

# FORCE GUIDED RELAY SRS2

## GENERAL PURPOSE RELAYS

### INTRODUCTION

TE Connectivity (TE)'s SRS2 is a force guided relay (IEC/EN61810-3 type A) for safety applications with limited space. The just 210 mW coil power consumption helps allow a dense arrangement in hot environments. The NO contact can switch 2 A/ 250 VAC or 6 A/ 24 VAC/DC and is linked to a monitoring NC contact with a diagnostic coverage of 99% (IEC 61508-2). The relay can be mounted upright or horizontal.

### FEATURES

- Slim 2 pole relay with force guided relay according to type A of IEC/EN 61810-3 (EN50205)
- 1 form A (NO) + 1 form B (NC) contacts
- Small size (28 x 6 x 15.5) mm
- Polarized magnet system with small coil power consumption (210 mW)
- Reinforced insulation between NO and NC-circuit and between NO and relay coil

### APPLICATIONS

- Safety relay modules
- Safety controllers
- Programmable logic controllers (PLC's)
- Machines
- Presses
- Robots
- Emergency shut-off
- Light barriers
- Elevator and escalator safety control
- Railway level crossings
- Signaling



### APPROVALS

- VDE CERT. NO. 40040661
- TUV 968/FSP 2503.00/23
- UL E214025 Vol. 8 Sec. 5



Note: Technical data of approved types on request

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### CONTACT DATA

	NO contact		NC contact
Contact material	AgSnO <sub>2</sub>		AgCuNi + Au
Rated voltage	250V AC	24 VAC/DC	24 VAC/DC
Rated current	2 A*	6 A	100 mA
Minimum switching power	60 mW		3.3 mW
Minimum switching voltage	12 V		3.3 V
Minimum switching current	3 mA		1 mA
Maximum contact voltage drop	200 mV		200 mV
Short circuit protection acc. to EN 60947-5-1 1000A SCPD	6 A gL/gG		
Contact configuration	1 form A (NO) + 1 form B (NC) contacts		

\* Version for 6A/250VAC is under development.

### CONTACT RATINGS (NORMALLY OPEN, RTIII)

UL Approval acc. to UL 61810-1 (former UL 508)	
B300	6,000 Cycles
R300	6,000 Cycles
TUV & VDE Approval acc. to IEC 61810-1	
AC 250 V, 6 A *), resistive, NO contact	5,000 cycles
Mechanical endurance	10,000,000 cycles
Electrical lifetime acc. to IEC 60947-4-1	
AC 250V, 2A @ 80°C, resistive	350,000 cycles
DC 24V, 6A @ 80°C, resistive	1,000,000 cycles

\*) consider limitation to AC 250V, 2A

### COIL DATA

Nominal coil voltage	3.3 VDC - 24 VDC
Operating range acc. EN 61810-1	2

Coil code	Rated voltage VDC	Maximum Voltage** VDC	Operate Voltage* VDC	Release Voltage* VDC	Coil resistance* Ω±10% 100mA	Rated coil power* mW
024	24	31.2	15.6	3	2800	206
020	20	26	13	2.5	1929	207
018	18	23.4	11.7	2.3	1540	210
012	12	15.6	7.8	1.5	685	210
011	11	14.3	7.2	1.4	585	207
009	9	11.7	5.9	1.1	410	198
005	5	6.5	3.25	0.63	125	200
004	4.5	5.9	2.93	0.56	97	209
003	3.3	4.3	2.15	0.41	50	218

