

SCHRACK MINIATURE POWER PCB RYII & RYII REFLOW SOLDERABLE

GENERAL PURPOSE RELAYS PCB RELAYS

INTRODUCTION

TE Connectivity (TE)'s Miniature Power PCB Relays RYII & RYII reflow is general purpose relay designed for various types of loads (e.g., resistive, inductive) with low component height. The relay is designed as 1 pole 8A with different contact variants: 1 form C (CO) or 1 form A (NO) or 1 form B (NC) contact.

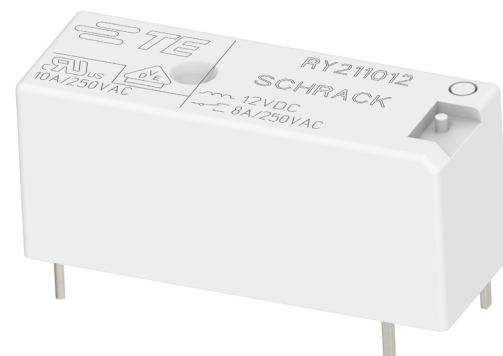
Other advantages include: high initial dielectric strength, reinforced insulation (protection class II) and the possibility of the relay to use for the reflow-solderable process.

FEATURES

- 1 pole 8A, 1 form C (CO) or 1 form A (NO) or 1 form B (NC) contact
- Low component height 12.3mm
- 5kV/8mm coil-contact
- Reinforced insulation (protection class II)
- Pinnings: 3.2mm and 5mm
- Reflow-solderable version
- Especially suitable for resistive and inductive loads on form A (NO) and form B (NC) contacts
- Plastic materials according to IEC 60335-1 (domestic appliances)

APPLICATIONS

- Heating control
- Interface technology
- Domestic appliances
- Timers
- Temperature control



APPROVALS

- VDE Cert. No. 40009639
- UL E214025

Technical data of approved types on request



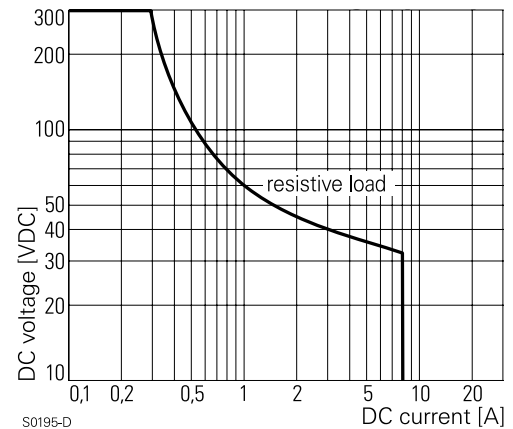
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General Purpose Relays

CONTACT DATA

Contact arrangement	1 form C (CO) or 1 form A (NO) or 1 form B (NC)
Rated voltage	250VAC
Max. switching voltage	400VAC
Rated current	8A
Breaking capacity max.	2000VA
Contact material	AgNi0.15, AgSnO ₂
Frequency of operation, with/without load	6/1200min-1
Operate/release time max.	9/5ms
Bounce time max., form A/form B	6/10ms

