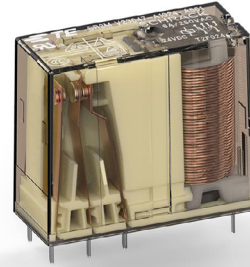


# SCHRACK FORCE GUIDED RELAY SR2M

## FORCE GUIDED RELAYS

### INTRODUCTION

TE Connectivity (TE)'s Schrack Force Guided Relay SR2M is a high-performance 2-pole relay designed for safety-critical applications. It features force guided contacts, reinforced insulation, and a dielectric strength of 4000Vrms between contact and coil. With a wide coil voltage range from 5 to 110VDC and a rated current of 6A, it is suitable for demanding industrial environments. The SR2M relay ensures reliable and compliant operation.



### FEATURES

- 2 pole relay with force guided contacts according to EN61810-3 (formerly EN50205)
- Reinforced insulation between poles
- Version P1 for use in sockets

### APPLICATIONS

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

### APPROVALS

- VDE Cert. No. 116064
- UL E214025
- TÜV 968/EZ 111
- CCC 2020970303000150



Technical data of approved types on request

# FORCE GUIDED RELAY SR2M

Force Guided Relays

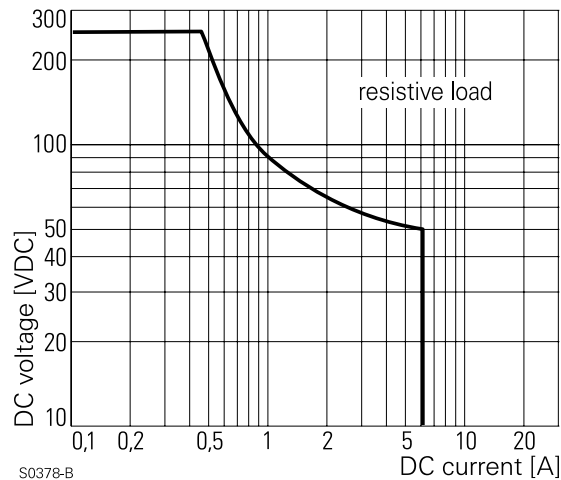
## CONTACT DATA

Contact arrangement	1 form A + 1 form B contacts (1 NO + 1 NC) or 2 form C contacts (2 CO)
According EN61810-3 only 1NO / 1NC (11-14 and 22-21 or 12-11 and 21-24) shall be used as force guided contacts.	
Rated voltage	250VAC
Max. switching voltage	400VAC
Rated current	6 A
Contact material	AgNi
Contact style	single contact, force guided
1 form A + B, 1 NO + 1NC	type A according to EN61810-3
2 form C, 2CO	type B according to EN61810-3
Min. recommended contact load	5V/10mA
Initial contact resistance	$\leq 100\text{m}\Omega$ at 1A, 24 VDC $\leq 20\Omega$ at 10mA, 5 VDC
Frequency of operation, with/without load	6/300min <sup>-1</sup>
Mechanical endurance	10x10 <sup>6</sup> operations

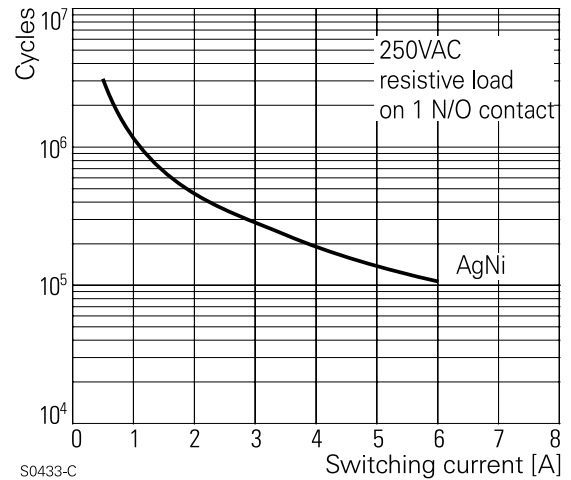
## CONTACT RATINGS

Contact	Load	Cycles
<b>IEC 61810-1 (VDE and TÜV approved)</b>		
NO (1 form A)	6A, 250VAC, cosphi=1, 70°C	100x10 <sup>3</sup>
<b>IEC 60947-5-1 (VDE and TÜV approved)</b>		
NO (1 form A)	AC15 - 250V/3A	6050
NO (1 form A)	DC13 - 24V/3A	6050
<b>UL 61810-1 (UL approved, former UL 508)</b>		
NO (1 form A)	6A, 250VAC, cosphi=1, 70°C	100x10 <sup>3</sup>
NO (1 form A)	R300 and B300, 40°C	6000
NO (1 form A) + NC (1 form B)	1A, 24VDC, gen. purpose, 70°C	100x10 <sup>3</sup>

