

Power PCB Relay U/UB

- 1 pole 7 A, mono or bistable
- 1 CO or 1 NO or 1 NC contact
- Bistable and DC-version
- Wash tight version
- Version for 10 A on request
- RoHS compliant (Directive 2002/95/EC) as per product date code 0402



Applications

Heating control, installation, battery powered equipment

F0153-B

Approvals

UL E194065
Technical data of approved types on request

Contact data

| | |
|--|--|
| Contact configuration | 1 CO, 1 NO or 1 NC |
| Contact set | single contact |
| Type of interruption | micro disconnection |
| Rated current | standard and bistable: 7 A sensitive: 5 A |
| Rated voltage / max.switching voltage AC | 240/400 V |
| Maximum breaking capacity AC | standard and bistable: 1750 VA sensitive: 1250 VA |
| Limiting making capacity, max 4 s, duty factor 10% | 12 A |
| Contact material | AgNi 90/10 |
| Mechanical endurance | 20x10 ⁶ cycles |
| Rated frequency of operation with / without load | 10/300 min ⁻¹ |

Contact ratings

| Type | Load | Cycles |
|-----------------------|-------------------------|---------------------|
| standard and bistable | 7 A, 250 VAC, resistive | 5x10 ⁴ |
| standard | 5 A, 250 VAC, resistive | 1,5x10 ⁵ |
| sensitive | 5 A, 250 VAC, resistive | 1x10 ⁵ |
| bistable | 5 A, 250 VAC, resistive | 1x10 ⁵ |
| standard and bistable | 7 A, 24 VDC, resistive | 5x10 ⁴ |
| sensitive | 5 A, 24 VDC, resistive | 3x10 ⁴ |

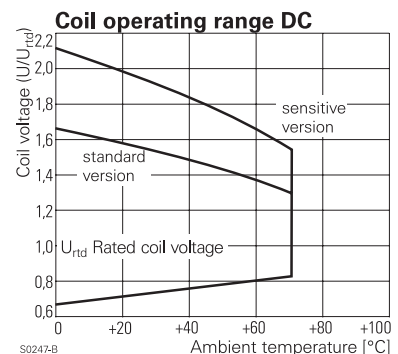
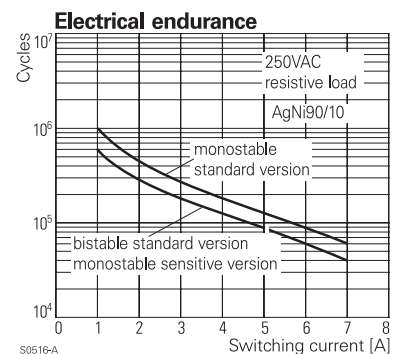
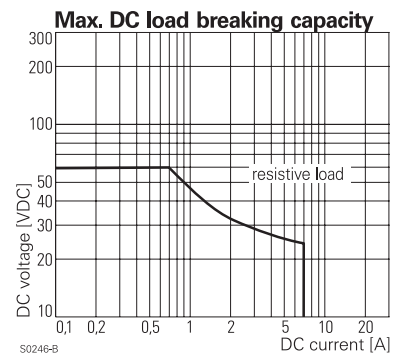
Coil data

| | monostable | sensitive |
|----------------------------------|---------------------|--------------------------------------|
| Rated coil voltage range DC coil | 6 ... 48 VDC | |
| Coil power DC coil | 3..24 VDC 48 VDC | 450 mW 330 mW 610 mW 570 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 |
|-----------------------|-------------------|---------------------|---------------------|---------------------|---------------------|
| standard coil | | | | | |
| 003 | 6 | 4.2 | 0.6 | 80±10% | 450 |
| 005 | 12 | 8.4 | 1.2 | 320±10% | 450 |
| 007 | 24 | 16.8 | 2.4 | 1280±10% | 450 |
| 008 | 48 | 33.6 | 4.8 | 3800±10% | 606 |
| sensitive coil | | | | | |
| 103 | 6 | 4.4 | 0.6 | 110±10% | 327 |
| 105 | 12 | 8.8 | 1.2 | 440±10% | 327 |
| 107 | 24 | 17.5 | 2.4 | 1780±10% | 324 |
| 108 | 48 | 35.0 | 4.8 | 4000±10% | 576 |

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



Power PCB Relay U/UB (Continued)

| Coil data | | bistable |
|---|--|-----------------------|
| Rated coil voltage range | | 6 ... 48 VDC |
| Rated operate power | | 900...1300 mW / 20 ms |
| Reset voltage min., % of rated coil voltage | | 25% |
| Reset voltage max., % of rated coil voltage | | 45% |

| Coil versions, bistable | | | | | |
|-------------------------|-------------------|---------------------|-------------------|---------------------|---------------------|
| Coil code | Rated voltage VDC | Operate voltage VDC | Reset voltage VDC | Coil resistance Ohm | Rated coil power mW |
| 003 | 6 | 4.7 | 1.5 | 33±10% | 1091 |
| 005 | 12 | 9.4 | 3.0 | 119±10% | 1210 |
| 007 | 24 | 18.7 | 6.0 | 475±10% | 1213 |
| 008 | 48 | 37.4 | 12.0 | 1750±10% | 1317 |

