

Miniature Power PCB Relay MSR

- 1 pole 8 / 10 A, 1CO or 1NO contact
- High inrush currents with AgSnO contacts (TV4 = 65 A)
- 4 kV/8 mm coil-contact
- Reinforced insulation (protection class II)
- Ambient temperature up to 85°C at 8 A
- Plastic materials according to IEC60335-1 (domestic appliances)
- RoHS compliant (Directive 2002 / 95 / EC) as per product date code 0404

Applications

HVAC, interface technology, power supplies, TV-/Monitor control, computer-/communication technology, domestic appliances, Hi-Fi products, timers



F0143-C

Approvals

VDE REG.-Nr. 3919, cULus E214024
Technical data of approved types on request

Contact data

| | | |
|--|----------------------------|------------|
| Contact configuration | 1CO or 1NO | |
| Contact set | single contact | |
| Type of interruption | micro disconnection | |
| Rated current | versions A,B: | 8 A |
| | versions C,D: | 10 A |
| Rated voltage / max.switching voltage AC | 240/400 VAC | |
| Maximum breaking capacity AC | 2000 VA | |
| Limiting making capacity, max 20 ms | A302: 65 A | |
| max 4 s, duty factor 10% | 15 A | 15 A |
| Contact material | AgSnO ₂ , AgCdO | AgNiO, 15* |
| Mechanical endurance | 10x10 ⁶ cycles | |
| Rated frequency of operation with / without load | 6 / 1200 min ⁻¹ | |

*not recommended for AC loads with arcing (CC2 according EN61810-2)

Contact ratings

| Type | Load | Cycles |
|-------------------|--|---------------------|
| V23061-A1***-A302 | 8 A, 250 VAC, resistive load, 85°C, 1 mm mounting distance, 6 cycles min ⁻¹ , 50% duty factor, EN61810-1 | 100x10 ³ |
| V23061-C2***-A302 | 10 A, 250 VAC, resistive load, 85°C, 0 mm mounting distance, 6 cycles min ⁻¹ , 50% duty factor, EN61810-1 | 10x10 ³ |
| V23061-C2***-A302 | 5 A, 250 VAC, resistive load, 105°C, 0 mm mounting distance, 6 cycles min ⁻¹ , 50% duty factor, EN61810-1 | 100x10 ³ |
| V23061-A1***-A302 | TV-4 Tungsten, 120 VAC, UL508 | 25x10 ³ |
| V23061-*****-A30* | 240 VAC, A300, Pilot duty, UL508 | 6x10 ³ |

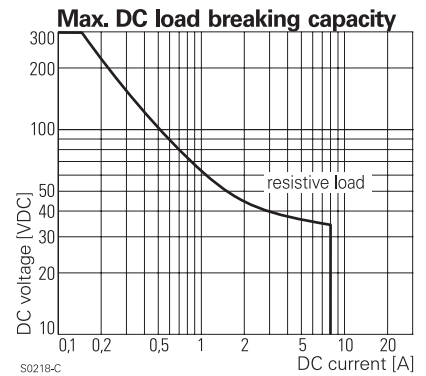
Coil data

| | |
|---|------------------|
| Rated coil voltage range DC coil | 3...60 VDC |
| Coil power DC coil | typ. 220 mW |
| Operative range | 2 |
| Coil insulation system according UL1446 | Class A, Class F |

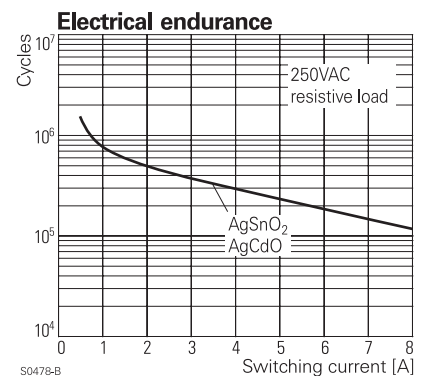
Coil versions, DC-coil

| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance Ohm | Rated coil power mW |
|-----------|-------------------|---------------------|---------------------|---------------------|---------------------|
| 001 | 3 | 2.1 | 0.3 | 40±10% | 225 |
| 002 | 5 | 3.4 | 0.5 | 118±10% | 212 |
| 003 | 6 | 4.1 | 0.6 | 165±10% | 218 |
| 004 | 9 | 6.1 | 0.9 | 364±10% | 223 |
| 005 | 12 | 8.2 | 1.2 | 652±10% | 221 |
| 007 | 24 | 16.3 | 2.4 | 2270±10% | 254 |
| 009 | 48 | 32.6 | 4.8 | 8790±10% | 262 |
| 010 | 60 | 40.8 | 6.0 | 15265±15% | 236 |

