

SCHRACK SRL6 AND SRL7

LOW PROFILE FORCE GUIDED RELAYS

INTRODUCTION

TE Connectivity (TE)'s SCHRACK SRL7 and SRL6 families offer a 7-pole (5 NO / form A + 2 NC / form B) and a 6-pole (4 NO / form A + 2 NC / form B) contact set with force guided contacts according to IEC 61810-3, for loads up to 6 A. With an overall height of only 10.8 mm TE's SRL relays belong to the flattest Force Guided Relays available. The low profile is highly reliable for the realization of compact safety modules (overall width of only 17.5 mm), but also whenever there is little space for installation height. The low coil power consumption of only 700 mW reduces heat dissipation and enables to increase and expand the usage of this relay from usual 70 °C now up to 85 °C ambient temperature conditions.



FEATURES

- Low profile relay with force guided contacts according to EN 50205
- SRL6: 4 form A (NO) + 2 form B (NC) contacts
- SRL7: 5 form A (NO) + 2 form B (NC) contacts
- Reinforced insulation between contact circuits

APPLICATIONS

- Emergency stop or two hand guard safety relays
- Expansion I/O modules
- Safety control circuits

APPROVALS

- VDE Cert. No. 40036240
- UL E214025
- TÜV 968/EL908



Technical data of approved types on request

SCHRACK SRL6 and SRL7

Low profile Force Guided Relays

CONTACT DATA

Contact arrangement	5 form A (NO) + 2 form B (NC) 4 form A (NO) + 2 form B (NC)
Rated voltage	250 VAC
Max. switching voltage	400 VAC
Rated current	6 A
Contact material	Ag alloy
Contact style	Single contact, force guided type A according to EN 50205
Min. recommended contact load	5V/10 mA
Initial contact resistance	$\leq 100 \text{ m}\Omega$ at 1 A, 24 VDC $\leq 20 \text{ }\Omega$ at 10 mA, 5 VDC
Frequency of operation, with/without load	6/300 min ⁻¹
Mechanical endurance	10x10 ⁶ operations

COIL DATA

Coil voltage range	5 VDC to 110 VDC
Operative range, IEC 61810	2
Max. coil power	700 mW

COIL VERSIONS, DC COIL

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	36	700
006	6	4.5	0.6	51	700
009	9	6.8	0.9	116	700
012	12	9	1.2	206	700
015	15	11.3	1.5	319	700
018	18	13.5	1.8	463	700
021	21	16	2.1	630	700
024	24	18	2.4	820	700
036	36	27	3.6	1850	700
048	48	36	4.8	3290	700
060	60	45	6	5140	700
110	110	83	11	17280	700

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

CONTACT RATINGS

Contact	Load	Cycles
SRL7/SRL6		
UL61810-1 (former UL508)		
NO/NC	6 A, 250 VAC, general purpose, 85 °C	6.000
IEC61810		
NO/NC	6 A, 250 VAC, $\cos\Phi=1$, 50% DF, 85 °C	6.000
NO (1 form A)	5 A, 24 VDC, DC-13	6.050
NO (1 form A)	3 A, 250 VAC, AC-15	6.050

INSULATION DATA

	Group A	Group B
Initial dielectric strength		
between open contacts	1000 Vrms	1000 Vrms
between contact and coil	4000 Vrms	2500 Vrms
between adjacent contacts	4000 Vrms	2500 Vrms
between group A and group B	4000 Vrms	
Clearance/creepage		
between open contacts	microdisconnection	
between contact and coil	≥ 5.5/5.5 mm	≥ 3/4 mm
between adjacent contacts	≥ 5.5/5.5 mm	≥ 3/4 mm
between group A and group B	≥ 5.5/5.5 mm	

	Group A	Group B
Insulation to EN 62477 (former EN 50178), type of insulation		
between contact and coil	reinforced	basic
between adjacent contacts	reinforced	basic
between group A and group B	reinforced	

