

Miniature Power PCB RY II & RY II reflow solderable

- 1 pole 8 A, 1 CO or 1 NO or 1 NC contact
- Low component height 12.3 mm
- 5 kV / 8 mm coil-contact
- Reinforced insulation (protection class II)
- Pinnings: 3.2 and 5 mm
- Reflow-solderable version
- Sockets with PCB-type terminals
- Especially suitable for resistive and inductive loads on NO and NC contacts
- Plastic materials according to IEC60335-1 (domestic appliances, not in reflow-solderable version)



F0142-E

Applications: heating control, interface technology, domestic appliances, timers, temperature control

Approvals

VDE REG.-Nr. 5358, **us** E214025
 Technical data of approved types on request

Contact data

Contact configuration	1 CO or 1NO or 1NC
Contact set	single contact
Type of interruption	micro disconnection
Rated voltage / max. switching voltage AC	250 / 400 VAC
Rated current	8 A
Maximum breaking capacity AC	2000 VA
Contact material	AgNi0.15, AgSnO ₂
Rated frequency of operation with / without load	6 / 1200 min ⁻¹
Operate- / release time	max. 9 / 5 ms
Bounce time NO / NC contact	max. 6 / 10 ms

Contact ratings

Type	Contact	Load	Ambient temp. [°C]	Cycles
IEC 61810				
RY531	NO	8 A, 250 VAC	70°C	100x10 ³
RY211	NO	8 A, 250 VAC	70°C	75x10 ³
RY211	NC	8 A, 250 VAC	70°C	50x10 ³
UL 508				
RY211	NO / NC	10 A, 250 VAC, general purpose	70°C	30x10 ³
RY211	NO	1/2 hp, 240 VAC	85°C	30x10 ³
RY211	NO / NC	B300	70°C	6x10 ³
EN60730-1				
RY211	NO / NC	6(4)A, 250 VAC	85°C	100x10 ³
RY211	NO	8(4)A, 250 VAC	75°C	100x10 ³

Coil data

Rated coil voltage range DC coil	5...60 VDC
Operative range to IEC 61810	2

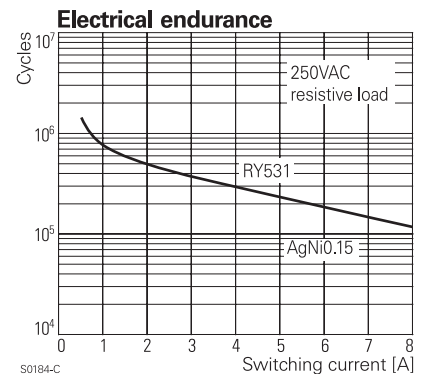
Coil versions, DC-coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ohm	Rated coil power mW
005	5	3,5	0,5	112±10%	223
006	6	4,2	0,6	162±10%	222
009	9	6,3	0,9	320±10%	253
012	12	8,4	1,2	627±10%	230
024	24	16,8	2,4	2350±10%	245
048	48	33,6	4,8	9391±10%	245
060	60	42,0	6,0	14000±10%	257

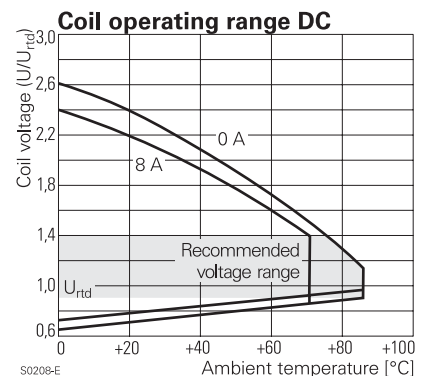
All figures are given for coil without preenergization, at ambient temperature +23°C
 Other coil voltages on request