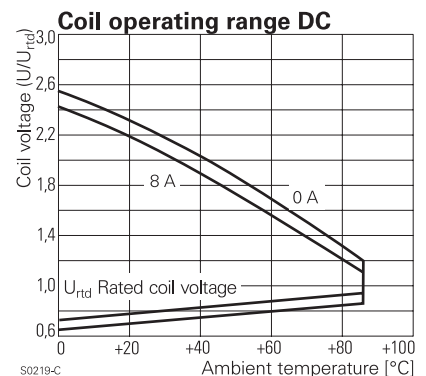
All figures are given for coil without preenergization, at ambient temperature +23°C
Other coil voltages on request



S0218-C



S0478-B



S0219-C

Miniature Power PCB Relay MSR (Continued)

| Insulation | CO contact | NO contact |
|---|-------------|-----------------------|
| Dielectric strength coil-contact circuit | | 4000 V _{rms} |
| open contact circuit | | 1000 V _{rms} |
| Clearance / creepage coil-contact circuit | ≥ 8 / 8 mms | ≥ 8 / 8 mm |
| Material group of insulation parts | IIIb | IIIb |
| Insulation to IEC 60664-1 | | |
| Type of insulation coil-contact circuit | reinforced | reinforced |
| open contact circuit | functional | functional |
| Rated insulation voltage | 250 V | 250 V |
| Pollution degree | 3 | 2 |
| Rated voltage system | 230 V | 400 V |
| Overvoltage category | III | III |

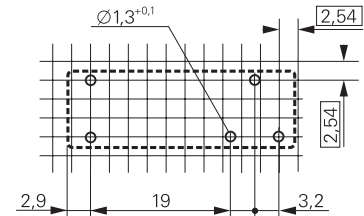
Other data

| | | |
|---|---|--|
| RoHS - Directive 2002/95/EC | compliant as per product date code 0404 | |
| Flammability class according to UL94 | V-0 | |
| For WG version: GWFI to IEC 60335-1 | > 850 °C | |
| GWIT to IEC 60335-1 | > 775 °C | |
| Ambient temperature range | -40...+85°C | |
| Operate- / release time | 6 / 2,5 ms | |
| Bounce time NO / NC contact | 0,5 / 4 ms | |
| Vibration resistance (function) NO / NC contact | 10 / 4 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 | |
| Resistance to soldering heat flux-proof version | 270°C / 10 s | |
| wash-tight version | 260°C / 5s | |
| Relay weight | 11 g | |
| Packaging unit | 20 / 1000 pcs | |

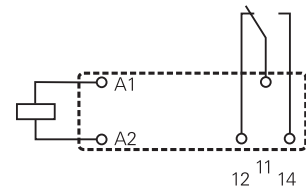
PCB layout / terminal assignment

Bottom view on solder pins

1 CO contact, 3,2 mm

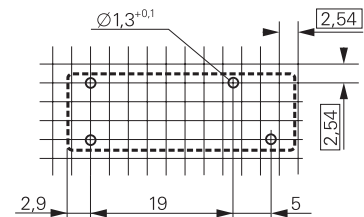


S0255-AA

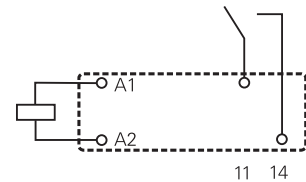


S0255-AB

1 NO contact, 5 mm



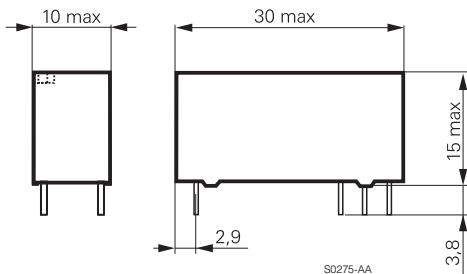
S0255-AH



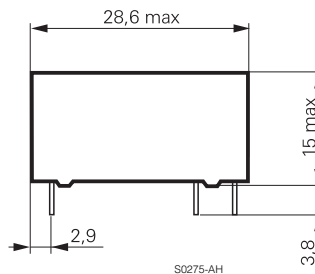
S0255-AI

Dimensions

1 CO contact, 3,2 mm



1 NO contact, 5 mm



Miniature Power PCB Relay MSR (Continued)

Product key

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|--|--|--|--|--|---|---|--|--|--|--|
| V | 2 | 3 | 0 | 6 | 1 | - | | | | | | - | A | | | | |
|---|---|---|---|---|---|---|--|--|--|--|--|---|---|--|--|--|--|

Type

Version

- | | | | |
|----------|--------------------------|----------|--------------------------|
| A | 1 NO contact, UL-class A | B | 1 CO contact, UL-class A |
| C | 1 NO contact, UL-class F | D | 1 CO contact, UL-class F |

Version

- | | | | |
|----------|------------|----------|------------|
| 1 | wash tight | 2 | flux proof |
|----------|------------|----------|------------|