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

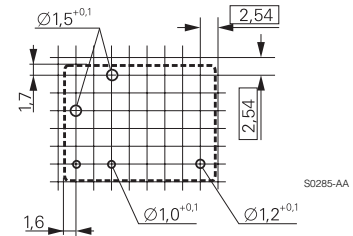
| Insulation | |
|---|--|
| Dielectric strength coil-contact circuit | 2000 V _{rms} version V23148-*0*** 4000 V _{rms} version V23148-*1*** |
| open contact circuit | 1000 V _{rms} |
| Clearance / creepage coil-contact circuit | ≥ 2.5 / 2.5 mm version V23148-*0*** ≥ 3.5 / 3.5 mm version V23148-*1*** |
| Material group of insulation parts | ≥ IIIa |
| Insulation to IEC 60664-1 | |
| Type of insulation coil-contact circuit | basic |
| open contact circuit | functional |
| Rated insulation voltage | 250 V |
| Pollution degree | 2 |
| Rated voltage system | 230/400 V |
| Overvoltage category | II |

| Other data | |
|---|--|
| RoHS - Directive 2002/95/EC | compliant as per produc date code 0402 |
| Flammability class according to UL94 | V-0 |
| Ambient temperature range | -25...+70°C |
| Operate- / release time | standard: 5/3 ms sensitive: 7/3 ms |
| Operate- / reset time | 5/3 ms |
| Bounce time NO / NC contact | 2/10 ms |
| Vibration resistance (function) NO / NC contact | 10/10 g |
| Shock resistance (function) NO / NC contact | 10/10 g |
| Category of protection | RT III - wash tight |
| Resistance to soldering heat wash-tight version | 260°C / 5 s |
| Relay weight | 9,5 g |
| Packaging unit | 25 pcs |

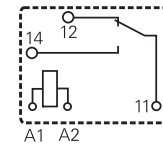
PCB layout / terminal assignment

Bottom view on solder pins

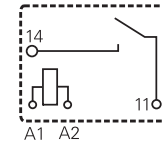
Monostable and bistable 1 coil



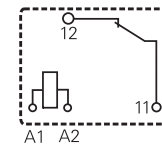
CO contact



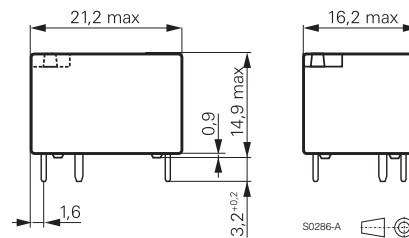
NO contact



NC contact



Dimensions



Product key

V 2 3 1 4 8 - [] [] [] [] - [] [] []

Type

Version

- A** monostable (Miniature power relay U)
- B** bistable (Miniature power relay UB, remanence version)

Dielectric strength coil-contact

- 0** 2 kV_{rms}
- 1** 4 kV_{rms}

Version

- 0** monostable standard
- 1** monostable sensitive
- 0** bistable standard

Coil

- 03** 6 VDC
- 05** 12 VDC
- 07** 24 VDC
- 08** 48 VDC

Contact configuration

- A** 1 CO contact
- B** 1 NO contact
- C** 1 NC contact

Contact material

- 101** AgNi10

Other types on request

| Product key | Version | Dielectric | Version | Configuration | Coil | Part number |
|-------------------|------------|-----------------------|-----------|---------------|--------|-------------|
| V23148-A0003-A101 | monostable | 2000 V _{rms} | standard | 1 CO contact | 6 VDC | 0-1393203-4 |
| V23148-A0003-B101 | relay 'U' | contact-coil | | 1 NO contact | | 0-1393203-5 |
| V23148-A0005-A101 | AgNi10 | | | 1 CO contact | 12 VDC | 0-1393203-8 |
| V23148-A0005-B101 | | | | 1 NO contact | | 0-1393203-9 |
| V23148-A0007-A101 | | | | 1 CO contact | 24 VDC | 1-1393203-1 |
| V23148-A0007-B101 | | | | 1 NO contact | | 1-1393203-2 |
| V23148-A0008-A101 | | | | 1 CO contact | 48 VDC | 1-1393203-4 |
| V23148-A0105-A101 | | | sensitive | | 12 VDC | 2-1393203-1 |
| V23148-A0107-A101 | | | | | 24 VDC | 2-1393203-4 |
| V23148-A1005-A101 | | 4000 V _{rms} | standard | | 12 VDC | 2-1393203-7 |
| V23148-A1007-A101 | | contact-coil | | | 24 VDC | 2-1393203-8 |
| V23148-A1105-A101 | | | sensitive | | 12 VDC | 2-1393203-9 |
| V23148-A1107-A101 | | | | | 24 VDC | 3-1393203-1 |
| V23148-B0003-A101 | bistable | 2000 V _{rms} | standard | | 6 VDC | 0-1393204-4 |
| V23148-B0005-A101 | relay 'UB' | contact-coil | | | 12 VDC | 0-1393204-7 |
| V23148-B0007-A101 | AgNi10 | | | | 24 VDC | 1-1393204-0 |
| V23148-B0008-A101 | | | | | 48 VDC | 1-1393204-3 |