

CONTACTOR RELAY FOR RAILWAY, 2NO+1NC,  
DC 110V, 0,7..1,25\*US,  
W/VARISTOR INTEGRATED, 3-POLE, SZ S00,  
SPRING-LOADED TERMINAL FOR STANDING  
MOUNTING POSITION

#### General technical data:

<b>product brand name</b>		SIRIUS
<b>Size of the contactor</b>		S00
<b>Identification number and letter for switching elements</b>		21
<b>Product extension / auxiliary switch</b>		Yes
<b>Protection class IP / on the front</b>		IP20
<b>Protection against electrical shock</b>		finger-safe
<b>Degree of pollution</b>		3
<b>Insulation voltage / with degree of pollution 3 / rated value</b>	V	690
<b>Installation altitude / at a height over sea level / maximum</b>	m	2,000
<b>Ambient temperature</b>		
• during storage	°C	-55 ... +80
• during operating	°C	-40 ... +70
• note		Railway application: See catalog for rated conditions
<b>Shock resistance</b>		
• at rectangular impulse		
• at DC		10g / 5 ms, 5g / 10 ms
• at sine pulse		
• at DC		15g / 5 ms, 8g / 10 ms
<b>Impulse voltage resistance / rated value</b>	kV	6

<b>Mechanical operating cycles as operating time</b>		
• of the contactor / typical		30,000,000
• of the contactor with added auxiliary switch block / typical		10,000,000
• of the contactor with added electronics-compatible auxiliary switch block / typical		5,000,000

Control circuit/ Control:		
<b>Design of the surge suppressor</b>		with varistor
<b>Voltage type / of control feed voltage</b>		DC
<b>Control supply voltage</b>		
• for DC / rated value	V	110
<b>Operating range factor control supply voltage rated value / of the magnet coil</b>		
• for DC		0.7 ... 1.25
<b>Holding power / of the solenoid / for DC</b>	W	4
<b>Pull-in power / of the solenoid / for DC</b>	W	13
<b>Closing delay</b>		
• at DC	ms	30 ... 100
<b>Opening delay</b>		
• at DC	ms	25 ... 90
<b>Arcing time</b>	s	10 ... 15

Auxiliary circuit:		
<b>Contact reliability / of the auxiliary contacts</b>		1 faulty switching per 100 million (17 V, 1 mA)
<b>Number of NC contacts / for auxiliary contacts / instantaneous switching</b>		1
<b>Number of NO contacts / for auxiliary contacts / instantaneous switching</b>		2
<b>Operating current</b>		
• at AC-12 / maximum	A	10
• at AC-15		
• at 230 V / rated value	A	10
• at 400 V / rated value	A	3
• at 500 V / rated value	A	2
• at 690 V / rated value	A	1
<b>Operating current</b>		
• with 1 current path / at DC-12		
• at 24 V / rated value	A	10
• at 110 V / rated value	A	3
• at 220 V / rated value	A	1
• at 440 V / rated value	A	0.3
• at 600 V / rated value	A	0.15

<ul style="list-style-type: none"> <li>• with 2 current paths in series / at DC-12 <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>• with 3 current paths in series / at DC-12 <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>	A	10
	A	10
	A	4
	A	2
	A	1.3
	A	0.65
	A	10
	A	10
	A	10
	A	3.6
	A	2.5
	A	1.8
<b>Operating current</b>		
<ul style="list-style-type: none"> <li>• with 1 current path / at DC-13 <ul style="list-style-type: none"> <li>• at 24 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>• with 2 current paths in series / at DC-13 <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>• with 3 current paths in series / at DC-13 <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>	A	10
	A	1
	A	0.3
	A	0.14
	A	0.1
	A	10
	A	3.5
	A	1.3
	A	0.9
	A	0.2
	A	0.1
	A	10
	A	4.7
	A	3
	A	1.2
	A	0.5
	A	0.26
<b>Off-load operating frequency</b>		
<ul style="list-style-type: none"> <li>• at AC</li> <li>• at DC</li> </ul>	1/h	10,000
	1/h	10,000
<b>Frequency of operation</b>		
<ul style="list-style-type: none"> <li>• at AC-12 / maximum</li> </ul>	1/h	1,000

- at AC-14 / maximum
- at AC-15 / maximum
- at DC-12 / maximum
- at DC-13 / maximum

1/h	1,000
1/h	1,000
1/h	1,000
1/h	1,000

#### Short-circuit:

##### Design of the fuse link / for short-circuit protection of the auxiliary switch

- required

fuse gL/gG: 10 A

##### Design of the miniature circuit breaker / for short-circuit protection of the auxiliary circuit / up to 230 V

C characteristic: 6 A; 0.4 kA

#### Installation/ mounting/ dimensions:

##### mounting position

+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface

##### Mounting type

screw and snap-on mounting onto 35 mm standard mounting rail

##### Width

mm 45

##### Height

mm 70

##### Depth

mm 123

#### Connections/ terminals:

##### Design of the electrical connection

- for auxiliary and control current circuit
- for auxiliary contacts / finely stranded / with conductor end processing
- for auxiliary contacts / finely stranded / without conductor final cutting
- for AWG conductors / for auxiliary contacts

spring-loaded terminals

2x (0.5 ... 2.5 mm<sup>2</sup>)

2x (0.5 ... 2.5 mm<sup>2</sup>)

2x (20 ... 12)

#### Certificates/ approvals:

<b>General Product Approval</b>	<b>Functional Safety / Safety of Machinery</b>	<b>Declaration of Conformity</b>	<b>Test Certificates</b>
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[Type Examination](#)



EG-Konf.