Coil

Coil code: please refer to coil versions table

Contact system

- A** standard

Contact material

- | | | | |
|----------|--------------------|----------|--------------------|
| 3 | AgSnO ₂ | 5 | AgNi 0.15 |
| 4 | AgCdO | 6 | AgCdO, gold plated |

Contact configuration

- | | | | |
|-----------|--------------|-----------|--------------|
| 01 | 1 CO contact | 02 | 1 NO contact |
|-----------|--------------|-----------|--------------|

Other types on request

| Product key | Version | Contacts | Contact material | Coil | Part number |
|-------------------|------------|--------------|--------------------|--------|-------------|
| V23061-A1002-A302 | wash tight | 1 NO contact | AgSnO ₂ | 5 VDC | 0-1393222-4 |
| V23061-A1002-A502 | | | AgNi 0.15 | | 0-1393222-6 |
| V23061-A1003-A302 | | | AgSnO ₂ | 6 VDC | 0-1393222-9 |
| V23061-A1003-A502 | | | AgNi 0.15 | | 1-1393222-3 |
| V23061-A1005-A302 | | | AgSnO ₂ | 12 VDC | 2-1393222-0 |
| V23061-A1005-A502 | | | AgNi 0.15 | | 2-1393222-7 |
| V23061-A1005-A602 | | | AgCdO gold pl. | | 2-1393222-8 |
| V23061-A1007-A302 | | | AgSnO ₂ | 24 VDC | 3-1393222-9 |
| V23061-A1007-A502 | | | AgNi 0.15 | | 4-1393222-6 |
| V23061-A1007-A602 | | | AgCdO gold pl. | | 4-1393222-7 |
| V23061-A1009-A502 | | | AgNi 0.15 | 48 VDC | 5-1393222-7 |
| V23061-A1009-A602 | | | AgCdO gold pl. | | 5-1393222-8 |
| V23061-A1010-A502 | | | AgNi 0.15 | 60 VDC | 6-1393222-2 |
| V23061-A1010-A602 | | | AgCdO gold pl. | | 6-1393222-3 |
| V23061-B1002-A301 | | 1 CO contact | AgSnO ₂ | 5 VDC | 7-1393222-2 |
| V23061-B1002-A501 | | | AgNi 0.15 | | 7-1393222-4 |
| V23061-B1002-A601 | | | AgCdO gold pl. | | 7-1393222-5 |
| V23061-B1003-A501 | | | AgNi 0.15 | 6 VDC | 8-1393222-1 |
| V23061-B1003-A601 | | | AgCdO gold pl. | | 8-1393222-2 |
| V23061-B1005-A301 | | | AgSnO ₂ | 12 VDC | 9-1393222-1 |
| V23061-B1005-A501 | | | AgNi 0.15 | | 9-1393222-7 |
| V23061-B1005-A601 | | | AgCdO gold pl. | | 9-1393222-9 |
| V23061-B1007-A301 | | | AgSnO ₂ | 24 VDC | 1-1393223-7 |
| V23061-B1007-A501 | | | AgNi 0.15 | | 2-1393223-5 |
| V23061-B1007-A601 | | | AgCdO gold pl. | | 2-1393223-6 |
| V23061-B1009-A301 | | | AgSnO ₂ | 48 VDC | 3-1393223-7 |
| V23061-B1009-A501 | | | AgNi 0.15 | | 3-1393223-9 |
| V23061-B1009-A601 | | | AgCdO gold pl. | | 4-1393223-0 |
| V23061-B1010-A501 | | | AgNi 0.15 | 60 VDC | 4-1393223-3 |
| V23061-B1010-A601 | | | AgCdO gold pl. | | 4-1393223-4 |
| V23061-A2002-A402 | flux proof | 1 NO contact | AgCdO | 5 VDC | 6-1393222-8 |
| V23061-A2003-A402 | | | | 6 VDC | 1-1416200-9 |
| V23061-A2005-A402 | | | | 12 VDC | 2-1416200-1 |
| V23061-A2007-A402 | | | | 24 VDC | 2-1416200-3 |
| V23061-A2009-A402 | | | | 48 VDC | 2-1416200-5 |
| V23061-A2010-A402 | | | | 60 VDC | 2-1416200-6 |
| V23061-B2002-A401 | | 1 CO contact | | 5 VDC | 2-1416200-7 |
| V23061-B2003-A401 | | | | 6 VDC | 2-1416200-8 |
| V23061-B2005-A401 | | | | 12 VDC | 3-1416200-1 |
| V23061-B2007-A401 | | | | 24 VDC | 5-1393223-0 |
| V23061-B2009-A401 | | | | 48 VDC | 3-1416200-6 |
| V23061-B2010-A401 | | | | 60 VDC | 4-1416200-0 |