiliary contacts	
— solid	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> )
— single or multi-stranded	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> )
— finely stranded with core end processing	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )
• at AWG conductors for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14), 1x 12

### Safety related data

<b>Proportion of dangerous failures</b>	
• with low demand rate acc. to SN 31920	40 %

• with high demand rate acc. to SN 31920	73 %
<b>Product function</b>	
• Mirror contact acc. to IEC 60947-4-1	Yes
• positively driven operation acc. to IEC 60947-5-1	No
<b>MTBF</b>	75 y
<b>T1 value for proof test interval or service life acc. to IEC 61508</b>	20 y
<b>Protection against electrical shock</b>	finger-safe when touched vertically from front acc. to IEC 60529

### Certificates/ approvals

<b>General Product Approval</b>	<b>EMC</b>	<b>Functional Safety/Safety of Machinery</b>
---------------------------------	------------	--



[Type Examination Certificate](#)

<b>Declaration of Conformity</b>	<b>Test Certificates</b>	<b>other</b>
----------------------------------	--------------------------	--------------



[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

[Confirmation](#)

[Miscellaneous](#)

### Railway

[Special Test Certificate](#)

### Further information

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

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

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1476-6SF36>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1476-6SF36>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1476-6SF36>

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

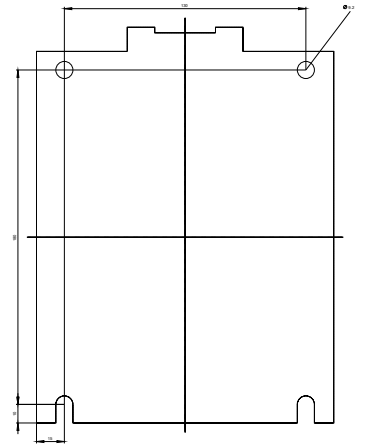
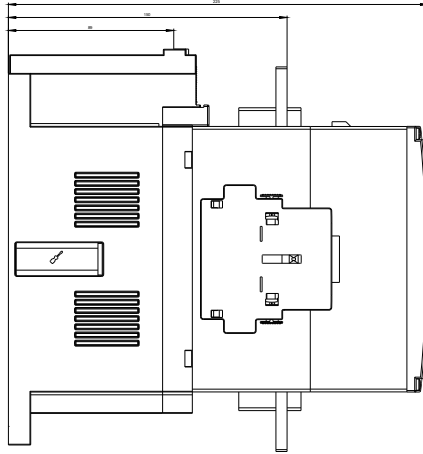
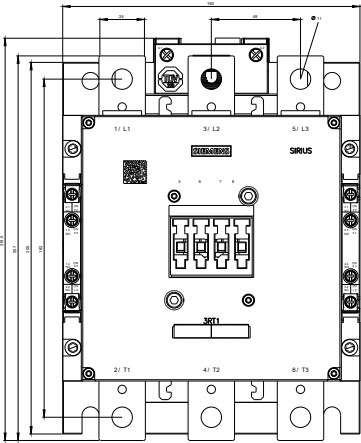
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1476-6SF36&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1476-6SF36&lang=en)

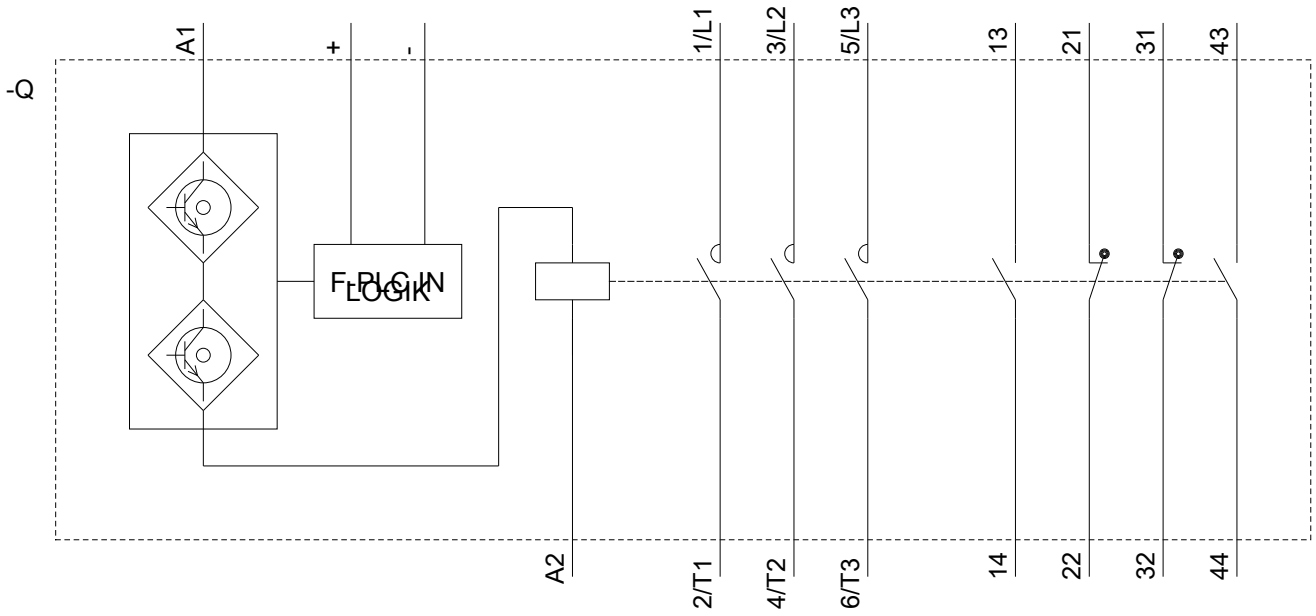
**Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1476-6SF36/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1476-6SF36&objecttype=14&gridview=view1>





last modified:

01/16/2020