

**Safety Relay SR6**

- 6 pole safety relay with either  
4 NO+2 NC or 3 NO+3 NC or 5 NO+1 NC contacts
- Forcibly guided contacts according to EN50205
- Rated current 8 A
- Coil power 800 mW or 1200 mW

**Applications**

Emergency shut-off, press control, machine control, elevator and escalator control, safety modules



F0206-EA

**Approvals** (in preparation)

VDE REG.-Nr. 128935, **RU** us E214024, 968/EL 350.03/06  
Technical data of approved types on request

**Contact data**

Contact configuration	3 NO contacts and 3 NC contacts 4 NO contacts and 2 NC contacts 5 NO contacts and 1 NC contact
Contact set	single contact, forcibly guided type A according to EN 50205
Type of interruption	micro disconnection
Rated voltage / max. switching voltage AC	250 / 400 VAC
Rated current	8 A
Maximum breaking capacity AC	2000 VA
Contact material	800 mW version AgSnO <sub>2</sub> + 0,2 μm Au 1200 mW version AgSnO <sub>2</sub>
Minimum contact load	10 mA / 5 V
Contact resistance	≤ 100 mOhm / 1 A / 24 VDC ≤ 20 Ohm / 10 mA / 5 VDC
Rated frequency of operation with / without load	6 min <sup>-1</sup> / 150 min <sup>-1</sup>

**Contact ratings**

Type	Contact	Load*)	Ambient temp. [°C]	Cycles
EN60947-5-1				
SR6	1 NO	IEC 947-5-1 (AC15) utilization category 250 VAC / 5 A	23°C	6,050
SR6	1 NO	IEC 947-5-1 (DC13) utilization category 24 VDC / 6 A	23°C	6,050

\*) load on one pole

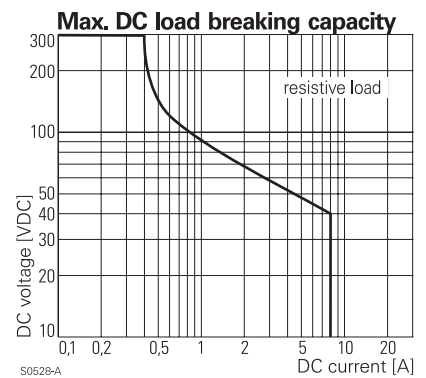
**Coil data**

Rated coil voltage range DC coil	5...110 VDC
Operative range	2

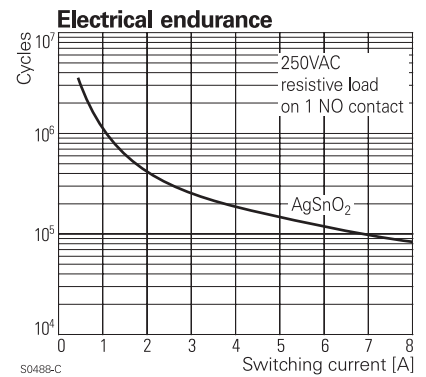
**Coil versions, 800 mW, DC-coil**

Coil code	Nominal voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω	Rated coil power mW
K05	5	3.8	0.5	31±10%	806
K06	6	4.5	0.6	45±10%	800
K09	9	6.8	0.9	101±10%	802
K12	12	9.0	1.2	180±10%	800
K18	18	13.5	1.8	405±10%	800
K21	21	15.8	2.1	551±10%	800
K24	24	18.0	2.4	720±10%	800
K36	36	27.0	3.6	1620±10%	800
K40	40	30.0	4.0	2000±10%	800
K48	48	36.0	4.8	2880±10%	800
K60	60	45.0	6.0	4500±10%	800
K85	85	63.8	8.5	9031±10%	800
L10	110	82.5	11.0	15130±10%	800