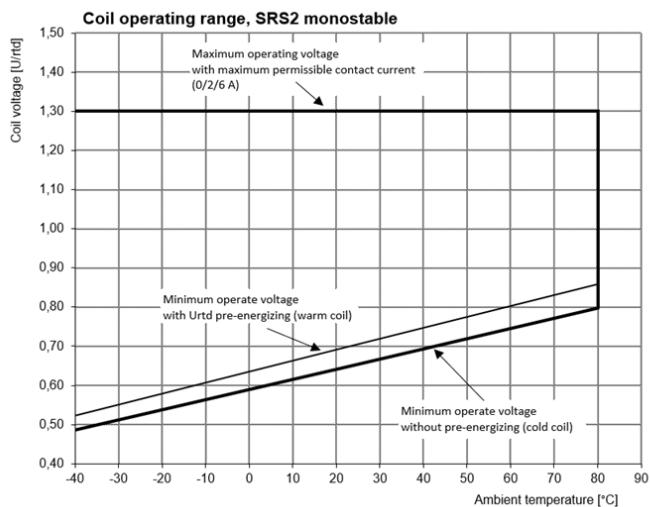
\* at 23 °C,

\*\* at 80 °C

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

### OPERATING VOLTAGE RANGE

(E = Pre-Energization of relay coil, I = continuous current on NO-contact)



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### INSULATION

According to DIN EN 61810-1 / DIN EN 61010-1 / IEC EN 62477 (former EN 50178)

Pollution degree	2
Overvoltage category	III

Initial dielectric strength

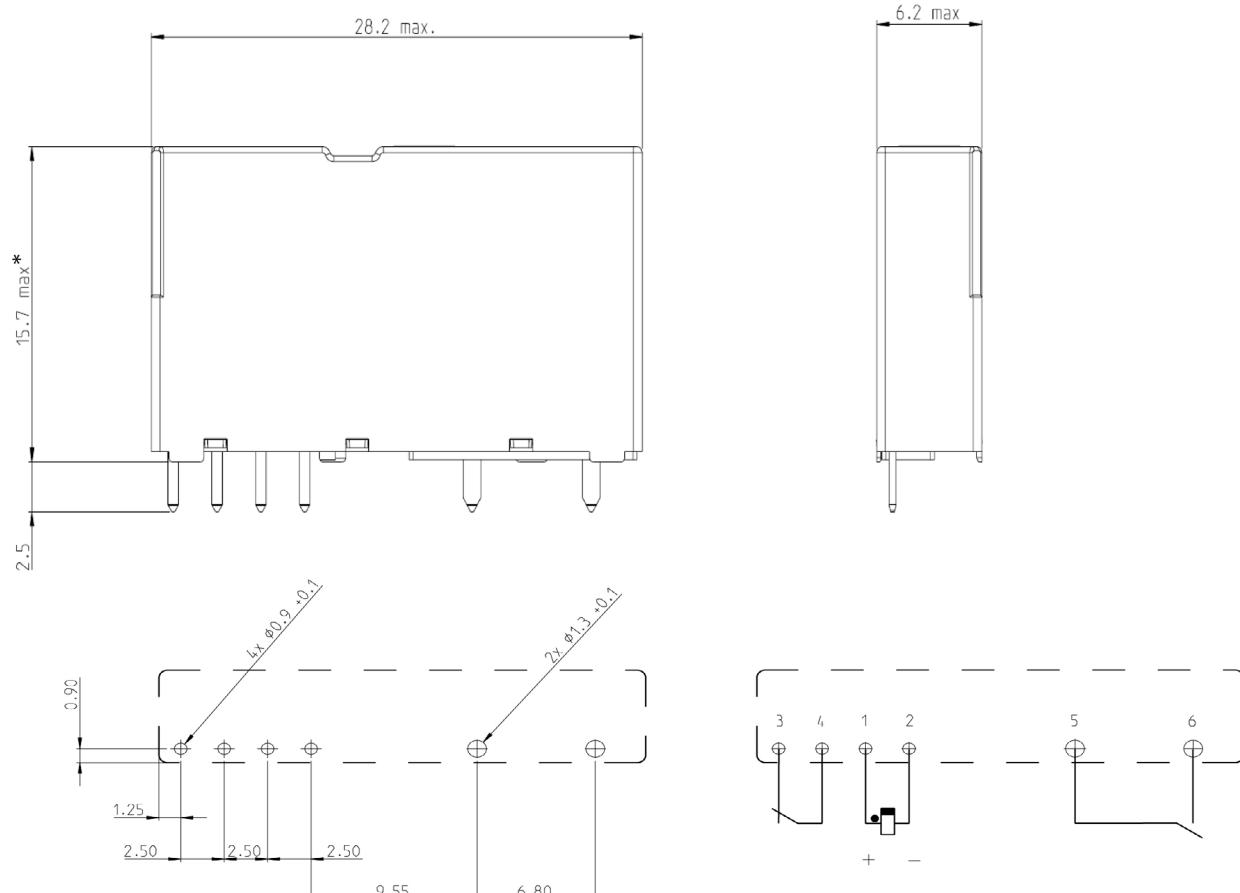
Between NO contact and NC contact	3000 Vrms
Between NO contact and coil	3000 Vrms
Between NC contact and coil	800 Vrms
Between open contacts	500 Vrms

