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 at reflow-solderable version)**
- **RoHS compliant (Directive 2002/95/EC) as per product date code 0403**

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

F0142-F

Approvals

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

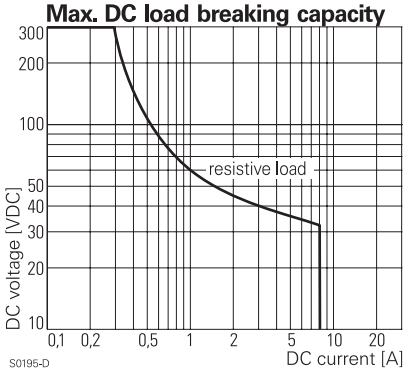
Contact data

Contact configuration	1 CO or 1NO or 1NC
Contact set	single contact
Type of interruption	micro disconnection
Rated current	8 A
Rated voltage / max. switching voltage AC	250/400 VAC
Maximum breaking capacity AC	2000 VA
Contact material	AgNi0,15, $AgSnO_2$, AgCdO
Mechanical endurance	$30x10^6$ cycles
Rated frequency of operation with / without load	6 / 1200 min^{-1}

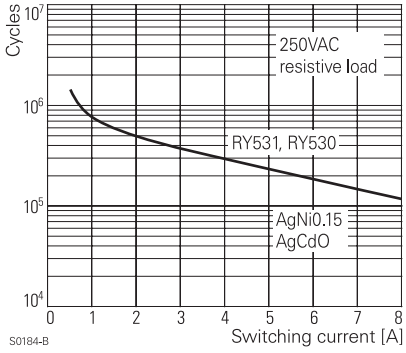
Contact ratings

Type	Load	Cycles
RY**1***	NO, 8 A, 250 VAC, resistive, 70°C	$1x10^5$
RY**1***	NC, 8 A, 250 VAC, resistive, 70°C	$5x10^4$
RY**(0,1,2)***	8 A, 30 VDC, UL 508	$3 x10^4$
RY**(0,1,2)***	0,28 A, 250 VDC, UL 508	$3 x10^4$
RY**(0,1,2)***	1/2 HP, 240 VDC, UL 508	
RY**(0,1,2)***	1/4 HP, 120 VDC, UL 508	
RY**(0)***	8 A, 415 VAC, resistive, UL 508	$6 x10^3$
RY**(0,1,2)***	Pilot duty - B300, UL 508	6000
RY*** ***	CO, 8 A, 250 VAC, resistive, 70°C	$5x10^3$
RY**1 ***	6(4)A, 250 VAC, 85°C, EN60730	$1x10^5$

Max. DC load breaking capacity



Electrical endurance



Coil data

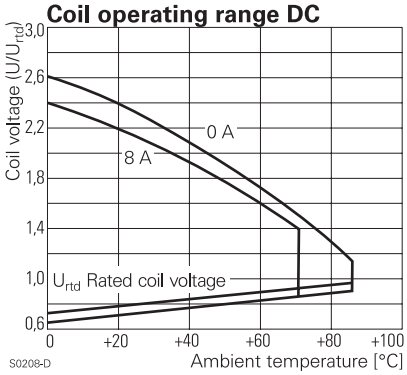
Rated coil voltage range DC coil	5...60 VDC
Coil power DC coil	typ. 220 mW
Operative range	2

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

Coil operating range DC



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Product specification according to IEC 61810-1. Product data, technical parameters, test conditions and processing information only to be used together with the 'Definitions' at schrackrelays.com in the 'Schrack' section.

Specifications subject to change.

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

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 60664-1			
Type of insulation coil-contact circuit	reinforced		
open contact circuit	functional		
Rated insulation voltage	250 V		250 V
Pollution degree	3	2	3
Rated voltage system	230 V	400 V	230 / 400 V
Overvoltage category	III		III

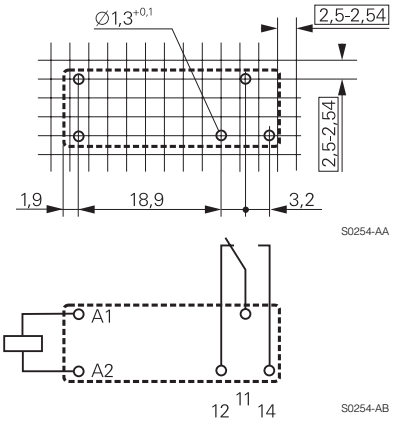
Other data	
RoHS - Directive 2002/95/EC	compliant as per product date code 0403
Flammability class according to UL94	V-0
GWFI to IEC 60335-1	> 850 °C**
GWT to IEC 60335-1	> 750 °C**
Ambient temperature range	-40...+70°C
Ambient temperature max.	85°C at 6A
Operate- / release time	typ. 7 / 3 ms
Bounce time NO / NC contact	typ. 2.5 / 4.5 ms
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**
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	20 / 500 pcs

