

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.

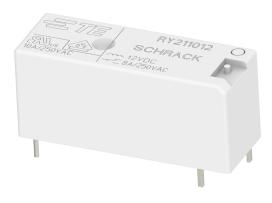
Other advantages include: high initial dielectric strength, reinforced insulation (protection class II) and the possibility of the relay to use for the reflow-solderable process.

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



General Purpose Relays

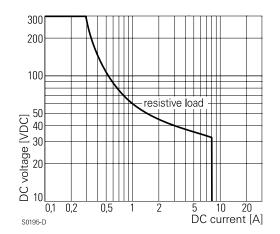
CONTACT DATA

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

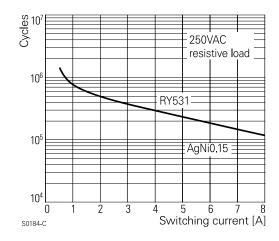
CONTACT RATINGS

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 (UL	508)		
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 ³
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	30x10³
Mechanical en DC coil	durance,	30x10 ⁶ operations	

MAX. DC LOAD BREAKING CAPACITY



ELECTRICAL ENDURANCE



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General Purpose Relays

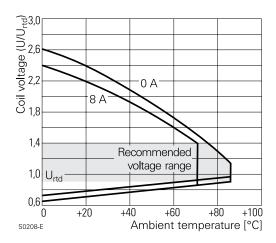
COIL DATA

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 Ω±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

COIL OPERATING RANGE DC



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

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	Illa			
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 p	rotection
IEC 61810	RTII - flux proof RTIII - wash tight ¹⁾
Vibration resistance (function	nal)
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 heatin allowed				
Packaging/unit				
standard version	tube/20 pcs., box/500 pcs.			
reflow version	reel/280 pcs. box/1120 pcs. (4 reels)			

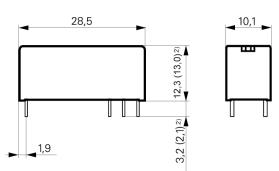
1) not available as reflow-solderable version

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DIMENSIONS

Pinning 3.2 mm

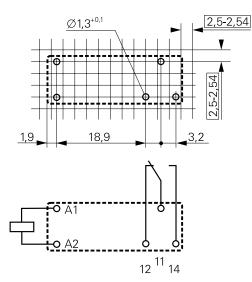


2) Values in brakets are valid for reflow-solderable version

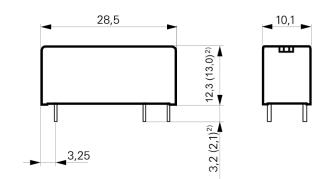
PCB LAYOUT / TERMINAL ASSIGNMENT

Bottom view on solder pins

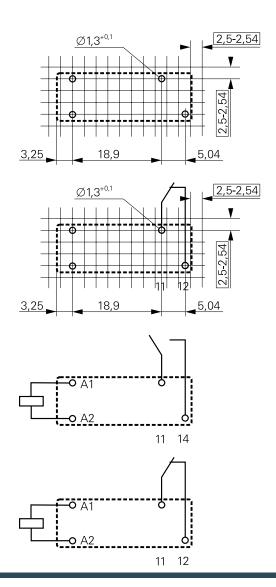
1 form C (CO) contact, 3.2 mm



Pinning 5 mm

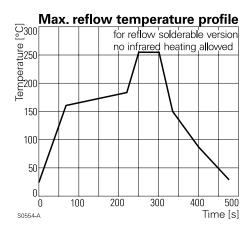


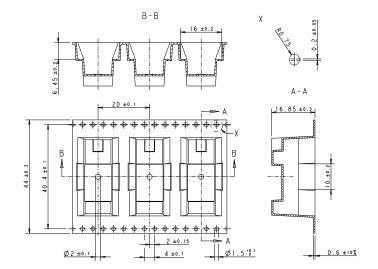
1 form A (NO), 1 form B (NC) contact 5 mm