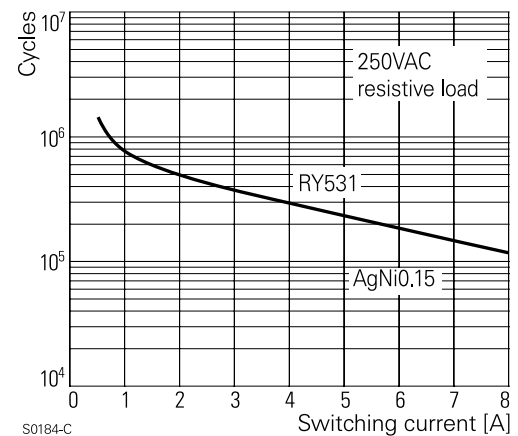
MAX. DC LOAD BREAKING CAPACITY



CONTACT RATINGS

Type	Contact	Load	Cycles
IEC61810			
RY531	A (NO)	8A, 250VAC, 70°C	100x10 ³
RY211	A (NO)	8A, 250VAC, 75°C	100x10 ³
RY211	A (NO)	8A, 250VAC, 85°C	50x10 ³
RY211	B (NC)	8A, 250VAC, 70°C	50x10 ³
UL61810-1 (UL508)			
RY211	A/B (NO/NC)	10A, 250VAC, general purpose, 70°C	30x10 ³
RY211	A (NO)	1/2hp, 240VAC, 85°C	30x10 ³
RY211	B (NC)	B300, 70°C	6x10 ⁵
RY211	A (NO)	8A, 250VAC, 85°C	100x10 ³
RY211	A (NO)	8A, 24VDC, 85°C	30x10 ³
RY211	A (NO)	B300, 85°C	30x10 ³
RY211	A (NO)	C300, 105°C	30x10 ³
RY211	A (NO)	1/3 hp, 250VAC, 85°C	30x10 ³
RY211	A (NO)	1/4 hp, 120VAC, 70°C	30x10 ³
EN60730-1			
RY211	A/B (NO/NC)	6(4)A, 250VAC, 85°C	100x10 ³
RY211	A (NO)	8(4)A, 250VAC, 75°C	50x10 ³
RY211	A (NO)	8(4)A, 250VAC, 85°C	30x10 ³
RY211	A (NO)	2(2)A, 250VAC, -40 / +105°C	100x10 ³
RY211	C (CO)	2(2)A, 250VAC, -40 / +105°C	30x10 ³
Mechanical endurance, DC coil		30x10 ⁵ operations	

ELECTRICAL ENDURANCE



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COIL DATA

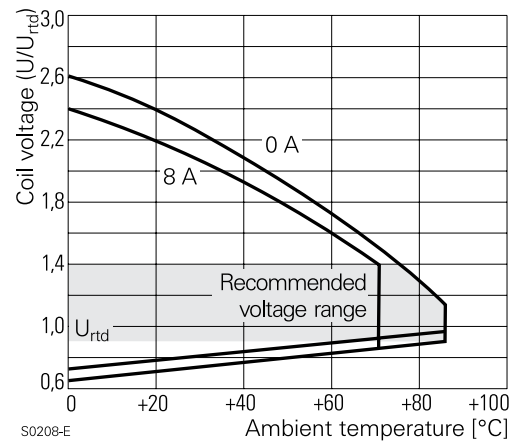
Coil voltage range	5 to 60VDC
Operative range, IEC 61810	2

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	3.5	0.5	112	223
006	6	4.2	0.6	162	222
009	9	6.3	0.9	320	253
012	12	8.4	1.2	627	230
024	24	16.8	2.4	2350	245
048	48	33.6	4.8	9391	245
060	60	42.0	6.0	14000	257

All figures are given for coil without pre energization, at ambient temperature +23°C.
Other coil voltages on request.

COIL OPERATING RANGE DC



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
Tracking index of relay base	PTI250
Reflow-solderable version	PTI175

OTHER DATA

Material compliance	EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter
Ambient temperature	-40 to +70°C +85°C at 6A
Category of environmental protection	
IEC 61810	RTII - flux proof RTIII - wash tight ¹⁾
Vibration resistance (functional)	
Form A (NO) / form B (NC)	20/5g

OTHER DATA CONTINUED

Shock resistance (functional)	
Form A (NO) / form B (NC)	20/5g
Shock resistance (destructive)	100g
Terminal type	PCB-THT, PCB-THR
Weight	8 g
Resistance to soldering heat THT	
IEC 60068-2-20	RTII: 270°C/10s RTIII: 260°C/5s
Resistance to soldering heat THR	
IEC 60068-2-58	250°C, no infrared heating allowed
Packaging/unit	
standard version	tube/20 pcs., box/500 pcs.
reflow version	reel/280 pcs. box/1120 pcs. (4 reels)