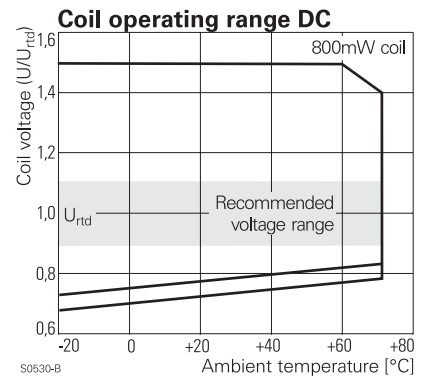
All figures are given for coil without preenergization, at ambient temperature +23°C  
Other coil voltages on request



S0528-A



S0488-C



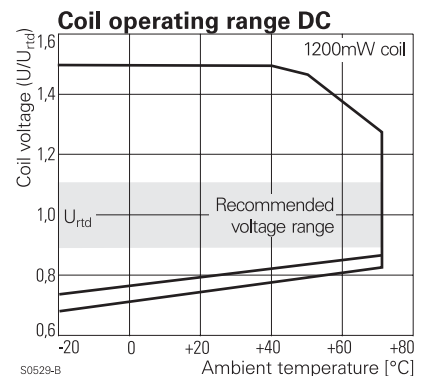
S0530-B

**Safety Relay SR6 (Continued)**

**Coil versions, 1200 mW, DC-coil**

Coil code	Rated voltage VDC	Operate voltage VDC	Release/Reset voltage VDC	Coil resistance Ohm	Rated coil power mW
005	5	3.8	0.5	21±10%	1190
006	6	4.5	0.6	30±10%	1200
009	9	6.8	0.9	68±10%	1191
012	12	9.0	1.2	120±10%	1200
018	18	13.5	1.8	270±10%	1200
021	21	15.8	2.1	368±10%	1198
024	24	18.0	2.4	480±10%	1200
036	36	27.0	3.6	1080±10%	1200
040	40	30.0	4.0	1333±10%	1200
048	48	36.0	4.8	1920±10%	1200
060	60	45.0	6.0	3000±12%	1200
085	85	64.0	8.5	6021±12%	1200
110	110	82.5	11.0	10080±12%	1200

All figures are given for coil without preenergization, at ambient temperature +23°C  
Other coil voltages on request



**Insulation**

Dielectric strength coil-contact circuit	4000 V <sub>rms</sub>
open contact circuit	1500 V <sub>rms</sub>
adjacent contact circuits	3000 V <sub>rms</sub>
Clearance / creepage coil-contact circuit	≥ 5.5 / 5.5 mm
adjacent contact circuits	≥ 5.5 / 5.5 mm
Material group of insulation parts	IIIa
Tracking index of relay base	PTI 250
Insulation to IEC 61810-1	
Type of insulation coil-contact circuit	basic
open contact circuit	micro disconnection
adjacent contact circuits	basic
Rated insulation voltage	250 V
Pollution degree	2
Rated voltage system	230 / 400 V
Overvoltage category	III
Insulation to EN 50178	
Type of insulation coil-contact circuit	reinforced
adjacent contact circuits	reinforced

**Other data**

Mechanical endurance	10x10 <sup>6</sup> cycles
Material	
RoHS - Directive 2002/95/EC	compliant as per product date code 0407
Environment	
Ambient temperature range	-25...+70°C
Vibration resistance (function) NO / NC contact > 8 / 2.5 g, 10...200 Hz	
Shock resistance (function) NO / NC contact > 10 / 2.5 g, 16 ms half sine	
Category of protection	RT III <sup>1)</sup>
Processing	
Resistance to soldering heat	260°C / 5 s
Relay weight	30 g
Packaging unit	10 pcs

