

Special Load PCB Relay RP3SL

- 1 pole 16A, 1 form A (NO) contact
- For high inrush currents up to 120A
- Mono- or bistable
- 4kV/8mm coil-contact

Typical applications

Lighting control, timers, motor control, building automation.



Approvals

VDE Cert. No. 40025448 (DC versions only), UL E214024

Technical data of approved types on request.

Contact Data

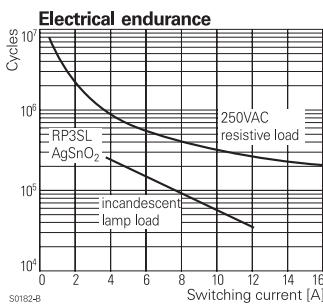
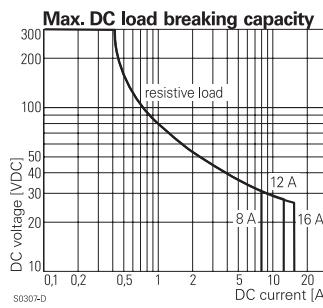
| | |
|---|-------------------------|
| Contact arrangement | 1 form A (NO) |
| Rated voltage | 250VAC |
| Max. switching voltage | 400VAC |
| Rated current | |
| flux proof version | 16A |
| wash tight version | 12A |
| Limiting making current | |
| max. 4 s, duty factor 10 % | 25A |
| max. 20 ms (incandescent lamp) | 120A |
| Breaking capacity max. | |
| flux proof version | 4000VA |
| wash tight version | 3000VA |
| Contact material | AgSnO ₂ |
| Frequency of operation, with/without load | 960/72000h ¹ |
| Operate/release time max., monostable | 14/12ms |
| Set/reset time max., bistable | 30/25ms |
| Bounce time max. | |
| monostable | 5/7ms |
| bistable | 5/15ms |

Contact ratings

| Type | Contact | Load | Cycles |
|----------|---------|-----------------------------|---------------------|
| IEC61810 | | | |
| RP3SL | A (NO) | 16A, 250VAC resistive, 70°C | 50x10 ³ |
| RP7SL | A (NO) | 12A, 250VAC resistive, 70°C | 100x10 ³ |

Mechanical endurance

| | |
|------------|--------------------------------|
| monostable | >20x10 ⁶ operations |
| bistable | >1x10 ⁶ operations |



Coil Data

Coil data, monostable coil

Coil voltage range 5 to 110VDC

Operative range, IEC 61810

 flux proof version

 2

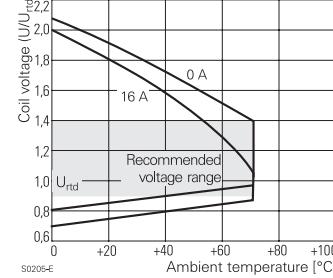
 wash tight version

 1

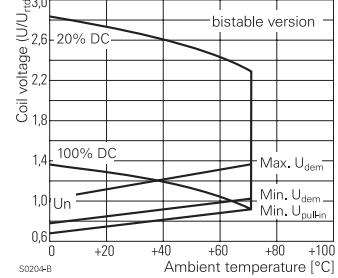
Coil versions, DC coil

| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance $\Omega \pm 10\%$ ¹⁾ | Rated coil power mW |
|-----------|-------------------|---------------------|---------------------|---|---------------------|
| 005 | 5 | 3.8 | 0.5 | 54 | 500 |
| 006 | 6 | 4.5 | 0.6 | 68 | 500 |
| 012 | 12 | 9.0 | 1.2 | 270 | 500 |
| 024 | 24 | 18.0 | 2.4 | 1100 ¹⁾ | 500 |
| 048 | 48 | 36.0 | 4.8 | 4400 ¹⁾ | 500 |
| 060 | 60 | 45.0 | 6.0 | 6540 ¹⁾ | 500 |

Coil operating range DC



Coil operating range DC



Coil Data, bistable coil

1 coil 2 coils

Coil voltage range 5 to 24VDC

Operative range, IEC 61810

1

Reset voltage min/max, % of U_{rdt}

70/110% 75/120%

Min./Max. energization duration

20ms/1min at < 50%DF

Coil versions, bistable

| Coil code | Rated voltage VDC | Set voltage VDC | Reset voltage VDC | Reset R1 Ω/W | Coil resistance $\Omega \pm 10\%$ ¹⁾ | Rated coil power mW |
|-----------|-------------------|-----------------|-------------------|---------------------|---|---------------------|
| A05 | 5 | 3.7 | 3.6 | 39/0.5 | 21 | 1250 |
| A12 | 12 | 9.0 | 8.7 | 220/0.5 | 115 | 1250 |
| A24 | 24 | 18.0 | 16.7 | 820/0.5 | 460 | 1250 |

Coil versions, bistable 1 coil

| | | | | | | |
|-----|----|------|------|---------|-----|------|
| A05 | 5 | 3.7 | 3.6 | 39/0.5 | 21 | 1250 |
| A12 | 12 | 9.0 | 8.7 | 220/0.5 | 115 | 1250 |
| A24 | 24 | 18.0 | 16.7 | 820/0.5 | 460 | 1250 |

Coil versions, bistable 2 coils

| | | | | | |
|-----|----|------|------|-------------------|------|
| F12 | 12 | 9.0 | 9.0 | 105 ¹⁾ | 1250 |
| F24 | 24 | 18.0 | 18.0 | 460 ¹⁾ | 1250 |

¹⁾ Coil resistance $\pm 15\%$.