Type of insulation / rated insulation voltage acc. to DIN EN 61010-1 / IEC EN 62477 (former EN 50178)

Between NO contact and NC contact	Reinforced	250 V
Between NO contact and coil	Reinforced	250 V
Between NC contact and coil	Basic	32 V

### DIMENSIONS (Unit: mm)

**SRS2-113-Dxxx-y1**



\* Version for 6 A/250 VAC is under development. Height of 15.7 mm will be increased for the 6 A version.

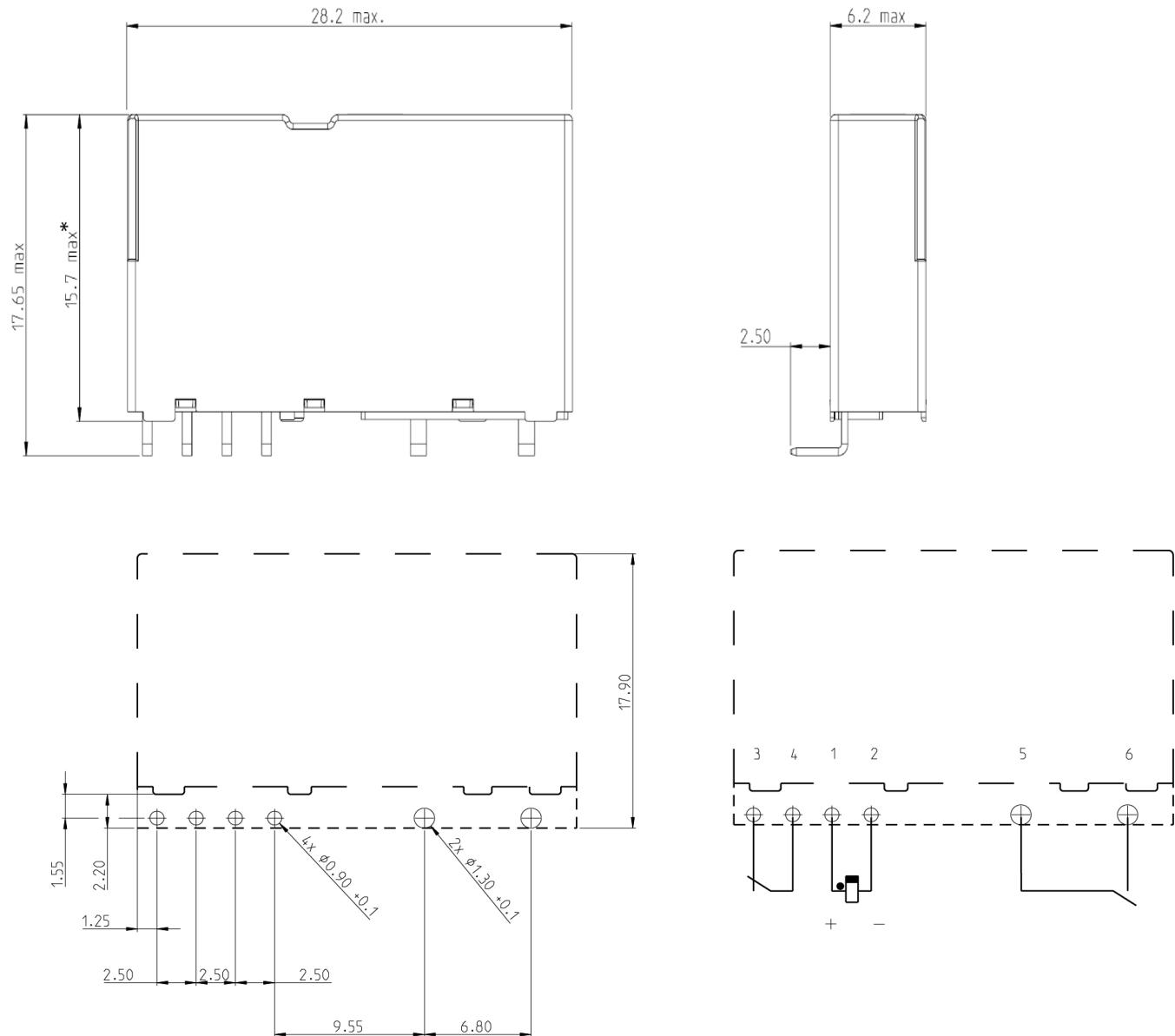
### OTHER DATA

Material compliance	ROHS conform
Ambient temperature	-40 °C to +80 °C
Vibration resistance (10-200Hz) NO/NC	10 g / 5 g
Contact interruption < 10µs	
Shock resistance (11ms half sine) NO/NC	15 g / 10 g
Contact interruption < 10µs	
Resistance to soldering heat	260 °C/ 5 s
Leadfree soldering condition	Wave soldering
Unit weight	8 g