## MAX. DC LOAD BREAKING CAPACITY



## ELECTRICAL ENDURANCE



# FORCE GUIDED RELAY SR2M

Force Guided Relays

## COIL DATA

Coil voltage range	5 to 110VDC
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## 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	35.7	700
006	6	4.5	0.6	51	706
009	9	6.8	0.9	116	698
012	12	9	1.2	206	699
015	15	11.3	1.5	321	701
018	18	13.5	1.8	483	671
021	21	16	2.1	630	700
024	24	18	2.4	823	700
036	36	27	3.6	1851	700
040	40	30	4.0	2286	700
048	48	36	4.8	3291 <sup>1)</sup>	700
060	60	45	6	5142 <sup>1)</sup>	700
080	80	60	8	9143 <sup>1)</sup>	700
110	110	83	11	17285 <sup>1)</sup>	700

<sup>1)</sup> Coil resistance  $\pm 12\%$ .

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

## INSULATION DATA

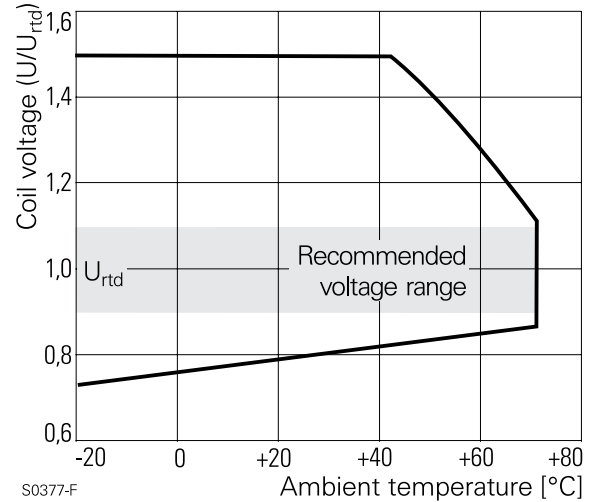
Initial dielectric strength	
between open contacts	1500Vrms
between contact and coil	4000Vrms
between adjacent contacts	3000Vrms
Clearance/creepage	
between open contacts	microdisconnection
between contact and coil	$\geq 8/8\text{mm}$
between adjacent contacts	$\geq 5.5/5.5\text{mm}$
Insulation to EN 62477-1 (former EN 50178), type of insulation	
between contact and coil	reinforced
between adjacent contacts	reinforced

## ACCESSORIES

Datasheet of compatible DIN-rail sockets	<a href="#">Accessories Force Guided Relay SR2M plugin</a>
Datasheet of compatible PCB sockets	<a href="#">PCB Accessories Industrial Power Relays</a>

NOTE: indicated contact ratings and electrical endurance data for direct wiring of relays (according IEC 61810-1 (VDE and TÜV approved)); for relays mounted on sockets deratings may apply.

## COIL OPERATING RANGE DC



## OTHER DATA

	SR2M	SR2M Plug-in
Material compliance	EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at <a href="http://www.te.com/customer-support/rohssupportcenter">www.te.com/customer-support/rohssupportcenter</a>	
Ambient temperature	-40°C to 70°C	
Category of environmental protection	IEC 61 810	
	RTIII <sup>1)</sup>	RTII
Weight	20g	
Resistance to soldering heat THT	IEC 60068-2-20	
	260°C/5s	
Packaging unit	tube/20 pcs.	

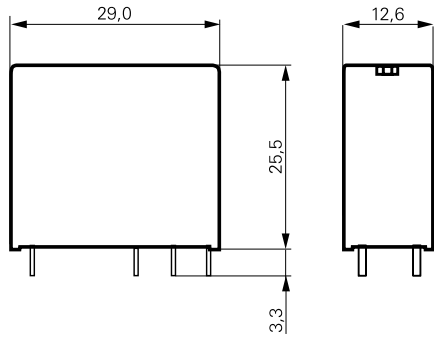
<sup>1)</sup> Relay fulfills the standardized IEC 61810 requirements for the category of environmental protection RT III "wash tight". These standardized RT III sealing tests do not include any type of washing process. The customer shall ensure, that their soldering process, cleaning process and potentially used chemicals are not damaging the relay! For more detailed information see product specification 2158001