All figures are given for coil without pre-energization, at ambient temperature +23°C, duty factor 20%. Other coil voltages on request.

Special Load PCB Relay RP3SL (Continued)

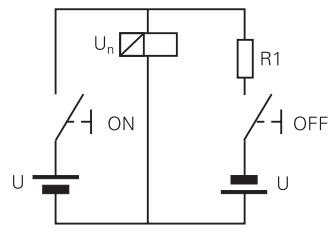
Insulation Data

| | |
|--|----------------------|
| Initial dielectric strength between open contacts | 2000V _{rms} |
| between contact and coil | 4000V _{rms} |
| Clearance/creepage between contact and coil | ≥8/8mm |
| Material group of insulation parts | IIIa |
| Tracking index of relay base | PTI250V |

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

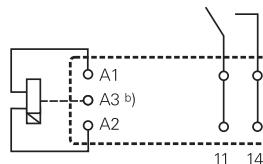
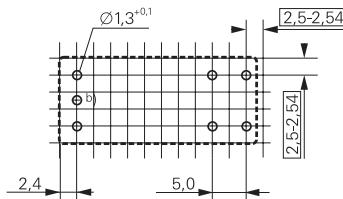
| | |
|---|---------------------------------------|
| Ambient temperature | |
| flux proof version | -40 to +70°C |
| wash tight version | -40 to +35°C |
| Category of environmental protection | |
| IEC 61810 | RTII - flux proof, RTIII - wash tight |
| Vibration resistance (functional), form A contact | 20g |
| Shock resistance (destructive) | 100g |
| Terminal type | PCB-THT |
| Mounting distance, 12A/16A | 0mm/≥3mm |
| Weight | 18g |
| Resistance to soldering heat THT, IEC 60068-2-20 | |
| flux proof version | 270°C/10s |
| wash tight version | 260°C/5s |
| Packaging/unit | |
| monostable and bistable 1coil version | tube/20 pcs., box/500 pcs. |
| bistable 2coil version | tray/25 pcs., box/100 pcs. |

Circuit scheme for bistable 1 coil


S0328-A

PCB layout / terminal assignment

Bottom view on solder pins



Bistable versions:

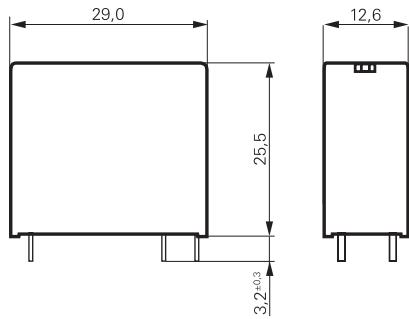
Indicated contact position during or after coil energization with reset voltage.

2-coil versions:

Operate A2, A3

Reset A1, A3

b) for 2 coil version only

Dimensions


Special Load PCB Relay RP3SL (Continued)

Product code structure

 Typical product code **RP** **3** **SL** **012**
Type
RP Special Load PCB Relay RP 3 SL

Version
3 Flux proof **7** Wash tight

Contact configuration / contact material
SL 1 form A contact (1 NO), AgSnO₂
Coil
 Coil code: please refer to coil versions table

| Product code | Version | Contact material | Coil version | Coil | Part number |
|--------------|-----------------------|------------------|------------------|-------|-------------|
| RP3SL005 | 1 form A (NO) contact | AgSnO | DC coil | 5VDC | 1393230-7 |
| RP3SL012 | 16A | | | 12VDC | 1393230-9 |
| RP3SL018 | flux proof | | | 18VDC | 1-1393230-0 |
| RP3SL024 | | | | 24VDC | 1-1393230-1 |
| RP3SL048 | | | | 48VDC | 1-1393230-2 |
| RP3SL060 | | | | 60VDC | 1-1393230-3 |
| RP3SLA06 | | | Bistable 1 coil | 6VDC | 1393230-2 |
| RP3SLA24 | | | | 24VDC | 1393230-4 |
| RP3SLF12 | | | Bistable 2 coils | 12VDC | 1393230-5 |

This list represents the most common types and does not show all variants covered by this datasheet.
 Other types on request.

Mouser Electronics

Authorized Distributor

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[TE Connectivity:](#)

[RP3SL012](#)