S0195-D



S0184-C



S0208-E

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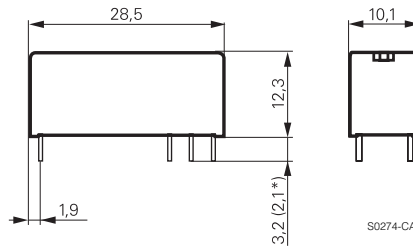
Insulation	CO contact	NO contact
Dielectric strength coil-contact circuit		5000 V _{eff}
open contact circuit		1000 V _{eff}
Clearance / creepage coil-contact circuit		≥ 8 / 8 mm
Material group of insulation parts		IIIa
Tracking index of relay base		PTI250, PTI 175*
Insulation to IEC 61810-1		
Type of insulation coil-contact circuit		reinforced
open contact circuit		micro disconnection
Rated insulation voltage	250 V	250 V
Pollution degree	3	2
Rated voltage system	230 V	230 / 400 V
V		3
Overvoltage category	III	III

Other data		
Mechanical endurance	30x10 ⁶ cycles	
Material		
RoHS - Directive 2002/95/EC	compliant as per product date code 0403	
Resistance to heat and fire	according EN60335, par.30**	
Environment		
Ambient temperature range	-40...+70°C	
Ambient temperature max.	85°C at 6A	
Vibration resistance (function) NO / NC contact	20 / 5 g	
Shock resistance (function) NO / NC contact	20 / 5 g	
Shock resistance (destruction)	100 g	
Category of protection	RTII - flux proof, RTIII - wash tight**	
Processing		
Mounting	pcb	
Mounting position	any	
Minimum mounting distance	≥ 0 mm	
Soldering heat resistance flux proof version	270°C / 10 s	
wash tight version	260°C / 5 s	
Relay weight	8 g	
Packaging unit, standard version	20 / 500 pcs	
reflow version	1120 pcs	

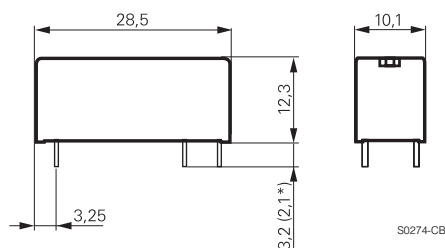
Accessoires	
For technical details see datasheet	Accessoires RYII
* reflow-solderable version	
** not as reflow-solderable version	

Dimensions

Pinning 3.2 mm



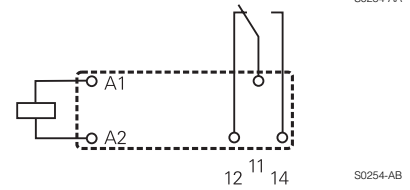
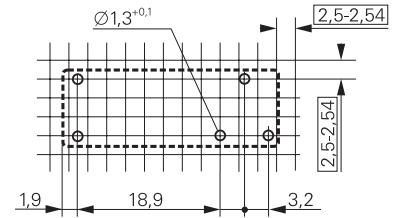
Pinning 5 mm



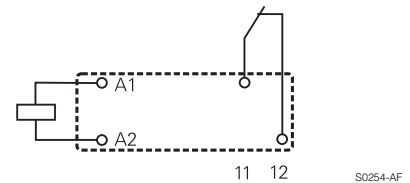
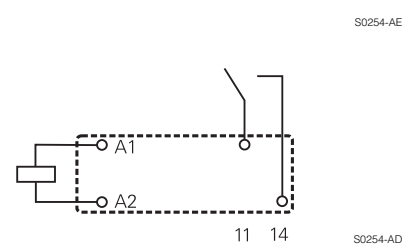
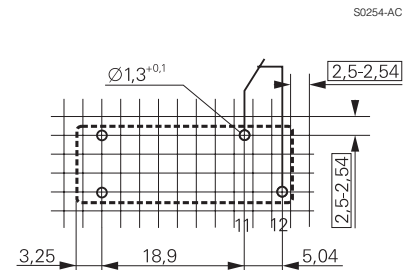
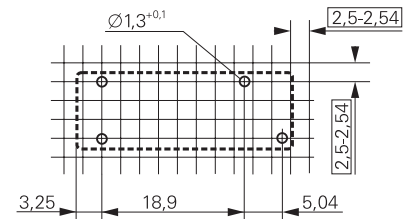
PCB layout / terminal assignment

