

SCHRACK FORCE GUIDED RELAY SR6 A/B/C/V

FORCE GUIDED RELAYS

INTRODUCTION

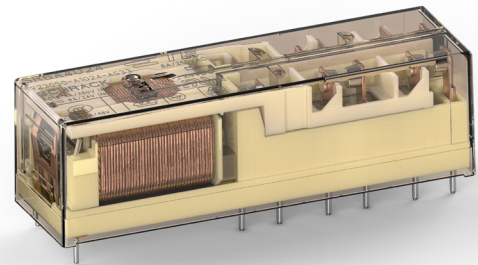
TE Connectivity (TE)'s Schrack Force Guided Relay SR6 A/B/C/V is a high-reliability component designed for industrial automation and safety systems. It features force-guided contacts compliant with EN61810-3 standards, ensuring fail-safe operation. With a rated voltage of 250VAC and a maximum switching voltage of 400VAC, it supports robust performance. The relay's coil voltage ranges from 5 to 110VDC, accommodating diverse operational requirements.

FEATURES

- 6 pole relay with force guided contacts according to EN61810-3 (formerly EN50205)
- Reinforced insulation between all contacts

APPLICATIONS

- Emergency shut-off
- Press control
- Machine control
- Elevator and escalator control
- Safety relays



APPROVALS

- VDE Cert. No. 128935
- UL E214025
- TÜV 968/EL 350
- CCC 2020970303000302



Technical data of approved types on request

SCHRACK Force Guided Relay SR6 A/B/C/V

Force Guided Relay

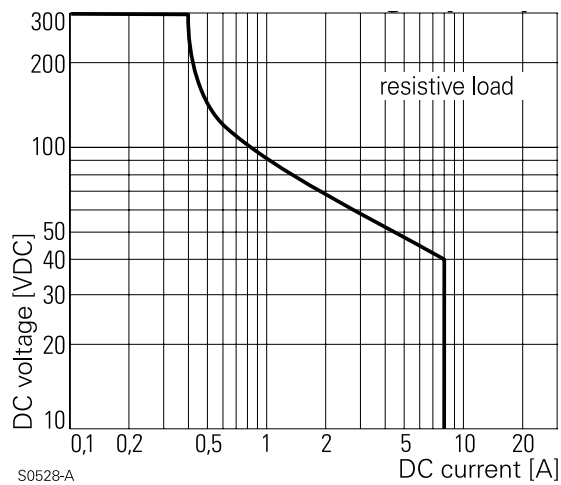
CONTACT DATA

Contact arrangement	3 form A + 3 form B contacts 3 NO + 3 NC, 4 form A + 2 form B contacts 4 NO + 2 NC, 5 form A + 1 form B contacts 5 NO + 1 NC
Rated voltage	250VAC
Max. switching voltage	400VAC
Rated current	8A
Contact material	AgSnO ₂ , AgSnO ₂ + 0.2μm Au
Contact style	single contact, force guided type A according to EN61810-3 (formerly EN50205)
Min. recommended contact load	5V, 10mA
Initial contact resistance	≤100mΩ at 1A, 24VDC ≤20Ω at 10mA, 5VDC
Frequency of operation, with/without load	6/150min ⁻¹
Mechanical endurance	10x10 ⁶ operations

