

Miniature Power PCB RYII & RYII Reflow Solderable

- 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 60335-1¹⁾ (domestic appliances)

Typical applications
heating control, interface technology, domestic appliances, timers,
temperature control

1) not available as reflow-solderable version

Approvals

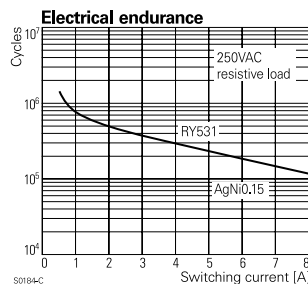
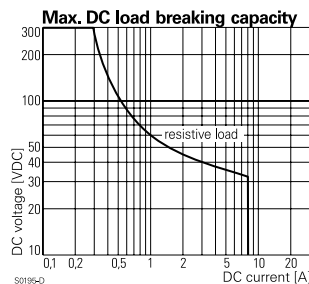
VDE REG.-Nr. 5358, cULus E214025
Technical data of approved types on request

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, 70°C | 75x10 ³ |
| RY211 | A (NO) | 8A, 250VAC, 70°C | 50x10 ³ |
| 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 | A/B (NO/NC) | B300, 70°C | 6x10 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 | 100x10 ³ |
| Mechanical endurance, DC coil | | | 30x10 ⁶ operations |



F0142-E



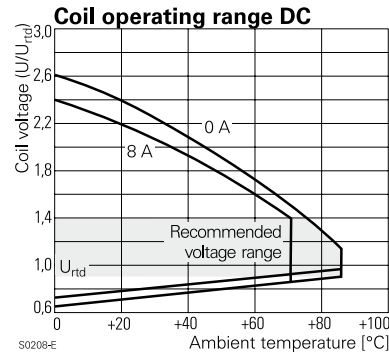
Coil Data

| | |
|----------------------------|------------|
| 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 |

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 | IIIa |
| Tracking index of relay base | PTI250 |
| reflow-solderable version | PTI175 |

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Other Data

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.tycoelectronics.com/customer-support/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 |
| Shock resistance (functional), form A (NO)/form B (NC) | 20/5g |
| Shock resistance (destructive) | 100g |
| Terminal type | PCB-THT, PCB-THR |
| Weight | 8g |
| 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 | box/1120 pcs. |

1) not available as reflow-solderable version

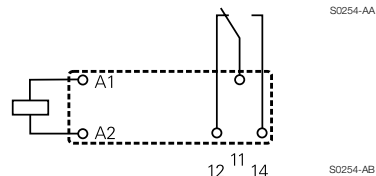
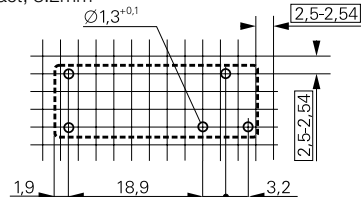
Accessories

For details see datasheet [Accessories Miniature PCB Relay RY](#)

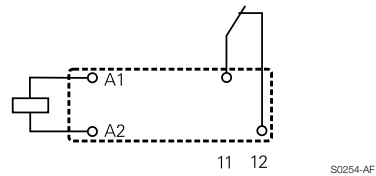
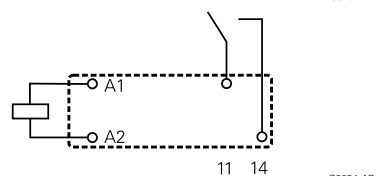
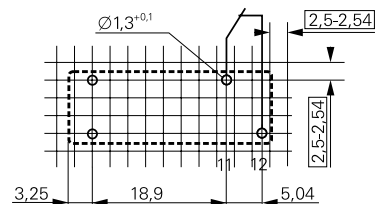
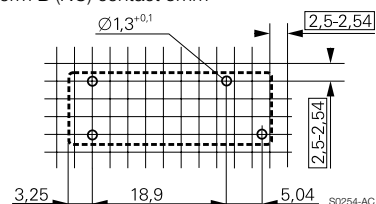
PCB layout / terminal assignment