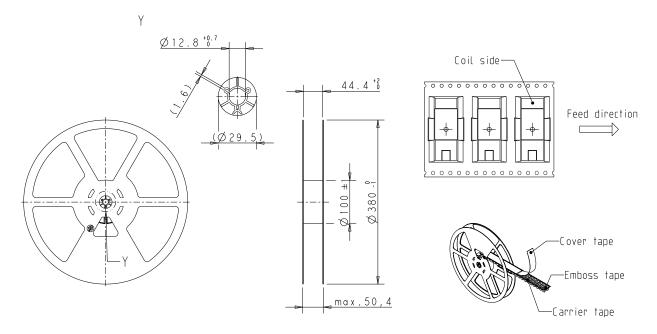
SOLDERING PROFILE FOR REFLOW-SOLDERABLE VERSION

TAPE DIMENSIONS



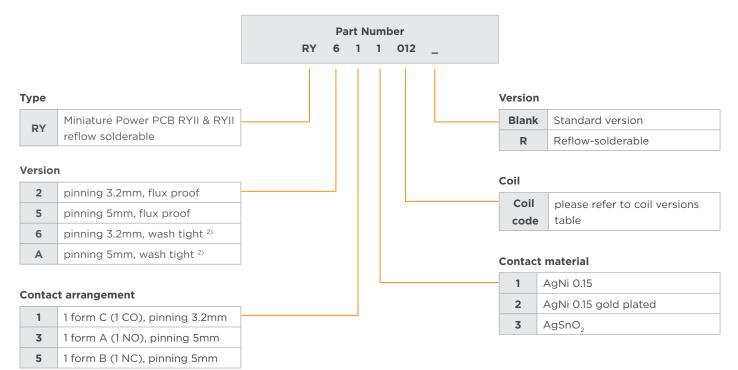


REEL DIMENSIONS



General Purpose Relays

PRODUCT CODE STRUCTURE



PRODUCT INFORMATION

Product code	Version	Contacts	Contact material	Coil	TE Part Number
RY211005		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	Pinning 3.2 mm flux proof			12VDC	5-1393224-5
RY212024				24VDC	5-1393224-8
RY212048				48VDC	5-1393224-9
RY213005			AgSnO₂	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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Product code	Version	Contacts	Contact material	Coil	TE Part Number
RY531005				5VDC	7-1393224-6
RY531006				6VDC	7-1393224-7
RY531012			AgNi 0.15	12VDC	7-1393224-9
RY531024				24VDC	8-1393224-2
RY531048		1 form A, 1 NO contact		48VDC	8-1393224-3
RY532012	Pinning 5 mm flux proof		AgNi 0.15 gold plated	12VDC	8-1393224-4
RY532024				24VDC	8-1393224-5
RY533006				6VDC	8-1393224-6
RY533012				12VDC	8-1393224-8
RY533024			AgSnO ₂	24VDC	8-1393224-9
RY533048				48VDC	9-1393224-0
RY611005				5VDC	1-1393225-7
RY611006				6VDC	1-1393225-8
RY611012			AgNi 0.15	12VDC	1-1393225-9
RY611024				24VDC	2-1393225-1
RY611048				48VDC	2-1393225-2
RY612005		1 form C, 1 CO contact		5VDC	2-1393225-3
RY612006			AgNi 0.15 gold plated	6VDC	2-1393225-4
RY612012	Pinning 3.2 mm wash tight			12VDC	2-1393225-6
RY612024	wash tight			24VDC	2-1393225-9
RY612048				48VDC	3-1393225-0
RY613005				5VDC	5-1419136-2
RY613012				12VDC	3-1393225-1
RY613024			AgSnO ₂	24VDC	3-1393225-3
RY613048				48VDC	3-1393225-4
RY631024				24VDC	4-1415400-1
RYA31005				5VDC	1393224-7
RYA31006				6VDC	1393224-8
RYA31012			AgNi 0.15	12VDC	1393224-9
RYA31024				24VDC	1-1393224-2
RYA31048	, _	1 form A,		48VDC	1-1393224-3
RYA32005	Pinning 5 mm	1 NO contact		5VDC	1-1393224-4
RYA32006	wash tight		AgNi 0.15	6VDC	8-1393224-8
RYA32012			gold plated	12VDC	1-1393224-6
RYA32024				24VDC	1-1393224-8
RYA33005			AgSnO2	5VDC	1-1393224-9
RYA33024				24VDC	2-1393224-1

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

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