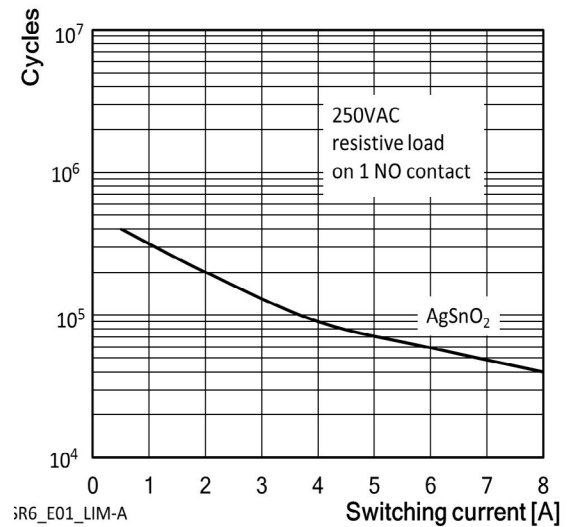
CONTACT RATINGS

Contact	Load	Cycles
IEC 60947-5-1 (VDE and TÜV approved)		
NO (1 form A)	AC15 - 250V/5A	6050
NO (1 form A)	DC13 - 24V/6A	6050
UL 61810-1 (UL approved, former UL 508)		
NO (1 form A)	8A, 250VAC, gen. purpose, 70°C	6000
NO (1 form A)	R300 and B300, 40°C	6000

MAX. DC LOAD BREAKING CAPACITY



ELECTRICAL ENDURANCE



SCHRACK Force Guided Relay SR6 A/B/C/V

Force Guided Relay

COIL DATA

Coil voltage range	5 to 110VDC
Max. coil power	1200mW or 800mW

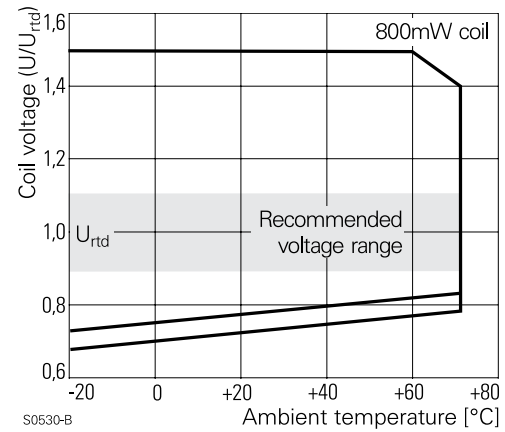
COIL VERSIONS, DC-COIL 800mW

Coil code	Rated voltage VDC	Operate Voltage VDC	Release Voltage VDC	Coil resistance $\Omega \pm 10\%$	Rated coil power mW
K12	12	9	1.2	180	800
K15	15	11.3	1.5	281	801
K18	18	13.5	1.8	405	800
K21	21	16	2.1	551	800
K24	24	18	2.4	720	800
K36	36	27	3.6	1620	800
K48	48	36	4.8	2880 ¹⁾	800
L10	110	82.5	11.0	15130 ¹⁾	800

1)Coil resistance $\pm 12\%$.

All figures are given for coil without pre-energization, at ambient temperature +23°C.

COIL OPERATING RANGE DC



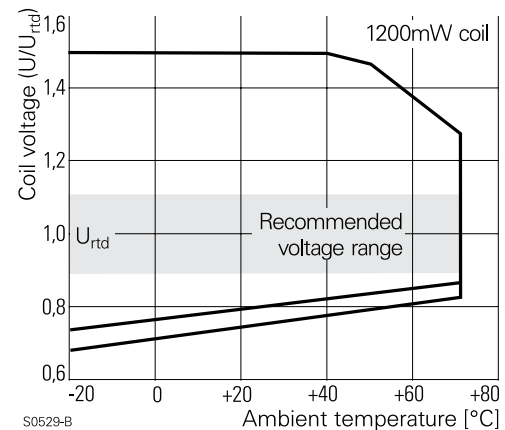
COIL VERSIONS, DC-COIL 1200mW

Coil code	Rated voltage VDC	Operate Voltage* VDC	Release Voltage* VDC	Coil resistance* $\Omega \pm 10\%$	Rated coil power* mW
005	5	3.8	0.5	20.8	1200
006	6	4.5	0.6	30.0	1200
009	9	6.8	0.9	67.5	1200
012	12	9	1.2	120	1200
018	18	13.5	1.8	270	1200
021	21	16	2.1	368	1200
024	24	18	2.4	480	1200
036	36	27	3.6	1080	1200
040	40	30	4.0	1333	1200
048	48	36	4.8	1920	1200
060	60	45	6.0	3000 ¹⁾	1200
110	110	83	11.0	10080 ¹⁾	1200

1)Coil resistance $\pm 12\%$.

All figures are given for coil without pre-energization, at ambient temperature +23°C.