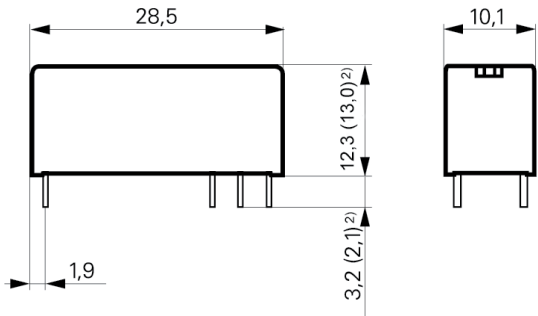
1) not available as reflow-solderable version

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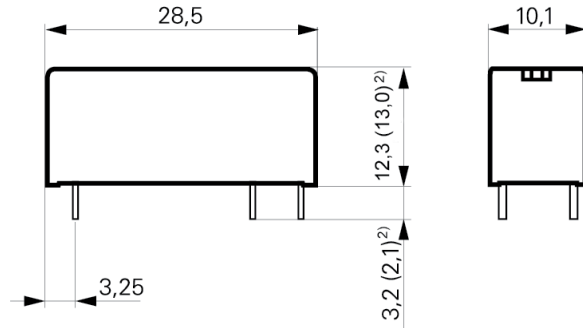
General Purpose Relays

DIMENSIONS

Pinning 3.2 mm



Pinning 5 mm

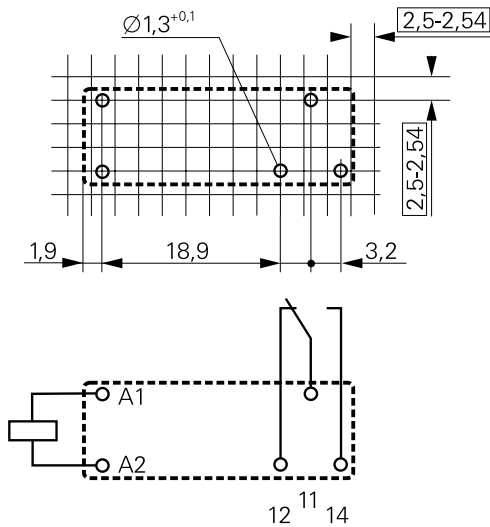


2) Values in brackets are valid for reflow-solderable version

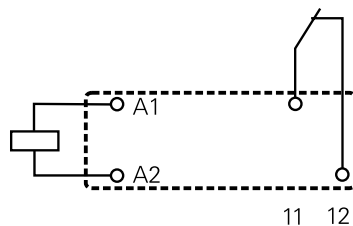
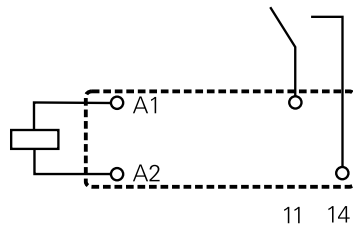
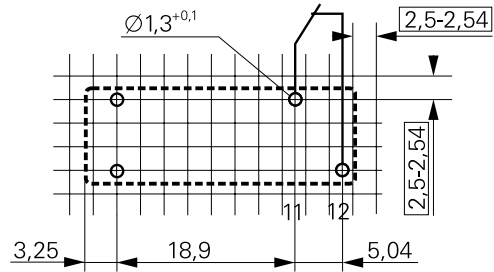
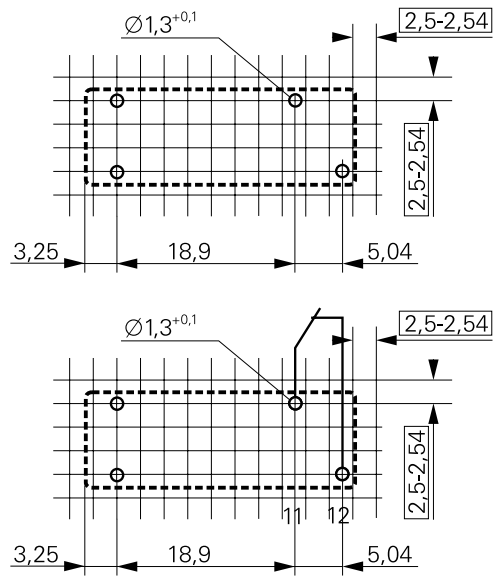
PCB LAYOUT / TERMINAL ASSIGNMENT