# FORCE GUIDED RELAY SR2M

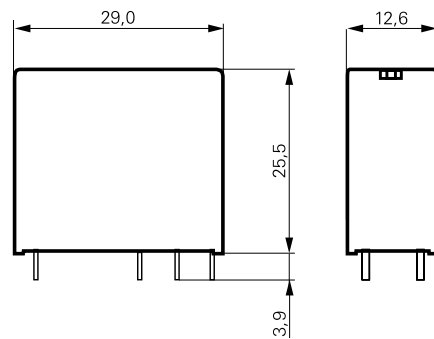
Force Guided Relays

## DIMENSIONS (Unit:mm)

SR2M



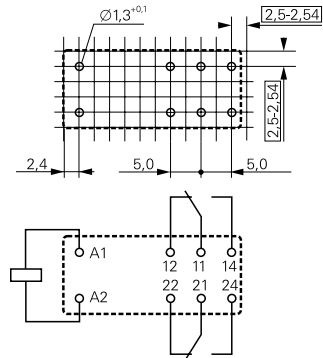
SR2M Plug-In



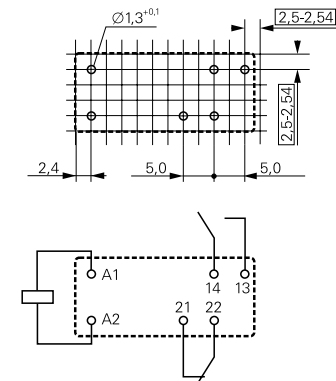
## PCB LAYOUT / TERMINAL ASSIGNMENT

Bottom view on solder pins

2 form C, 2 CO contacts



1 form A + 1 form B contacts, 1 NO + 1 NC



## PRODUCT CODE STRUCTURE

**Part Number**  
V23047 -A1 012 -A 5 11

### Type

<b>V23047</b>	Relay with force guided contacts SR2M
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### Version

<b>A1</b>	standard
<b>P1</b>	Plug-In

### Coil

<b>Coil code</b>	please refer to coil versions table (e.g. 024=24VDC)
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### Contact set

<b>A</b>	single contact
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### Contact configuration

<b>01</b>	2 form C contacts (2 CO)
<b>11</b>	1 form A + 1 form B contacts (1 NO + 1 NC)

Other types on request

### Contact material

<b>5</b>	AgNi
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# FORCE GUIDED RELAY SR2M

Force Guided Relays

## PRODUCT INFORMATION

Product code	Version	Contact arrangement	Cont. material	Coil	Part number	
V23047-A1005-A501	Standard wash tight	2 form C (CO)	AgNi	5VDC	<a href="#">1393258-2</a>	
V23047-A1005-A511		1 A + 1 B, (1 NO + 1 NC)			<a href="#">7-1415006-1</a>	
V23047-A1006-A501		2 form C (CO)		6VDC	<a href="#">3-1415011-1</a>	
V23047-A1006-A511		1 A + 1 B, (1 NO + 1 NC)			<a href="#">6-1415011-1</a>	
V23047-A1009-A501		2 form C (CO)		9VDC	<a href="#">1393258-3</a>	
V23047-A1009-A511		1 A + 1 B, (1 NO + 1 NC)			<a href="#">7-1415011-1</a>	
V23047-A1012-A501		2 form C (CO)		12VDC	<a href="#">1393258-4</a>	
V23047-A1012-A511		1 A + 1 B, (1 NO + 1 NC)			<a href="#">1393258-5</a>	
V23047-A1018-A501		2 form C (CO)		18VDC	<a href="#">1393258-8</a>	
V23047-A1018-A511		1 A + 1 B, (1 NO + 1 NC)			<a href="#">1393258-9</a>	
V23047-A1021-A501		2 form C (CO)		21VDC	<a href="#">1-1393258-1</a>	
V23047-A1021-A511		1 A + 1 B, (1 NO + 1 NC)			<a href="#">1-1393258-2</a>	
V23047-A1024-A501		2 form C (CO)		24VDC	<a href="#">1-1393258-5</a>	
V23047-A1024-A511		1 A + 1 B, (1 NO + 1 NC)			<a href="#">1-1393258-7</a>	
V23047-A1036-A501		2 form C (CO)		36VDC	<a href="#">2-1393258-0</a>	
V23047-A1036-A511		1 A + 1 B, (1 NO + 1 NC)			<a href="#">8-1415011-1</a>	
V23047A1040-A501		2 form C (CO)		40VDC	<a href="#">2-1393258-1</a>	
V23047-A1040-A511		1 A + 1 B, (1 NO + 1 NC)			<a href="#">2-1393258-2</a>	
V23047A1048-A501		2 form C (CO)		48VDC	<a href="#">3-1415006-1</a>	
V23047-A1048-A511		1 A + 1 B, (1 NO + 1 NC)			<a href="#">9-1415011-1</a>	
V23047-A1060-A511				60VDC	<a href="#">2-1393258-3</a>	
V23047-A1110-A501				2 form C (CO)	110VDC	<a href="#">1-1415012-1</a>
V23047-A1110-A511				1 A + 1 B, (1 NO + 1 NC)		<a href="#">2-1415012-1</a>
V23047-P1005-A501		Plug-in for socket use		2 form C (CO)	5VDC	<a href="#">7-1415543-4</a>
V23047-P1009-A501					9VDC	<a href="#">7-1415543-5</a>
V23047-P1012-A501					12VDC	<a href="#">7-1415543-6</a>
V23047-P1021-A501					21VDC	<a href="#">7-1415543-7</a>
V23047-P1024-A501					24VDC	<a href="#">7-1415543-8</a>
V23047-P1036-A501	36VDC		<a href="#">7-1415543-9</a>			
V23047-P1110-A501	110VDC		<a href="#">8-1415543-0</a>			

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

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**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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