Bottom view on solder pins

1 form C (CO) contact, 3.2mm

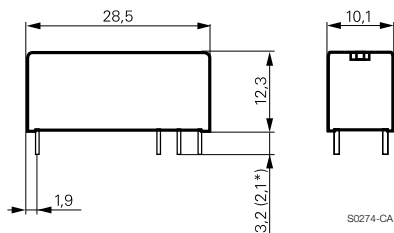


1 form A (NO), 1 form B (NC) contact 5mm

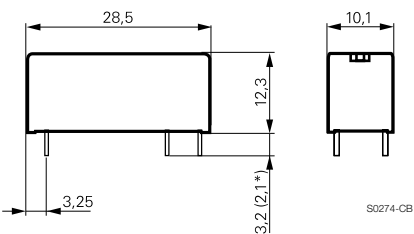


Dimensions

Pinning 3.2mm

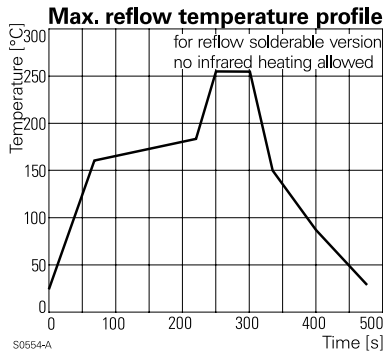


Pinning 5mm



Miniature Power PCB RYII & RYII Reflow Solderable (Continued)

**Soldering profile for
reflow-solderable version**



Product code structure

Typical product code **RY 6 1 1 012**

Type

RY Miniature Power PCB RYII & RYII reflow solderable

Version

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

Contact arrangement

1 1 form C (1 CO), pinning 3.2mm **3** 1 form A (1 NO), pinning 5mm
5 1 form B (1 NC), pinning 5mm

Contact material

1 AgNi 0.15 **2** AgNi 0.15 gold plated
3 AgSnO₂

Coil

Coil code: please refer to coil versions table

Version

Blank Standard version
R reflow-solderable

²⁾ not available as reflow-solderable version

Miniature Power PCB RYII & RYII Reflow Solderable (Continued)

| Product code | Version | Contacts | Contact material | Coil | Part number |
|--------------|------------------------------|---------------------------|--------------------------|-------|-------------|
| RY211005 | Pinning 3.2 mm flux proof | 1 form C, 1 CO contact | AgNi 0.15 | 5VDC | 4-1393224-2 |
| 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 |
| RY212012 | | | | 12VDC | 5-1393224-5 |
| RY212024 | | | | 24VDC | 5-1393224-8 |
| RY212048 | | | | 48VDC | 5-1393224-9 |
| RY213005 | | | AgSnO ₂ | 5VDC | 6-1393224-0 |
| RY213012 | | | | 12VDC | 6-1393224-1 |
| RY213024 | | | | 24VDC | 6-1393224-2 |
| RY213048 | | | | 48VDC | 6-1393224-3 |
| RY531005 | Pinning 5 mm flux proof | 1 form A, 1 NO contact | AgNi 0.15 | 5VDC | 7-1393224-6 |
| 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 |
| 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 |
| 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 |
| 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 | | 1 form A, 1 NO contact | AgNi 0.15 | 24VDC | 4-1415400-1 |
| RYA31005 | Pinning 5 mm wash tight | 1 NO contact | | 5VDC | 1393224-7 |
| RYA31012 | | | | 12VDC | 1393224-9 |
| RYA31024 | | | | 24VDC | 1-1393224-2 |
| RYA31048 | | | | 48VDC | 1-1393224-3 |
| RYA32005 | | | AgNi 0.15 gold plated | 5VDC | 1-1393224-4 |
| 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 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 solderable | 1 form A, 1 NO contact | | 5VDC | 1-1956171-1 |
| RY531012R | | | | 12VDC | 1-1956171-4 |
| RY531024R | | | | 24VDC | 1-1956171-7 |