Bottom view on solder pins

1 form C (CO) contact, 3.2 mm



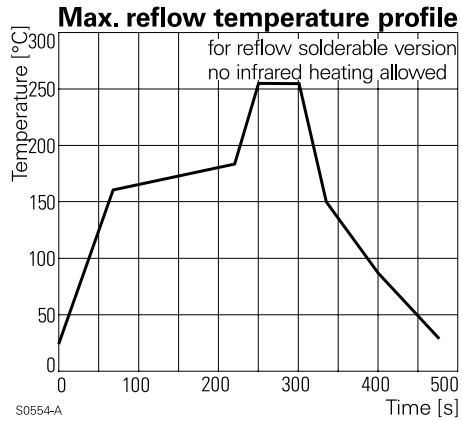
1 form A (NO), 1 form B (NC) contact 5 mm



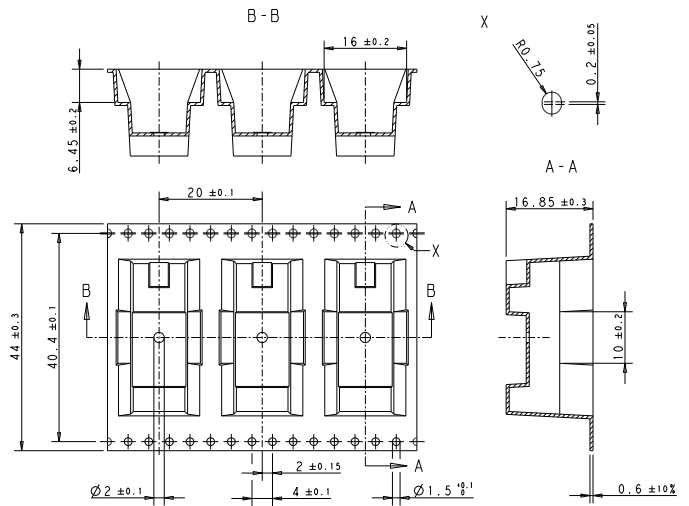
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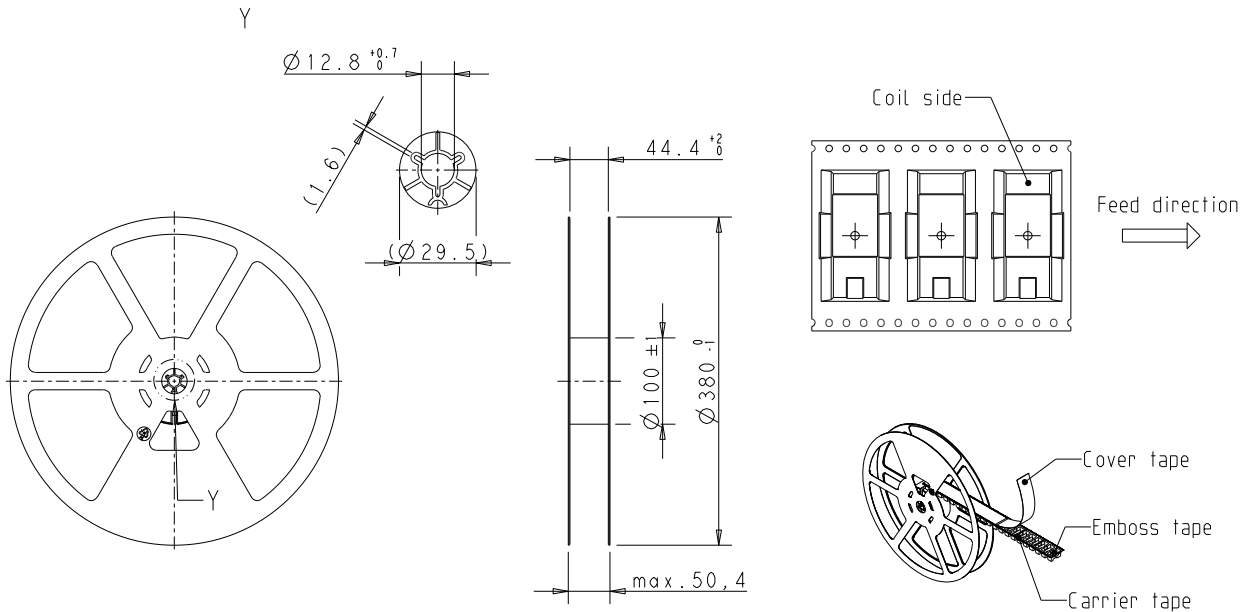
SOLDERING PROFILE FOR REFLOW-SOLDERABLE VERSION



