

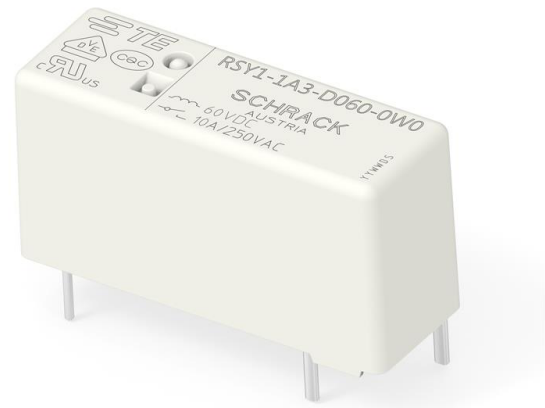
SCHRACK RSY MINIATURE POWER PCB RELAY

GENERAL PURPOSE RELAYS

POWER PCB RELAYS

INTRODUCTION

TE Connectivity (TE)'s SCHRACK RSY miniature power PCB relay is a compact 10 mm-wide solution designed for PCB mounting. Featuring a 10A single normally open (NO; form A) contact, the RSY serves as a direct replacement for the legacy MSR (V23061 Series), offering full compatibility for applications up to 10A switching capacity and 277VAC. It delivers high performance with enhanced vibration resistance and a longer mechanical and electrical lifecycle, making it highly suitable for space-constrained applications that demand reliability and durability. The series also contributes to sustainable engineering goals through a fine-tuned carbon footprint supported by its noteworthy design.



FEATURES

- 1 pole 10A, 1 form A (NO) contact
- Enhanced coil power consumption
- High inrush currents with AgSnO₂ contacts (TV4)
- 5kV/8mm coil-contact
- Reinforced insulation (protection class Class II)
- Extended ambient temperature up to 105 °C under derating of electric rating.
- Plastic materials according to IEC 60335-1 (domestic appliances)
- Enclosed-break device approvals:
 - Group IIA acc. to IEC 60079-1: Clause 15.5 (former IEC 60079-15: Clause 22.4.

APPLICATIONS

Safe, sustainable, and cost-effective solutions for HVACR applications

- Control units for electrical heat pumps, hybrid heating systems and gas burning systems.
- Control units for Cooling (AC) and ventilation systems.
- Control units for refrigeration systems in commercial buildings.

Safe, powerful, and miniaturized solutions for drive and factory automation

- Frequency Inverter Drives
- Programmable Logic Controllers (PLC)

APPROVALS

- VDE: 40062044
- UL: E214025



Technical data of approved types on request.

SCHRACK RSY MINIATURE POWER PCB RELAY

GENERAL PURPOSE | POWER PCB RELAYS

CONTACT DATA

Contact arrangement	1 form A (NO)
Rated voltage	277 VAC
Maximum switching voltage	440 VAC
Rated current	10 A
Limiting making current, max 4 s, df 10%	15 A
Limiting making current, max 20 ms	65 A
Breaking capacity max.	2770 VA
Contact material	AgSnO ₂
Minimum recommended contact load	1 mA, 5V
Frequency of operation, with/without load	6/1200 min-1
Operate/release time	9ms/5ms ¹⁾
Bounce time max. ¹⁾	N.O. 3ms N.C. 10ms

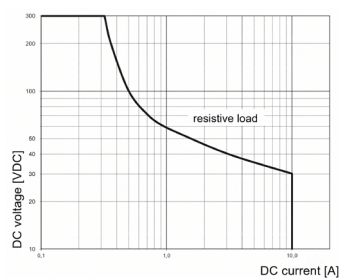
¹⁾ Measurement conditions: relay in upright position (terminals pointing downwards), 23°C coil temperature, relays energized with rated coil voltage, measurement after 5 switching cycles, coil energized with same polarity.