COIL OPERATING RANGE DC



SCHRACK Force Guided Relay SR6 A/B/C/V

Force Guided Relay

INSULATION

Initial dielectric strength	
between open contacts	1500Vrms
between contact and coil	4000Vrms
between adjacent contacts	3000Vrms
Clearance/creepage	
between open contacts	microdisconnection
between contact and coil	≥5.5/5.5mm
between adjacent contacts	≥5.5/5.5mm
Insulation to IEC EN 62477 (former EN 50178), type of insulation	
between contact and coil	reinforced
between adjacent contacts	reinforced

OTHER DATA

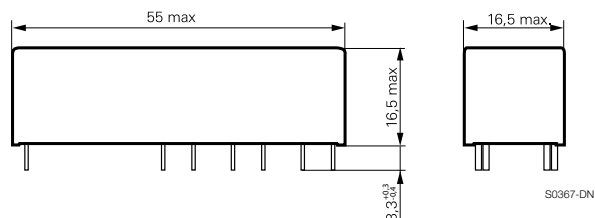
Material compliance	EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customer-support/rohssupportcenter
Ambient temperature	-25 °C to 70 °C
Category of environmental Protection	
IEC 61 810	RTIII ¹⁾
Weight	30 g
Resistance to soldering heat THT	260°C/5s
IEC 60068-2-20	
Packaging/unit	tube/10 pcs.

1) Relay fulfills the standardized IEC 61810 requirements for the category of environmental protection RT III "wash tight". These standardized RT III sealing tests do not include any type of washing process. The customer shall ensure, that their soldering process, cleaning process and potentially used chemicals are not damaging the relay!

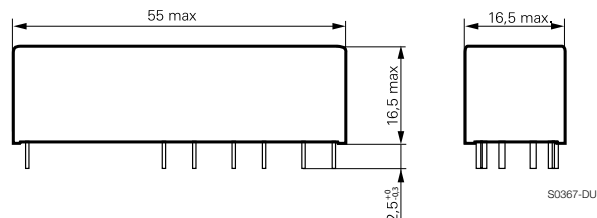
For more detailed information see product specification 2158003.

DIMENSIONS (Unit:mm)

SR6 A/B/C



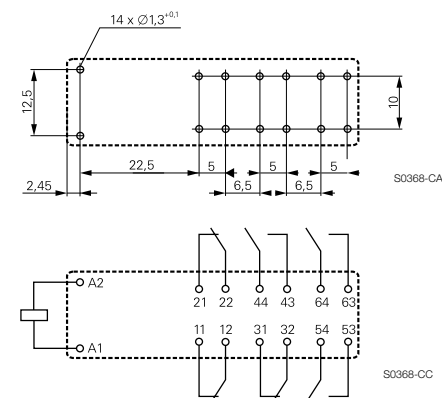
SR6 V



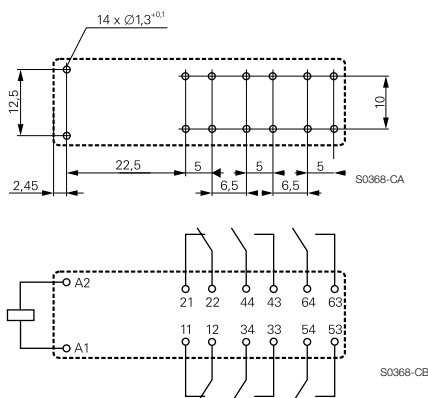
PCB LAYOUT / TERMINAL ASSIGNMENT

Bottom view

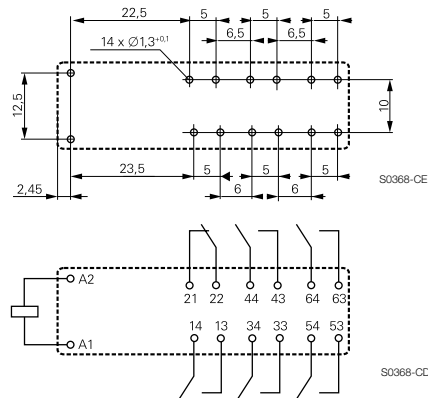
3 form A + 3 form B,
3 NO + 3 NC versions
SR6 A