Bottom view on solder pins

1 CO contact, 3.2 mm

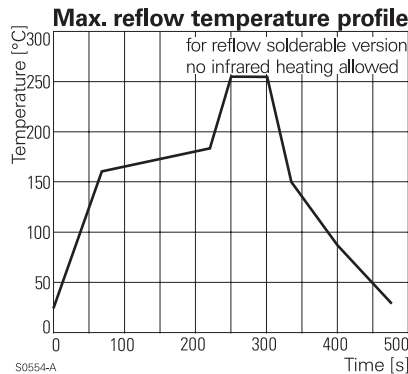


1 NO, 1 NC contact 5 mm



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Soldering profile for reflow-solderable version



Product key

Typical product key

RY 6 1 1 012

Type

RY Miniature Power PCB Relay RY II & RY II reflow-solderable

Version

2 pinning 3.2 mm, flux proof
5 pinning 5 mm, flux proof

6 pinning 3.2 mm, wash tight **)
A pinning 5 mm, wash tight **)

Contact configuration

1 1 CO contact (1 form C), pinning 3.2 mm

3 1 NO contact (1 form A), pinning 5 mm

Contact material

1 AgNi 0.15
3 AgSnO₂

2 AgNi 0.15 gold plated

Coil

Coil code: please refer to coil versions table

Version

Blank standard version
R reflow-solderable

**) not as reflow-solderable version
Other types on request

Miniature Power PCB RY II & RY II reflow solderable (Continued)

Product key	Version	Contacts	Contact material	Coil	Part number
RY211005	pinning 3.2 mm flux proof	1 CO contact	AgNi 0.15	5 VDC	4-1393224-2
RY211012				12 VDC	4-1393224-6
RY211024				24 VDC	4-1393224-9
RY211048				48 VDC	5-1393224-1
RY212005			AgNi 0.15 gold plated	5 VDC	5-1393224-2
RY212012				12 VDC	5-1393224-5
RY212024				24 VDC	5-1393224-8
RY212048				48 VDC	5-1393224-9
RY213005			AgSnO ₂	5 VDC	6-1393224-0
RY213012				12 VDC	6-1393224-1
RY213024				24 VDC	6-1393224-2
RY213048				48 VDC	6-1393224-3
RY531005	pinning 5 mm flux proof	1 NO contact	AgNi 0.15	5 VDC	7-1393224-6
RY531012				12 VDC	7-1393224-9
RY531024				24 VDC	8-1393224-2
RY531048				48 VDC	8-1393224-3
RY532012			AgNi 0.15 gold plated	12 VDC	8-1393224-4
RY532024				24 VDC	8-1393224-5
RY533012			AgSnO ₂	12 VDC	8-1393224-8
RY533024				24 VDC	8-1393224-9
RY533048				48 VDC	9-1393224-0
RY611005	pinning 3.2 mm wash tight	1 CO contact	AgNi 0.15	5 VDC	1-1393225-7
RY611012				12 VDC	1-1393225-9
RY611024				24 VDC	2-1393225-1
RY611048				48 VDC	2-1393225-2
RY612005			AgNi 0.15 gold plated	5 VDC	2-1393225-3
RY612012				12 VDC	2-1393225-6
RY612024				24 VDC	2-1393225-9
RY612048				48 VDC	3-1393225-0
RY613005			AgSnO ₂	5 VDC	5-1419136-2
RY613012				12 VDC	3-1393225-1
RY613024				24 VDC	3-1393225-3
RY613048				48 VDC	3-1393225-4
RYA31005	pinning 5 mm wash tight	1 NO contact	AgNi 0.15	5 VDC	1393224-7
RYA31012				12 VDC	1393224-9
RYA31024				24 VDC	1-1393224-2
RYA31048				48 VDC	1-1393224-3
RYA32005			AgNi 0.15 gold plated	5 VDC	1-1393224-4
RYA32012				12 VDC	1-1393224-6
RYA32024				24 VDC	1-1393224-8
RYA33005			AgSnO ₂	5 VDC	1-1393224-9
RYA33024				24 VDC	2-1393224-1