CONTACT RATINGS

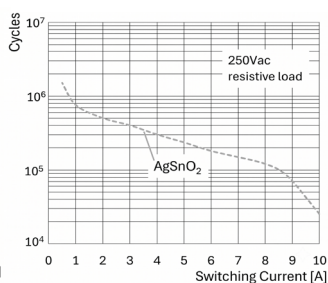
Type	Contact	Load	Cycles
IEC 61810			
RSY1-1A3-DXXX-0W0	A (NO)	10A, 250VAC resistive 85°C	10x10 ³
RSY1-1A3-DXXX-0W0	A (NO)	8A, 250VAC resistive 85°C;	100x10 ³
IEC 60947			
RSY1-1A3-DXXX-0W0	A (NO)	DC13 2A 85°C	6050
RSY1-1A3-DXXX-0W0	A (NO)	AC15 3A 85°C	6050
UL61810-1			
RSY1-1A3-DXXX-0W0	A (NO)	10A 277VAC GP 85°C	10x10 ³
RSY1-1A3-DXXX-0W0	A (NO)	10A 240VAC GP 40°C	30x10 ³
RSY1-1A3-DXXX-0W0	A (NO)	TV4 120VAC 40°C	25x10 ³
RSY1-1A3-DXXX-000	A (NO)	TV4 120VAC 40°C	25x10 ³
RSY1-1A3-DXXX-0W0	A (NO)	B300 85°C	10x10 ³
RSY1-1A3-DXXX-0W0	A (NO)	R300 85°C	10x10 ³
RSY1-1A3-DXXX-0W0	A (NO)	A300 40°C	6x10 ³
RSY1-1A3-DXXX-0W0	A (NO)	8A 24VDC Gp	10x10 ³
RSY1-1A3-DXXX-0W0	A (NO)	10A 24VDC Gp	6x10 ³
RSY1-1A3-DXXX-0W0	A (NO)	1/2Hp 250VAC 85°C	6x10 ³

Mechanical endurance	DC coil	10x10 ⁶ operations
----------------------	---------	-------------------------------

MAX.DC LOAD BREAKING CAPACITY



ELECTRICAL ENDURANCE



Note:

- The graph presents a preliminary estimate of the electrical life (MCTF) at 23°C ambient.
- The estimate is derived from elevated-temperature testing and Weibull analysis.
- The graph will be updated upon completion of ongoing tests.
- Actual performance data is provided on request.

COIL DATA

Coil voltage	3VDC to 60VDC
Operative range, IEC 61810	2
Coil insulation system according UL	Class F

COIL VERSIONS, DC COIL

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10% ²⁾	Rated coil power mW
Normal coil versions					
D003	3	2.1	0.3	39.1	230
D005	5	3.5	0.5	108.7	230
D006	6	4.2	0.6	163.6	220
D009	9	6.3	0.9	368.2	220
D012	12	8.4	1.2	654.5	220
D018	18	12.6	1.8	1408.7	230
D024	24	16.8	2.4	2504.3	230
D036	36	25.2	3.6	5634.8	230
D048	48	33.6	4.8	9846.2	234
D060	60	42	6	14814.8	243

²⁾ All figures are given for coil without pre-energization, at ambient temperature +23°C.

INSULATION DATA

Initial dielectric strength	
Between open contacts	1000V _{rms}
Between contact and coil	5000V _{rms}
Clearance/creepage	
Between contact and coil	≥8/8mm
Material group of insulation parts	IIIa
Type of insulation coil-contact	Reinforced insulation

OTHER DATA

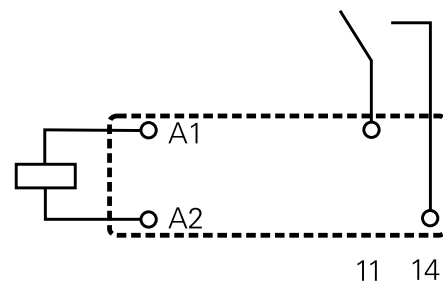
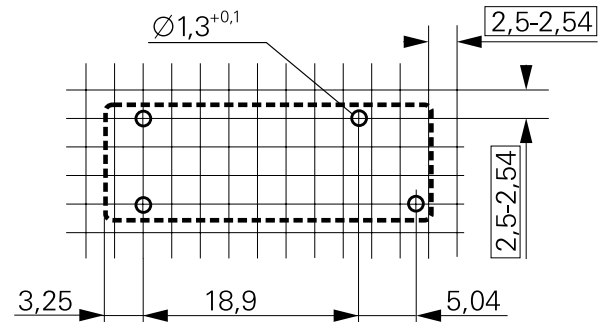
Material compliance	EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customer-support/rohssupportcenter
Ambient temperature (0mm mounting distance)	-40°C to +85°C -40°C to +105°C ³⁾
Explosive Atmosphere	
IEC 60079-15	Enclosed-break device Group IIA ⁴⁾
Category of environmental protection	
IEC 61810	RTII -flux proof, RTIII -wash tight
Vibration resistance (functional/closing)	
Form A (NO)	≥20g at 10Hz-55Hz ≥15g at 55Hz-150Hz
Shock resistance (functional/closing)	
Form A (NO)	20 g
Shock resistance (destructive)	100 g
Terminal type	PCB-THT
Weight	10 g
Resistance to soldering heat THT	
IEC 60068-2-20	RTII: 270°C/10s RTIII: 260°C/5s
Packaging/unit	tube/21 pcs., box/525 pcs.