4 form A + 2 form B,
4 NO + 2 NC versions
SR6 B



5 form A + 1 form B,
5 NO + 1 NC versions
SR6 C



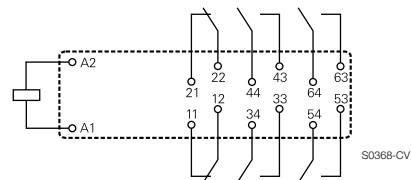
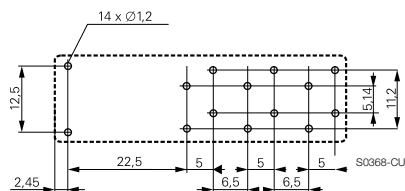
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Force Guided Relay

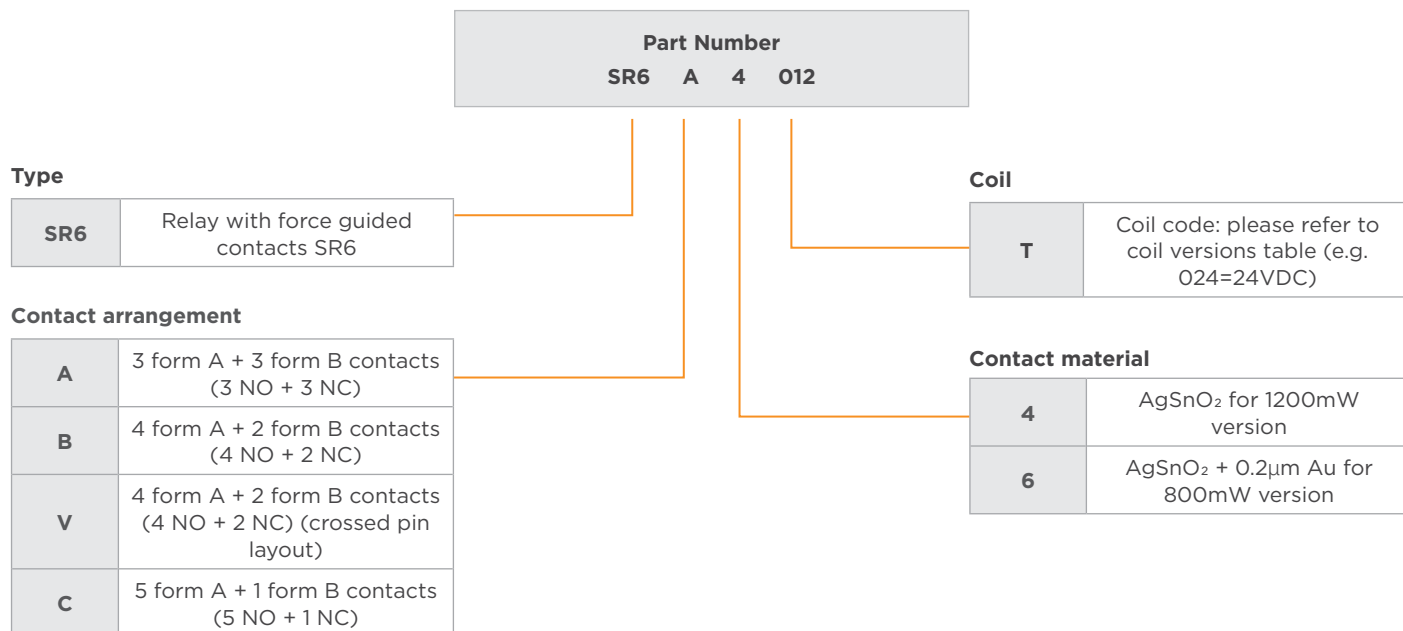
4 form A + 2 form B, 4 NO + 2 NC versions

