

Power PCB Relay RZL

- 1 pole 12/16 A, 1 form C (CO) or 1 form A (NO) contact
- DC coil 530 mW
- 5kV/10mm coil-contact, reinforced insulation
- Ambient temperature 70°C (special applications 85°C)



Typical applications
Household appliances, boiler control, timers, garage door control



F0305-A

Approvals

VDE Cert. No. 40023970, UL E214025, CQC 14001114367, CQC 14002113865

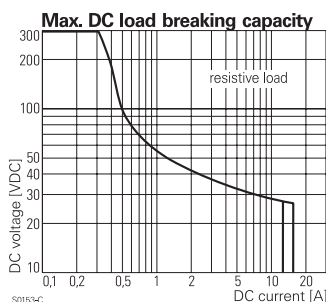
Technical data of approved types on request

| Contact Data | 12A | 16A |
|--|--------------------------------|--------|
| Contact arrangement | 1 form C (CO) or 1 form A (NO) | |
| Rated voltage | 250VAC | |
| Max. switching voltage | 400VAC | |
| Rated current | 12A | 16A |
| Limiting making current (form A contact) max. 4s, duty factor 10% | 30A | |
| Breaking capacity max. | 3000VA | 4000VA |
| Contact material | AgNi 90/10 | |
| Contact style | single contact | |
| Frequency of operation, with/without load | 360/72000h ⁻¹ | |
| Operate/release time max. | 8/6ms | |
| Bounce time max., form A/form B | 4/6ms | |

Contact ratings

| Type | Contact | Load | Cycles |
|-------------------------------|---------|----------------------------|---------------------|
| IEC 61810¹⁾ | | | |
| RZL3-1A4. | A (NO) | 16A, 250VAC, 85°C | 50x10 ³ |
| RZL3-1C4. | C (CO) | 16A, 250VAC, 85°C | 10x10 ³ |
| RZL3-1A4. | A (NO) | 16A, 250VAC, 70°C | 100x10 ³ |
| RZL1-1A4 | A (NO) | 12A, 250VAC, 85°C | 100x10 ³ |
| RZL1-1A4 | A (NO) | 16A, 250VAC, 70°C | 100x10 ³ |
| RZL3-1A4. | A (NO) | 8A, cosφ=0.4, 250VAC, 25°C | 100x10 ³ |
| RZL3-1C4. | B (NC) | 8A, 250VAC, 25°C | 100x10 ³ |
| UL 508¹⁾ | | | |
| RZL3-1A4. | A (NO) | 16A, 250VAC, 85°C | 50x10 ³ |
| RZL3-1C4. | C (CO) | 16A, 250VAC, 85°C | 10x10 ³ |
| RZL3-1A4. | A (NO) | 16A, 250VAC, 70°C | 100x10 ³ |
| RZL1-1A4 | A (NO) | 12A, 250VAC, 85°C | 100x10 ³ |
| RZL1-1A4 | A (NO) | 16A, 250VAC, 70°C | 100x10 ³ |
| RZL1/3-1A4. | A (NO) | 1hp, 240VAC, 25°C | 6x10 ³ |
| RZL1/3-1A4. | A (NO) | 1/2hp, 120VAC, 70°C | 6x10 ³ |

1) Ratings only for RZL flux proof (R) version. Wash tight ratings on request



50153-C

Coil Data

| | |
|---|------------|
| Coil voltage range | 5 to 48VDC |
| Operative range, IEC 61810 | 2 |
| Coil insulation system according UL1446 | class F |

Coil versions, DC coil

| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance Ω±10% | Rated coil power mW |
|-----------|-------------------|---------------------|---------------------|-----------------------|---------------------|
| L005 | 5 | 3,5 | 0,5 | 47 | 530 |
| L006 | 6 | 4,2 | 0,6 | 67 | 530 |
| L009 | 9 | 6,3 | 0,9 | 153 | 530 |
| L012 | 12 | 8,4 | 1,2 | 272 | 530 |
| L024 | 24 | 16,8 | 2,4 | 1086 | 530 |
| L048 | 48 | 33,6 | 4,8 | 4347 | 530 |

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 | ≥10/10mm |
| Material group of insulation parts | IIIa |
| Tracking index of relay base | PTI250V |

Other Data

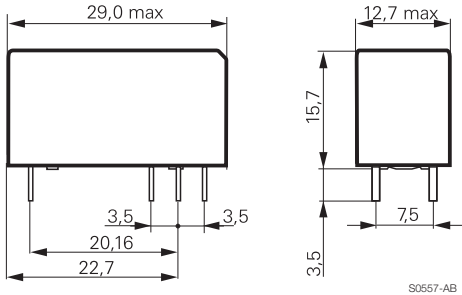
| | |
|--|-------------------------------------|
| Material compliance: EU RoHS/ELV, China RoHS compliance, | |
| Ambient temperature | |
| standard version | -40 to 70°C |
| special applications | -40 to 85°C |
| Category of environmental protection | |
| IEC 61810 | RTII - flux proof; RTIII wash tight |
| Vibration resistance (functional), 30 to 500Hz | |
| closing form A contact | >15g |
| opening form A contact | >20g |
| opening form B contact | >5g |
| Shock resistance (destructive) | 100g |
| Terminal type | PCB-THT |
| Mounting distance | |
| standard version | ≥0mm |
| Weight | 10g |
| Resistance to soldering heat THT | |
| IEC 60068-2-20 | 260°C/10s ²⁾ |
| Packaging/unit | tube/20 pcs., box/500 pcs. |

2) The use of foaming flux is not permitted.