[Special Test Certificate](#)

**Shipping Approval**



ABS



BUREAU VERITAS



DNV



GL



LRS



PRS

**Shipping Approval**

other



RINA



RMRS



VDE

[Environmental Confirmations](#)

**UL/CSA ratings:**

**Contact rating designation / for auxiliary contacts / according to UL**

A600 / Q600

**Safety related data:**

**B10 value / with high demand rate**

- according to SN 31920
- note

1,000,000  
With 0.3 x Ie

**T1 value / for proof test interval or service life**

- according to IEC 61508

a 20

**Proportion of dangerous failures**

- with low demand rate / according to SN 31920
- with high demand rate / according to SN 31920

% 40  
% 73

**Failure rate [FIT] / with low demand rate**

- according to SN 31920

FIT 100

**Product function / positively driven operation to IEC 60947-5-1**

Yes

**Further information:**

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

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

**Industry Mall (Online ordering system)**

<http://mall.industry.siemens.com/>

**Cax online generator**

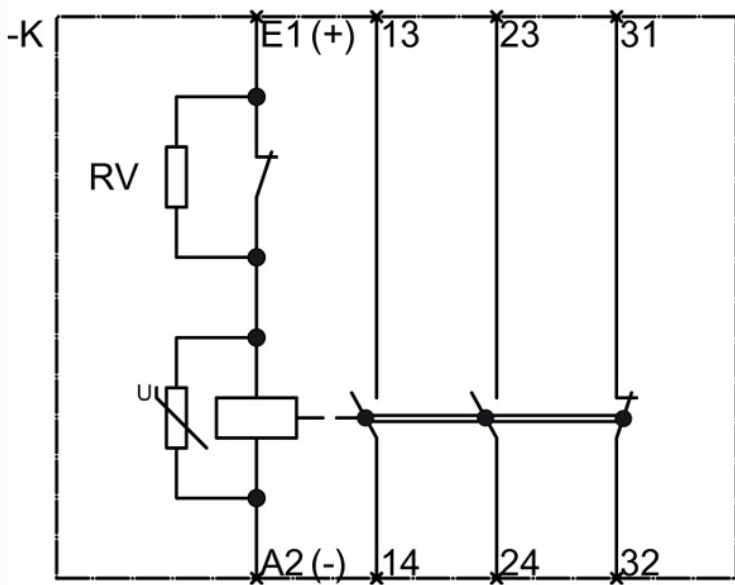
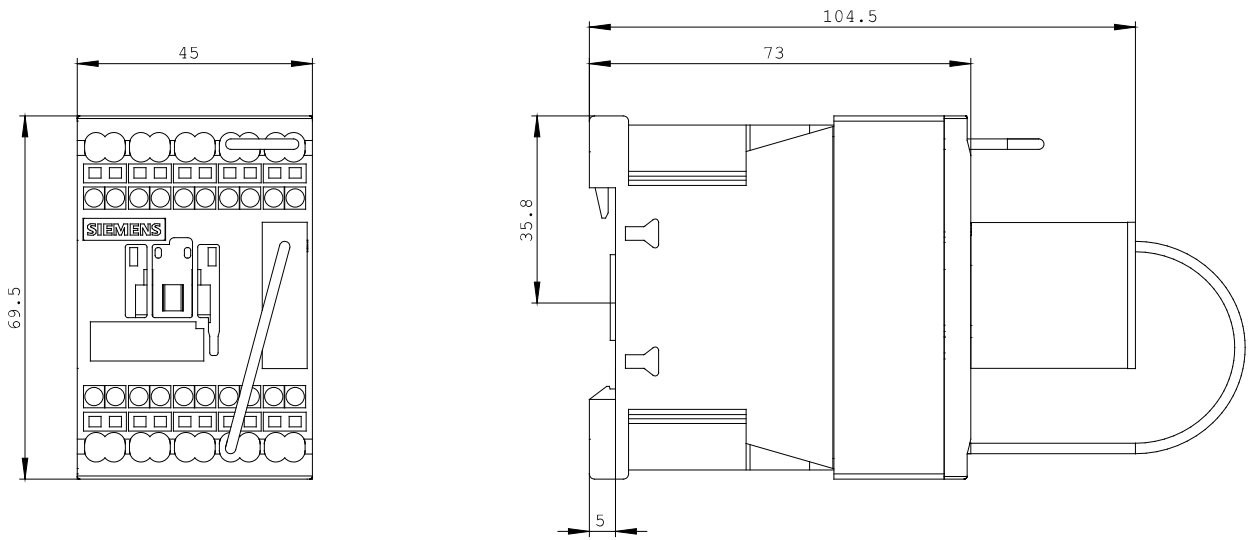
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WWW/view/en/3RH2122-2LF40-1LA0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RH2122-2LF40-1LA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RH2122-2LF40-1LA0)



last change:

Jul 21, 2014