TAPE DIMENSIONS



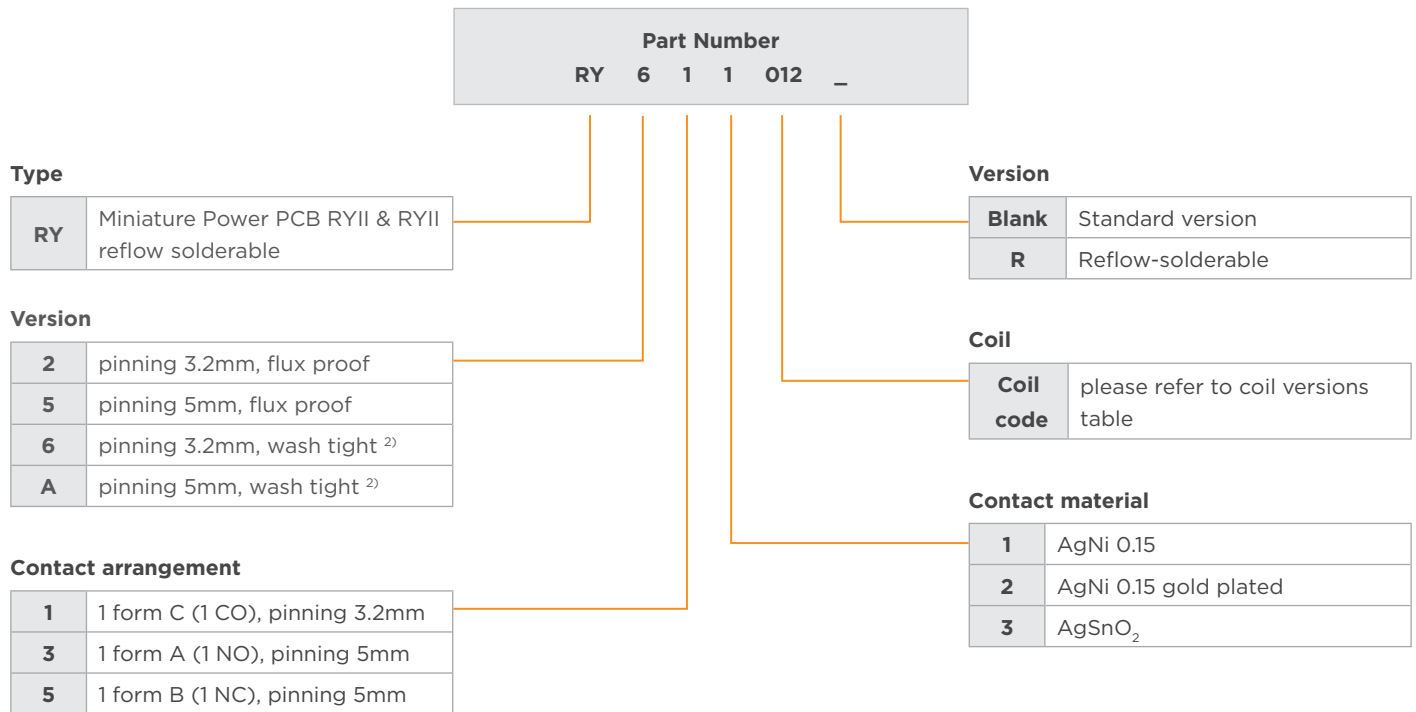
REEL DIMENSIONS



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General Purpose Relays

PRODUCT CODE STRUCTURE



PRODUCT INFORMATION

Product code	Version	Contacts	Contact material	Coil	TE Part Number
RY211005	Pinning 3.2 mm flux proof	1 form C, 1 CO contact	AgNi 0.15	5VDC	4-1393224-2
RY211006				6VDC	4-1393224-3
RY211012				12VDC	4-1393224-6
RY211024				24VDC	4-1393224-9
RY211048				48VDC	5-1393224-1
RY212005			AgNi 0.15 gold plated	5VDC	5-1393224-2
RY212006				6VDC	5-1393224-3
RY212012				12VDC	5-1393224-5
RY212024				24VDC	5-1393224-8
RY212048				48VDC	5-1393224-9
RY213005			AgSnO ₂	5VDC	6-1393224-0
RY213006				6VDC	9-1393224-0
RY213012				12VDC	6-1393224-1
RY213024				24VDC	6-1393224-2
RY213048				48VDC	6-1393224-3

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General Purpose Relays

Product code	Version	Contacts	Contact material	Coil	TE Part Number		
RY531005	Pinning 5 mm flux proof	1 form A, 1 NO contact	AgNi 0.15	5VDC	7-1393224-6		
RY531006				6VDC	7-1393224-7		
RY531012				12VDC	7-1393224-9		
RY531024				24VDC	8-1393224-2		
RY531048				48VDC	8-1393224-3		
RY532012			AgNi 0.15 gold plated	12VDC	8-1393224-4		
RY532024				24VDC	8-1393224-5		
RY533006				6VDC	8-1393224-6		
RY533012			AgSnO ₂	12VDC	8-1393224-8		
RY533024				24VDC	8-1393224-9		
RY533048				48VDC	9-1393224-0		