3) Derating of electric rating

4) The enclosures are capable of withstanding normal handling and assembly operations without damage to seals according IEC 60079-1. Only relays without damage and unaffected open outgassing hole (e.g. labeling, conformal coating, glue) meet the requirements of IEC 60079-1.

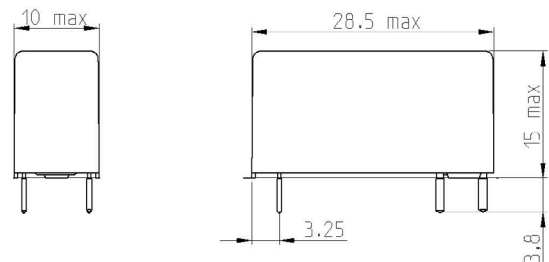
PCB LAYOUT / TERMINAL ASSIGNMENT

1 form A, 1 NO contact, 5 mm



DIMENSIONS (Unit:mm)

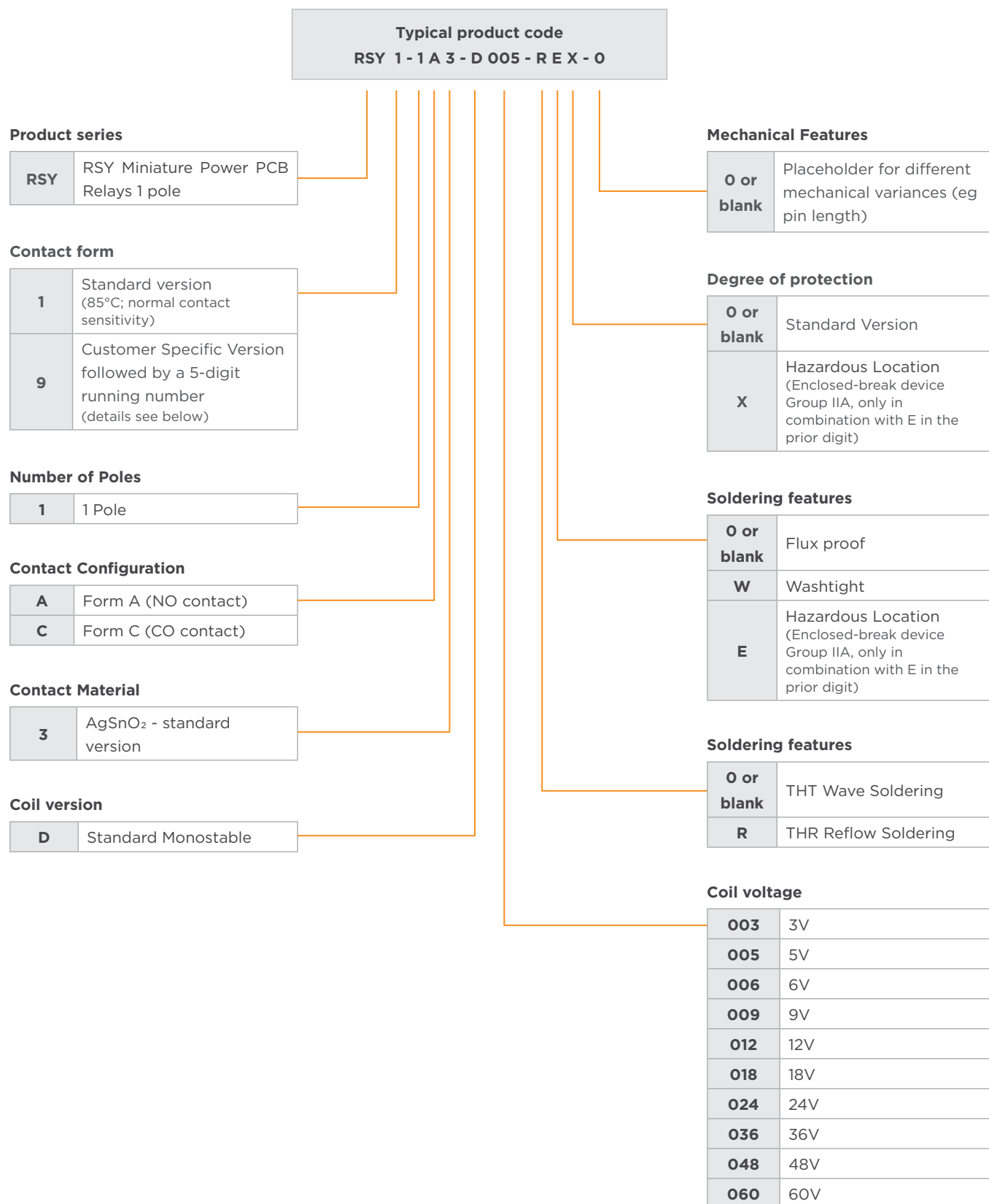
1 form A, 1 NO contact, 5 mm



Notes:

1. Dimensions are in millimeters over (inches) unless otherwise specified.
2. Specifications and availability subject to change.

PRODUCT CODE STRUCTURE



PART NUMBER LIST

TE Part Number	Coil Version	Soldering	Contacts	Contact material	Coil	Part Number
RSY1-1A3-D003-OWO	Standard Monostable	pinning 3.8mm, wash tight	1 form A (NO)	AgSnO ₂	3VDC	1-2045050-1
RSY1-1A3-D005-OWO					5VDC	1-2045050-2
RSY1-1A3-D006-OWO					6VDC	1-2045050-3
RSY1-1A3-D009-OWO					9VDC	1-2045050-4
RSY1-1A3-D012-OWO					12VDC	1-2045050-5
RSY1-1A3-D018-OWO					18VDC	1-2045050-6
RSY1-1A3-D024-OWO					24VDC	1-2045050-7
RSY1-1A3-D036-OWO					36VDC	1-2045050-8
RSY1-1A3-D048-OWO					48VDC	1-2045050-9
RSY1-1A3-D060-OWO					60VDC	1-2045050-0
RSY1-1A3-D003-000		pinning 3.8mm, flux proof			3VDC	2-2045050-1
RSY1-1A3-D005-000					5VDC	2-2045050-2
RSY1-1A3-D006-000					6VDC	2-2045050-3
RSY1-1A3-D009-000					9VDC	2-2045050-4
RSY1-1A3-D012-000					12VDC	2-2045050-5
RSY1-1A3-D018-000					18VDC	2-2045050-6
RSY1-1A3-D024-000					24VDC	2-2045050-7
RSY1-1A3-D036-000					36VDC	2-2045050-8
RSY1-1A3-D048-000					48VDC	2-2045050-9
RSY1-1A3-D060-000					60VDC	2-2045050-0
RSY1-1A3-D003-OEX		pinning 3.8mm, flux proof, (Haz Loc)			3VDC	7-2045050-1
RSY1-1A3-D005-OEX					5VDC	7-2045050-2
RSY1-1A3-D006-OEX					6VDC	7-2045050-3
RSY1-1A3-D009-OEX					9VDC	7-2045050-4
RSY1-1A3-D012-OEX					12VDC	7-2045050-5
RSY1-1A3-D018-OEX					18VDC	7-2045050-6