<sup>1)</sup> please contact technical support for washing parameters

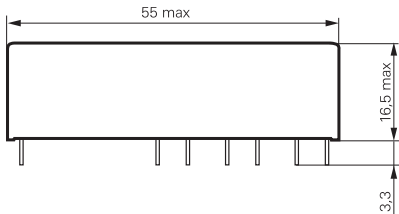
**Accessories**

PCB socket and hold down clip	contact technical support
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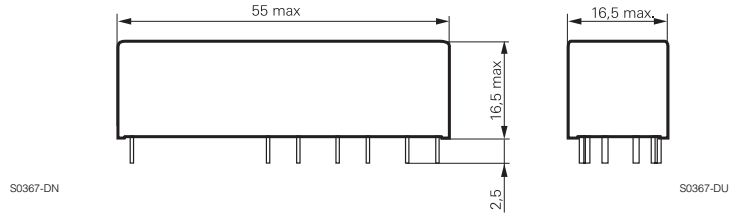
**Safety Relay SR6 (Continued)**

**Dimensions**

SR6 A/B/C



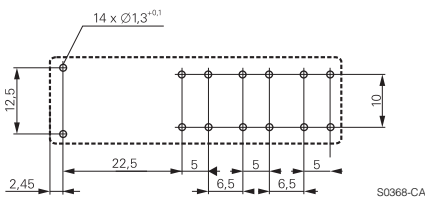
SR6 V



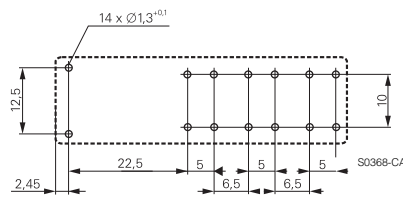
**PCB layout / terminal assignment**

Bottom view

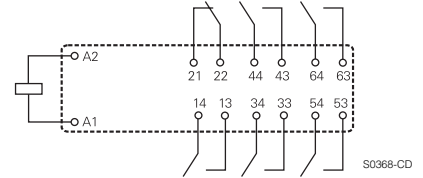
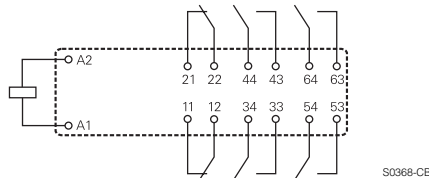
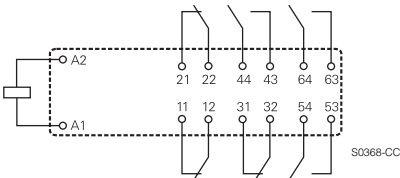
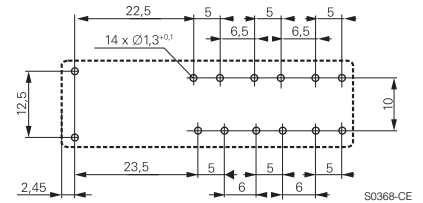
3 NO+3 NC versions  
SR6 A



4 NO+2 NC versions  
SR6 B

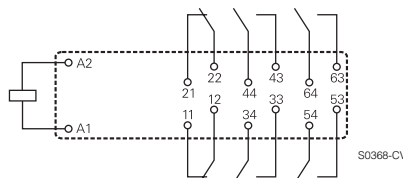
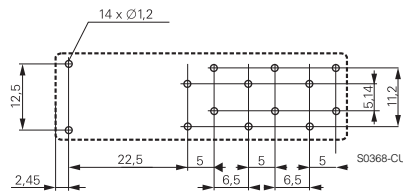


5 NO+1 NC versions  
SR6 C



4 NO+2 NC versions  
SR6 V

The design of the SR6 V allows clearance/creepage of 5.5 mm on the pcb.