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**SRS2-113-Dxxx-y2**

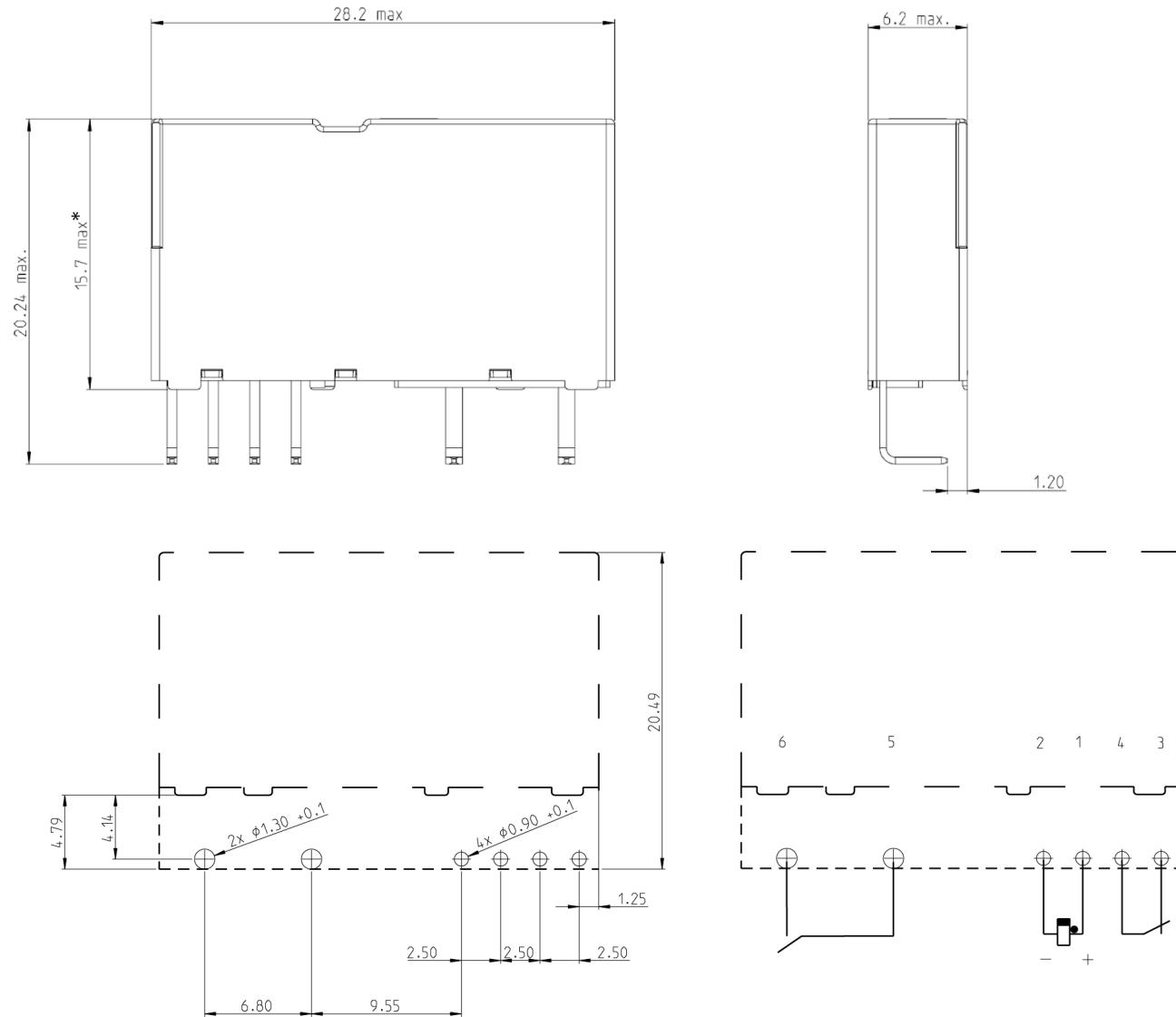


\* Version for 6 A/250 VAC is under development. Height of 15.7 mm will be increased for the 6 A version.