RSY1-1A3-D024-OEX					24VDC	7-2045050-7
RSY1-1A3-D036-OEX					36VDC	7-2045050-8
RSY1-1A3-D048-OEX					48VDC	7-2045050-9
RSY1-1A3-D060-OEX					60VDC	7-2045050-0

Notes:

1. Catalog and product specification according to IEC 61810-1 and to be used only together with the 'Definitions' section.
2. Catalog 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. Catalog product data, 'Definitions' section, application notes and all specifications are subject to change.

te.com

©2026 TE Connectivity. All Rights Reserved.

SCHRACK, TE Connectivity, TE connectivity (logo) and Every Connection Counts are trademarks owned or licensed by the TE Connectivity plc. family of companies. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

While TE has made every reasonable effort to ensure the accuracy of the information in this document, TE does not guarantee that it is error-free, nor does TE make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. TE reserves the right to make any changes to the information contained herein without prior notice. TE Connectivity assumes only those obligations set forth in the terms and conditions for this product and shall in no event be liable for any incidental, indirect, or consequential damages arising out of the sale, resale, use, or misapplication of the product. TE expressly disclaims any implied warranties with respect to the information contained herein, including, but not limited to, implied warranties of merchantability or fitness for a particular purpose. Dimensions, specifications and/or information contained herein are for reference purposes only and are subject to change without notice. Consult TE for the latest dimensions, specifications and/or information. Users of TE Connectivity products must make their own assessment as to whether the respective product is suitable for the respective desired application.

08/26 ED