RY611005			Pinning 3.2 mm wash tight	1 form C, 1 CO contact	AgNi 0.15	5VDC	1-1393225-7
RY611006	6VDC	1-1393225-8					
RY611012	12VDC	1-1393225-9					
RY611024	24VDC	2-1393225-1					
RY611048	48VDC	2-1393225-2					
RY612005	AgNi 0.15 gold plated	5VDC			2-1393225-3		
RY612006		6VDC			2-1393225-4		
RY612012		12VDC			2-1393225-6		
RY612024		24VDC			2-1393225-9		
RY612048		48VDC			3-1393225-0		
RY613005	AgSnO ₂	5VDC			5-1419136-2		
RY613012		12VDC			3-1393225-1		
RY613024		24VDC			3-1393225-3		
RY613048		48VDC			3-1393225-4		
RY631024		24VDC			4-1415400-1		
RYA31005	Pinning 5 mm wash tight	1 form A, 1 NO contact			AgNi 0.15	5VDC	1393224-7
RYA31006						6VDC	1393224-8
RYA31012						12VDC	1393224-9
RYA31024			24VDC	1-1393224-2			
RYA31048			48VDC	1-1393224-3			
RYA32005			AgNi 0.15 gold plated	5VDC	1-1393224-4		
RYA32006				6VDC	8-1393224-8		
RYA32012				12VDC	1-1393224-6		
RYA32024			24VDC	1-1393224-8			
RYA33005			AgSnO ₂	5VDC	1-1393224-9		
RYA33024				24VDC	2-1393224-1		

Product code	Version	Contacts	Contact material	Coil	Part Number
RY211005R	pinning 3.2mm	1 form C, 1 CO contact	AgNi 0.15	5VDC	1-1956170-2
RY211012R	flux proof reflow			12VDC	1-1956170-6
RY211024R	solderable			24VDC	1956164-1
RY531005R	pinning 5.0mm	1 form A, 1 NO contact		5VDC	1-1956171-1
RY531012R	flux proof reflow			12VDC	1-1956171-4
RY531024R	solderable			24VDC	1-1956171-7

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