SR6 V

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



PRODUCT CODE STRUCTURE



PRODUCT INFORMATION

Product code	Type	Contact arrangement	Contact material	Coil	Coil Power	Alt. Description	Part Number
SR6A4005	6 pole relay with force guided contacts	3 form A + 3 form B, 3 NO + 3 NC contacts	AgSnO ₂	5VDC	1200mW	V23050-A1005-A533	8-1415017-1
SR6A4012				12VDC		V23050-A1012-A533	1-1415015-1
SR6A4021				21VDC		V23050-A1021-A533	3-1415018-1
SR6A4024				24VDC		V23050-A1024-A533	1415015-1
SR6A4048				48VDC		V23050-A1048-A533	6-1415018-1
SR6A4060				60VDC		V23050-A1060-A533	7-1415018-1
SR6A4110				110VDC		V23050-A1110-A533	9-1415018-1
SR6A6K12			AgSnO ₂ + Au	12VDC	800mW	-	6-1415537-1
SR6A6K18				18VDC		-	6-1415537-3
SR6A6K24				24VDC		-	6-1415537-5

Product code	Type	Contact arrangement	Contact material	Coil	Coil Power	Alt. Description	Part Number
SR6B4005	6 pole relay with force guided contacts	4 form A + 2 form B, 4 NO + 2 NC contacts	AgSnO ₂	5VDC	1200mW	V23050-A1005-A542	1393260-1
SR6B4006				6VDC		V23050-A1006-A542	1393260-2
SR6B4012				12VDC		V23050-A1012-A542	1393260-4
SR6B4018				18VDC		V23050-A1018-A542	1393260-5
SR6B4021				21VDC		V23050-A1021-A542	1393260-6
SR6B4024				24VDC		V23050-A1024-A542	1393260-7
SR6B4040				40VDC		V23050-A1040-A542	1393260-9
SR6B4048				48VDC		V23050-A1048-A542	1-1393260-0
SR6B4060				60VDC		V23050-A1060-A542	1-1393260-1
SR6B4085				85VDC		V23050-A1085-A542	1-1393260-2
SR6B4110				110VDC		V23050-A1110-A542	1-1393260-3
SR6B6K12		5 form A + 1 form B, 5 NO + 1 NC contacts	AgSnO ₂	12VDC	1200mW	V23050-A1012-A551	1-1415017-1
SR6B6K15				15VDC		V23050-A1024-A551	1415017-1
SR6B6K18				18VDC		V23050-A1048-A551	2-1415019-1
SR6B6K21				21VDC		V23050-A1060-A551	3-1415019-1
SR6B6K24				24VDC		V23050-A1110-A551	5-1415019-1
SR6C4012		4 form A + 2 form B, 4 NO + 2 NC contacts (crossed pin layout)	AgSnO ₂ + Au	12VDC	800mW	-	7-1415537-6
SR6C4024				24VDC		-	7-1415537-7
SR6C4048				48VDC		-	7-1415537-8
SR6C4060				60VDC		-	7-1415537-9
SR6C4110				110VDC		-	8-1415537-0
SR6C6K12				12VDC		-	9-1415537-4
SR6C6K15				15VDC		-	3-1415542-5
SR6C6K18				18VDC		-	2-1415543-2
SR6C6K21				21VDC		-	3-1415543-3
SR6C6K24				24VDC		-	4-1415542-4
SR6V6K12				12VDC		-	5-1415539-2
SR6V6K15				15VDC		-	
SR6V6K18				18VDC		-	
SR6V6K21				21VDC		-	
SR6V6K24				24VDC		-	

This list represents the most common type and does not show all variants covered by this datasheet.
Other types on request

Notes:

1. Datasheets and product specification according to IEC 61810-1 and to be used only together with the 'Definitions' section.
2. Datasheets and product data is subject to the terms of the disclaimer and all chapters of the 'Definitions' section, available at <http://relays.te.com/definitions>.
3. Datasheets, product data, 'Definitions' section, application notes and all specifications are subject to change.
4. For general information on Force-Guided-Relays and our portfolio, please visit <http://www.te.com/fgr>.
5. For more detailed product-specific-information (such as B10d values, switching times, etc) please contact our Product Information Center (<https://www.te.com/usa-en/customer-support/customer-service.html>) and ask for the product-specification.

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