**Safety Relay SR6 (Continued)**

<b>Product key</b>	Typical product key	<b>SR6</b>	<b>A</b>	<b>4</b>	<b>012</b>
<b>Type</b>	SR6 Safety Relay SR6				
<b>Contact configuration</b>	<b>A</b> 3 NO + 3 NC contacts (3 form A + 3 form B) <b>B</b> 4 NO + 2 NC contacts (4 form A + 2 form B) <b>C</b> 5 NO + 1 NC contacts (5 form A + 1 form B) <b>V</b> 4 NO + 2 NC contacts (4 form A + 2 form B)				
<b>Contact material</b>	<b>4</b> AgSnO <sub>2</sub> , for 1200 mW version only <b>6</b> AgSnO <sub>2</sub> + 0.2 µm Au, for 800 mW version only				
<b>Coil</b>	Coil code = rated coil voltage (e.g. 024=24 VDC)				

Available types please see Part Number table

**800 mW version**

Product key	Type	Contact material	Contact configuration	Coil	Part number
SR6A6K12	6-pole safety relay 800 mW coil	AgSnO <sub>2</sub> + 0.2 µm Au	3 NO + 3 NC	12 VDC	6-1415537-1
SR6B6K12			4 NO + 2 NC	15 VDC	7-1415537-6
SR6B6K15		3 NO + 3 NC	18 VDC		7-1415537-7
SR6A6K18			4 NO + 2 NC	21 VDC	6-1415537-3
SR6B6K18		3 NO + 3 NC	24 VDC		7-1415537-8
SR6B6K21			4 NO + 2 NC	24 VDC	7-1415537-9
SR6A6K24		5 NO + 1 NC	18 VDC		6-1415537-5
SR6B6K24		4 NO + 2 NC		9-1415537-4	8-1415537-0
SR6C6K24			5 NO + 1 NC		
SR6V6K18				4 NO + 2 NC	18 VDC

**1200 mW version**

Product key	Prior product key	Contact configuration	Contact material	Coil	Part number
SR6A4005	V23050-A1005-A533	AgSnO <sub>2</sub>	3 NO + 3 NC	5 VDC	8-1415017-1
SR6B4005	V23050-A1005-A542		4 NO + 2 NC	6 VDC	1393260-1
SR6B4006	V23050-A1006-A542	4 NO + 2 NC	12 VDC		1393260-1
SR6A4012	V23050-A1012-A533	3 NO + 3 NC		18 VDC	1-1415015-1
SR6B4012	V23050-A1012-A542	4 NO + 2 NC	21 VDC		1393260-4
SR6C4012	V23050-A1012-A551	5 NO + 1 NC		24 VDC	1-1415017-1
SR6B4018	V23050-A1018-A542	4 NO + 2 NC	18 VDC		1393260-5
SR6A4021	V23050-A1021-A533	3 NO + 3 NC		21 VDC	3-1415018-1
SR6B4021	V23050-A1021-A542	4 NO + 2 NC	24 VDC		1393260-6
SR6A4024	V23050-A1024-A533	3 NO + 3 NC		24 VDC	1415015-1
SR6B4024	V23050-A1024-A542	4 NO + 2 NC	40 VDC		1393260-7
SR6C4024	V23050-A1024-A551	5 NO + 1 NC		48 VDC	1415017-1
SR6B4040	V23050-A1040-A542	4 NO + 2 NC	60 VDC		1393260-9
SR6A4048	V23050-A1048-A533	3 NO + 3 NC		48 VDC	6-1415018-1
SR6B4048	V23050-A1048-A542	4 NO + 2 NC	60 VDC		1-1393260-0
SR6C4048	V23050-A1048-A551	5 NO + 1 NC		85 VDC	2-1415019-1
SR6A4060	V23050-A1060-A533	3 NO + 3 NC	110 VDC		7-1415018-1
SR6B4060	V23050-A1060-A542	4 NO + 2 NC		110 VDC	1-1393260-1
SR6C4060	V23050-A1060-A551	5 NO + 1 NC	85 VDC		3-1415019-1
SR6B4085	V23050-A1085-A542	4 NO + 2 NC		110 VDC	1-1393260-2
SR6A4110	V23050-A1110-A533	3 NO + 3 NC	110 VDC		9-1415018-1
SR6B4110	V23050-A1110-A542	4 NO + 2 NC		110 VDC	1-1393260-3
SR6C4110	V23050-A1110-A551	5 NO + 1 NC	5 NO + 1 NC		5-1415019-1