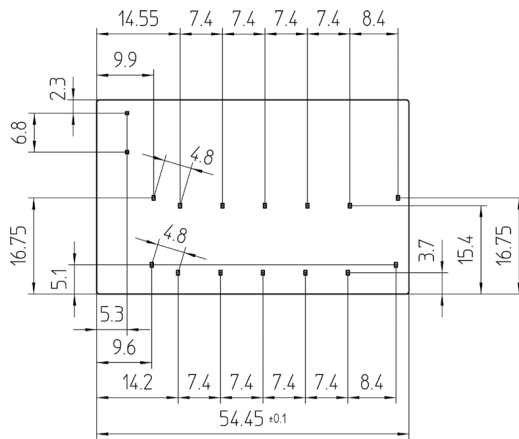
OTHER DATA

Ambient temperature	-40 °C to +85 °C
Category of environmental protection	
IEC 61810	RTII
Packaging/unit	20 pcs. tray / 200 pcs. box

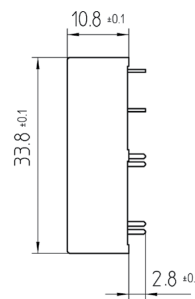
For more detailed information see product specification 2158004

DIMENSIONS (Unit:mm)

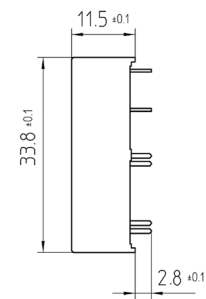
7 pole, 5 form A + 2 form B, 5NO + 2NC



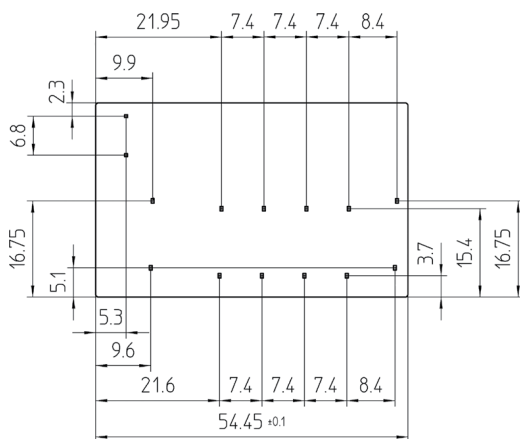
Low cover



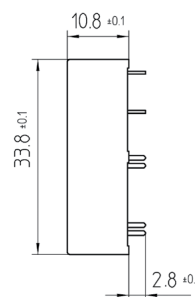
Normal cover



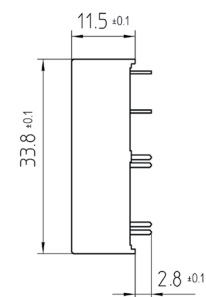
6 pole, 4 form A + 2 form B, 4NO+2NC



Low cover



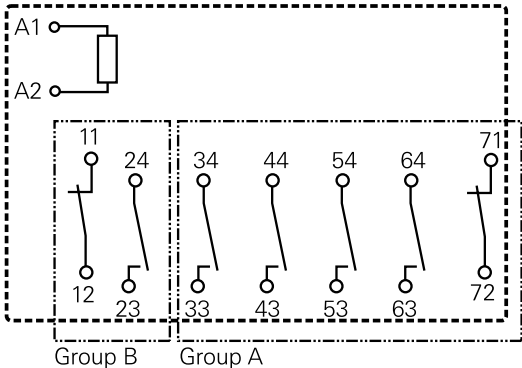
Normal cover



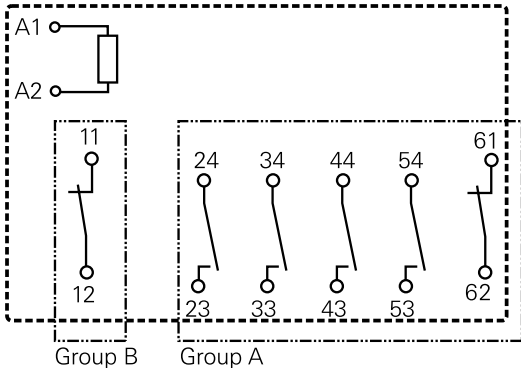
PCB LAYOUT / TERMINAL ASSIGNMENT

Bottom view on solder pins

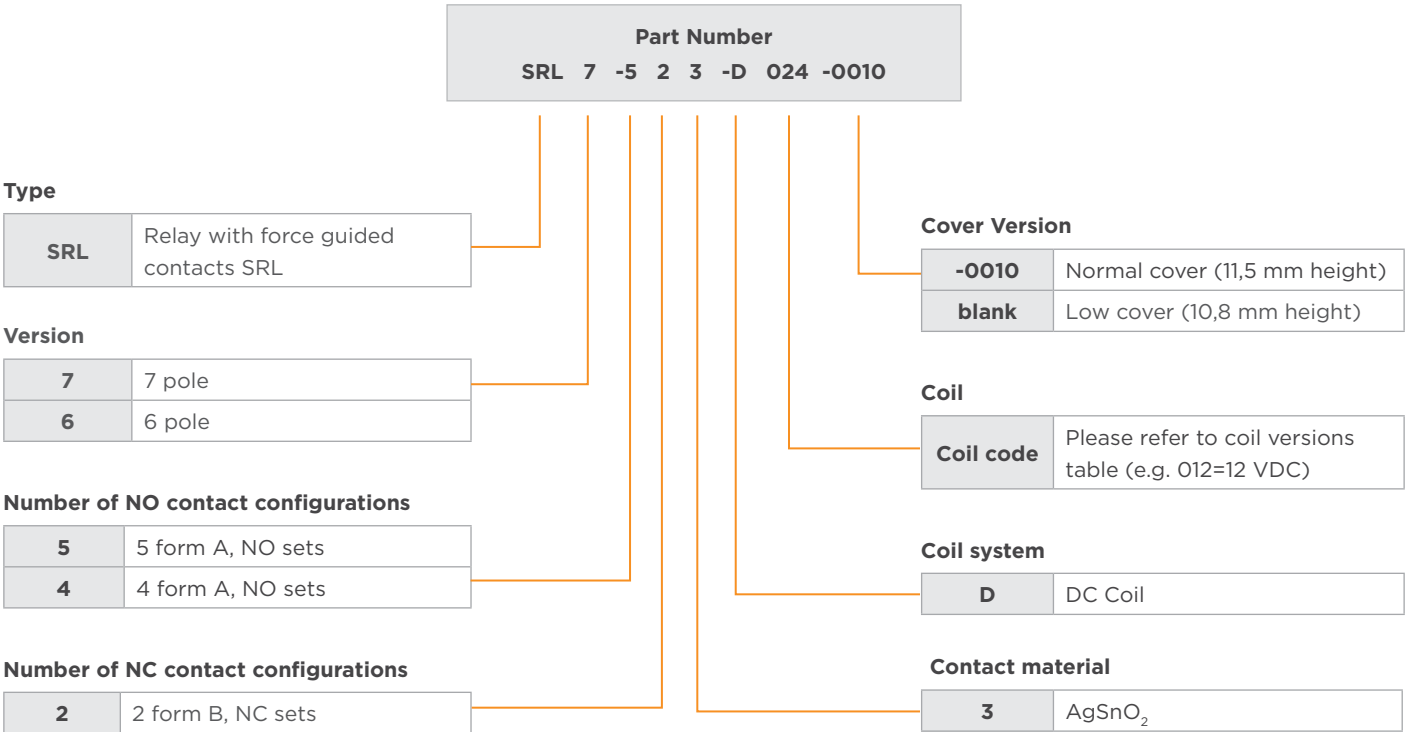
7 pole, 5 form A + 2 form B, 5NO + 2NC



6 pole, 4 form A + 2 form B, 4NO+2NC



PRODUCT CODE STRUCTURE



PRODUCT INFORMATION

Product code	Type	Contact arrangement	Contact material	Coil	Cover Version	Part Number
SRL7-523-D012-0010	7 pole relay with force guided contacts	5 form A + 2 form B contacts (5 NO + 2 NC)	AgSnO ₂	12 VDC	Normal Height (11.5 mm)	2-2045880-4
SRL7-523-D018-0010				18 VDC		2-2045880-6
SRL7-523-D021-0010				21 VDC		2-2045880-7
SRL7-523-D024-0010				24 VDC		2-2045880-8
SRL6-423-D012	6 pole relay with force guided contacts	4 form A + 2 form B contacts (4 NO + 2 NC)		12 VDC	Low Height (10.8 mm)	2045890-4
SRL6-423-D018				18 VDC		2045890-6
SRL6-423-D021				21 VDC		2045890-7
SRL6-423-D024				24 VDC		2045890-8

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

Notes:

- Datasheets and product specification according to IEC 61810-1 and to be used only together with the 'Definitions' section.
- 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>.
- Datasheets, product data, 'Definitions' section, application notes and all specifications are subject to change.
- For general information on Force-Guided-Relays and our portfolio, please visit <http://www.te.com/fg>.
- 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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