# FORCE GUIDED RELAY SRS2

GENERAL PURPOSE RELAYS

**SRS2-113-Dxxx-y3**

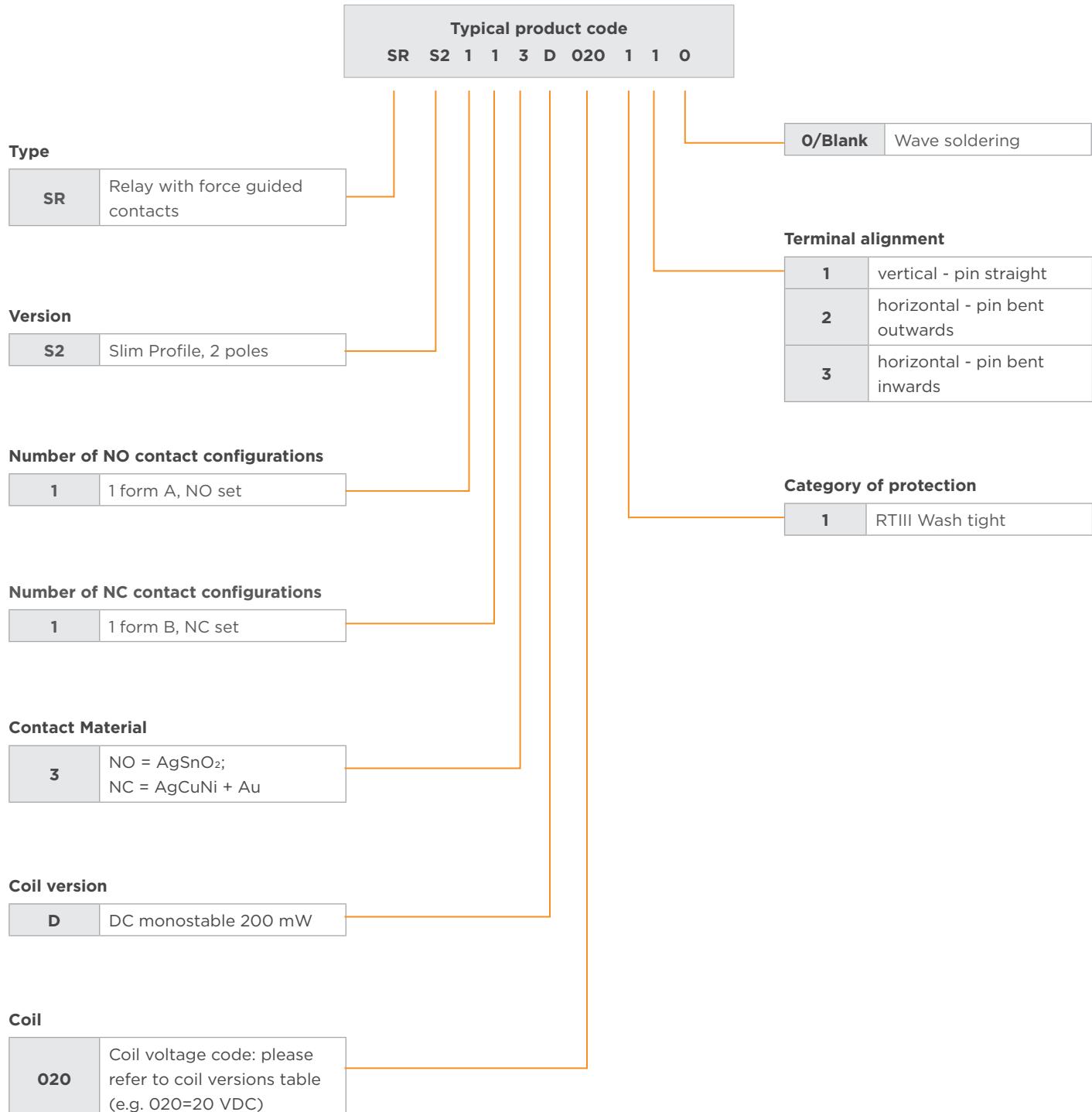


\* Version for 6 A/250 VAC is under development. Height of 15.7 mm will be increased for the 6 A version.

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### PRODUCT CODE STRUCTURE



## PRODUCT INFORMATION

Product code	Contact Material	Coll	Available approvals			Terminal alignment	Part Number
			UL	TUV	VDE		
SRS2-113-D003-11	NO = AgSnO <sub>2</sub> ; NC = AgCuNi+Au	3.3	X	X		Vertical - straight pins	<a href="#">1-8588003-1</a>
SRS2-113-D004-11		4.5	X	X			<a href="#">1-8588004-1</a>
SRS2-113-D011-11		11	X	X			<a href="#">1-8588011-1</a>
SRS2-113-D018-11		18	X	X			<a href="#">1-8588018-1</a>
SRS2-113-D020-11		20	X	X	X		<a href="#">1-8588020-1</a>
SRS2-113-D024-11		24	X	X			<a href="#">1-8588024-1</a>
SRS2-113-D003-12		3.3	X	X			<a href="#">1-8588003-2</a>
SRS2-113-D004-12		4.5	X	X		Horizontal - pins bent outwards	<a href="#">1-8588004-2</a>
SRS2-113-D011-12		11	X	X			<a href="#">1-8588011-2</a>
SRS2-113-D018-12		18	X	X			<a href="#">1-8588018-2</a>
SRS2-113-D020-12		20	X	X	X		<a href="#">1-8588020-2</a>
SRS2-113-D024-12		24	X	X			<a href="#">1-8588024-2</a>
SRS2-113-D003-13		3.3	X	X			<a href="#">1-8588003-3</a>
SRS2-113-D004-13		4.5	X	X			<a href="#">1-8588004-3</a>
SRS2-113-D011-13		11	X	X		Horizontal - pins bent inwards	<a href="#">1-8588011-3</a>
SRS2-113-D018-13		18	X	X			<a href="#">1-8588018-3</a>
SRS2-113-D020-13		20	X	X	X		<a href="#">1-8588020-3</a>
SRS2-113-D024-13		24	X	X			<a href="#">1-8588024-3</a>

### 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 more detailed product-specific-information (such as product specifications, application notes) please contact our Product Information Center (<https://www.te.com/usa-en/customer-support/customer-service.html>).

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