Accessoires	
For technical details see datasheet	Accessoires RYII

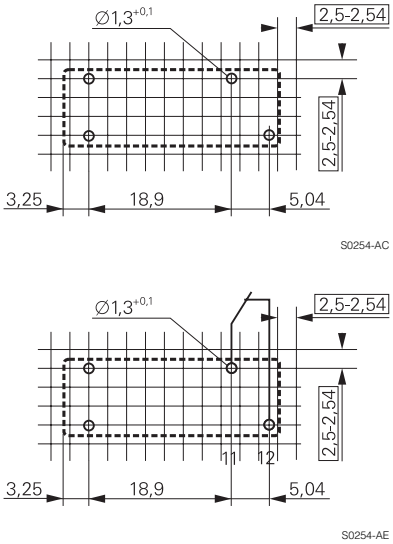
* reflow-solderable version
** not as reflow-solderable version

PCB layout / terminal assignment
Bottom view on solder pins

1 CO contact, 3.2 mm

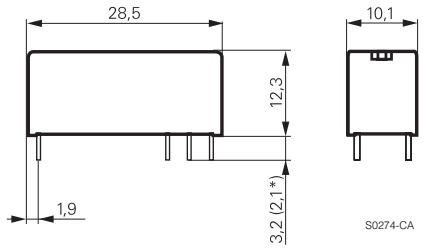


1 NO, 1 NC contact 5 mm

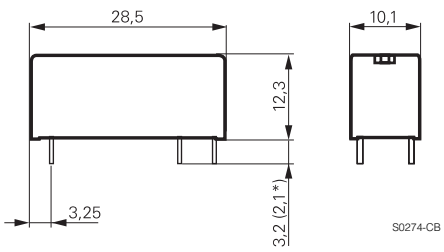


Dimensions

Pinning 3.2 mm



Pinning 5 mm



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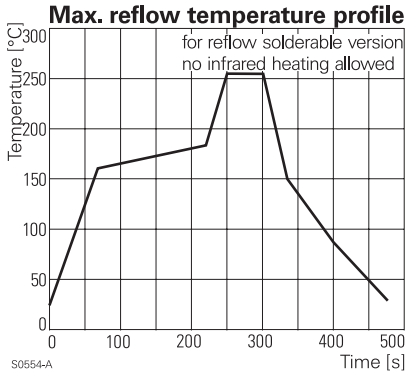
Miniature Power PCB RY II & RY II reflow-solderable (Continued)

Soldering profile for reflow-solderable version



Product key

R	Y							

Type

Version

2	pinning 3.2 mm, flux proof	**6**	pinning 3.2 mm, wash tight **)
5	pinning 5 mm, flux proof	**A**	pinning 5 mm, wash tight **)

Contact configuration

1	1 CO contact, pinning 3.2 mm	**3**	1 NO contact, pinning 5 mm

Contact material

0	AgCdO	**2**	AgNi 0.15 gold plated
1	AgNi 0.15	**3**	$AgSnO_2$

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

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

Product key	Version	Contacts	Contact material	Coil	Part number
RY210005	pinning 3.2 mm	1 CO contact	AgCdO	5 VDC	3-1393224-1
RY210012	flux proof			12 VDC	3-1393224-5
RY210024				24 VDC	3-1393224-8
RY210048				48 VDC	4-1393224-1
RY211005			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	5 VDC	5-1393224-2
RY212012			gold plated	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
RY530005	pinning 5 mm	1 NO contact	AgCdO	5 VDC	6-1393224-6
RY530012	flux proof			12 VDC	6-1393224-9
RY530024				24 VDC	7-1393224-2
RY530048				48 VDC	7-1393224-4
RY531005			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	12 VDC	8-1393224-4
RY532024			gold plated	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
RY610005	pinning 3.2 mm	1 CO contact	AgCdO	5 VDC	0-1393225-7
RY610012	wash tight			12 VDC	1-1393225-0
RY610024				24 VDC	1-1393225-4
RY610048				48 VDC	1-1393225-5
RY611005			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	5 VDC	2-1393225-3
RY612012			gold plated	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
RYA30005	pinning 5 mm	1 NO contact	AgCdO	5 VDC	0-1393224-1
RYA30012	wash tight			12 VDC	0-1393224-4
RYA30024				24 VDC	0-1393224-6
RYA30048				48 VDC	7-1393225-7
RYA31005			AgNi 0.15	5 VDC	0-1393224-7
RYA31012				12 VDC	0-1393224-9
RYA31024				24 VDC	1-1393224-2
RYA31048				48 VDC	1-1393224-3
RYA32005			AgNi 0.15	5 VDC	1-1393224-4
RYA32012			gold plated	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

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