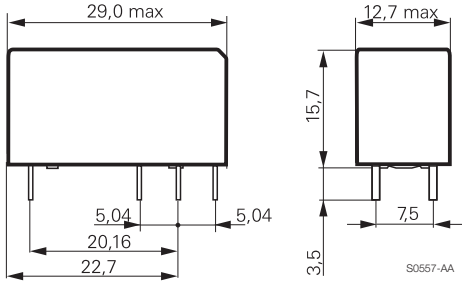
Power PCB Relay RZL (Continued)

Dimensions

12A/16A, pinning 3.5mm ²⁾



12A, 16A, pinning 5mm ²⁾



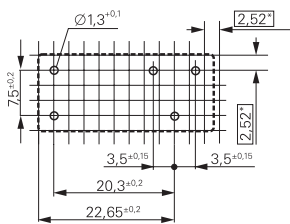
PCB layout / terminal assignment

Bottom view on solder pins

Recommended pcb hole for manual mounting:
Ø1.3mm

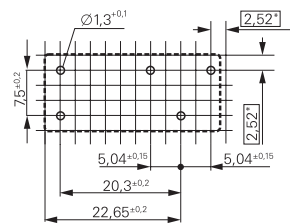
For automated mounting please ask for
detailed drawing.

12A/16A, pinning 3.5mm ²⁾



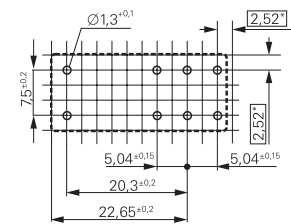
S0418-CB

16A, pinning 5mm



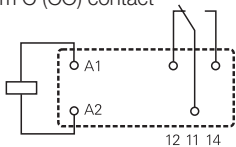
S0418-CN

16A, pinning 5mm



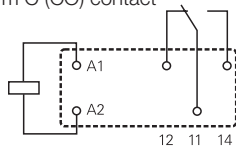
S0418-CA

1 form C (CO) contact



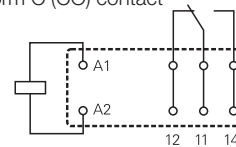
S0163-BG

1 form C (CO) contact



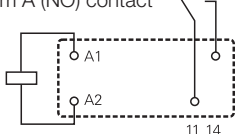
S0163-BC

1 form C (CO) contact



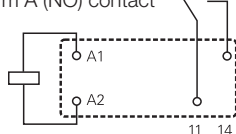
S0163-BE

1 form A (NO) contact



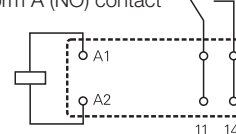
S0163-BH

1 form A (NO) contact



S0163-BD

1 form A (NO) contact



S0163-BF

²⁾ For 1 Form C type, subject to develop as market requirement

Power PCB Relay RZL (Continued)

| | | | | | | | | | |
|-------------------------------|--|----------------------|--|-----------|----------------------------|----------|------------|----------|--------------|
| Product code structure | | Typical product code | | RZ | L | 3 | -1C | 4 | -L012 |
| Type | RZ Power PCB Relay RZ | | | | | | | | |
| Version | L Black Cover | | | | | | | | |
| Version | 1 3.5mm pinning, 12A/16A | | | | 3 5mm double pinning, 16A | | | | |
| Contact configuration | 1A 1 form A (1 NO) contact | | | | 1C 1 form C (1 CO) contact | | | | |
| Contact material | 4 AgNi 90/10 | | | | | | | | |
| Coil version | Coil code: please refer to coil versions table | | | | | | | | |
| Sealing Level | R flux proof | | | | W wash tight | | | | |

| Product code | Version | Contacts | Contact material | Coil | Part number |
|-----------------|------------------------------------|---------------|------------------|-------|-------------|
| RZL1-1A4-L012-R | 12A/16A, pinning 3.5mm, flux proof | 1 form A (NO) | AgNi 90/10 | 12VDC | 2158100-4 |
| RZL3-1A4-L012-R | 16A, pinning 5mm, flux proof | 1 form A (NO) | | 12VDC | 1-2158100-6 |
| RZL3-1A4-L024-R | | 1 form A (NO) | | 24VDC | 1-2158100-7 |
| RZL3-1C4-L012-R | | 1 form C (CO) | | 12VDC | 2-2158100-2 |
| RZL3-1C4-L024-R | | 1 form C (CO) | | 24VDC | 2-2158100-3 |
| RZL3-1A4-L012-W | 16A, pinning 5mm, wash tight | 1 form A (NO) | | 12VDC | 4-2158100-0 |
| RZL3-1C4-L024-W | | 1 form C (CO) | | 24VDC | 4-2158100-7 |

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