

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)

Applications

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



F0143-E

Approvals

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

Contact data

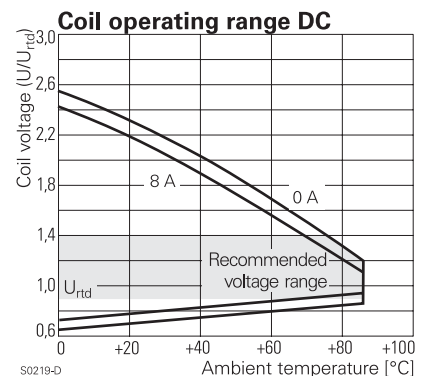
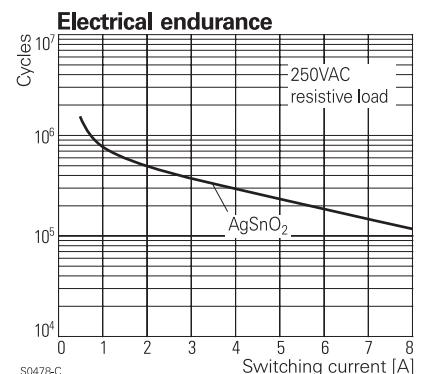
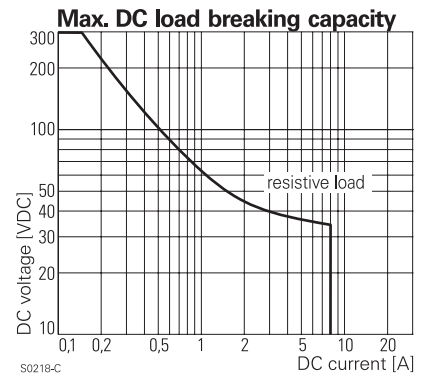
| | | |
|--|--------------------------------|------|
| Contact configuration | 1CO or 1NO | |
| Contact set | single contact | |
| Type of interruption | micro disconnection | |
| Rated voltage / max. switching voltage AC | 250 / 400 VAC | |
| Rated current | versions A,B: | 8 A |
| | versions C,D: | 10 A |
| Maximum breaking capacity AC | 2000 VA | |
| Limiting making capacity, max 20 ms | A302: 65 A | |
| max 4 s, duty factor 10% | 15 A | |
| Contact material | AgSnO ₂ , AgNi90/10 | |
| Rated frequency of operation with / without load | 6 / 1200 min ⁻¹ | |
| Operate- / release time | max 10 / 5 ms | |
| Bounce time NO / NC contact | max 3 / 10 ms | |

Contact ratings

| Type | Contact | Load | Ambient temp. [°C] | Cycles |
|-------------------|---------|--------------------------------|--------------------|---------------------|
| IEC 61810 | | | | |
| V23061-A1***-A302 | NO | 8 A, 250 VAC, cosφ=1 | 85°C | 100x10 ³ |
| V23061-C2***-A802 | NO | 10 A, 250 VAC, cosφ=1 | 85°C | 100x10 ³ |
| V23061-C2***-A802 | NO | 5 A, 250 VAC, cosφ=1 | 105°C | 100x10 ³ |
| UL 508 | | | | |
| V23061-A1***-A302 | NO | TV4, Tungsten, 120 VAC | 40°C | 25x10 ³ |
| V23061-A1***-A302 | NO | Pilot duty, A300 | 40°C | 6x10 ³ |
| V23061-C2***-A802 | NO | 10 A, 240 VAC, general purpose | 40°C | 30x10 ³ |
| EN60730-1 | | | | |
| V23061-A1***-A302 | NO | 2(2)A, 250 VAC | 85°C | 100x10 ³ |
| V23061-C2***-A802 | NO | 4(4)A, 250 VAC | 85°C | 100x10 ³ |

Coil data

| | |
|---|------------------|
| Rated coil voltage range DC coil | 3...60 VDC |
| Operative range to IEC 61810 | 2 |
| Coil insulation system according UL1446 | Class A, Class F |



Miniature Power PCB Relay MSR (Continued)

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

| 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 mm | |
| Material group of insulation parts | IIIa | IIIa |
| Insulation to IEC 61810-1 | | |
| Type of insulation coil-contact circuit | reinforced | reinforced |
| open contact circuit | micro disconn. | micro disconn. |
| Rated insulation voltage | 250 V | 250 V |
| Pollution degree | 3 | 2 |
| Rated voltage system | 240 V | 230 / 400 V |
| Overvoltage category | III | III |

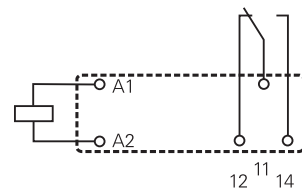
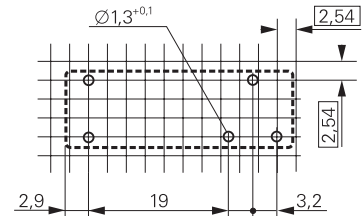
Other data

| | |
|---|---|
| Mechanical endurance | 10x10 ⁶ cycles |
| Material | |
| RoHS - Directive 2002/95/EC | compliant as per product date code 0404 |
| Resistance to heat and fire | according EN60335-1, par.30 |
| Environment | |
| Ambient temperature range | -40...+85°C |
| 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 |
| Processing | |
| 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 |

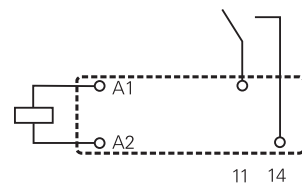
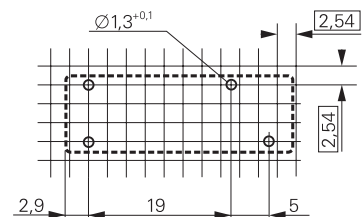
PCB layout / terminal assignment

Bottom view on solder pins

1 CO contact, 3.2 mm

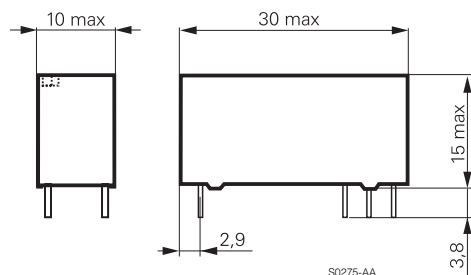


1 NO contact, 5 mm

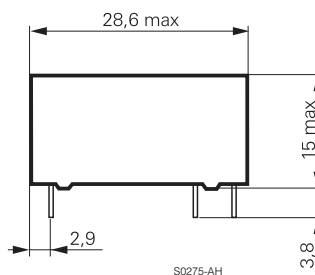


Dimensions

1 CO contact, 3.2 mm



1 NO contact, 5 mm



Miniature Power PCB Relay MSR (Continued)

| | | | | | | | | |
|------------------------------|--|---------------|---------------------|-----------------------------------|------------|-----------|----------|-----------|
| Product key | Typical product key | V23061 | -A | 1 | 007 | -A | 3 | 02 |
| Type | V23061 Miniature Power PCB Relay MSR | | | | | | | |
| Version | A 1 NO contact (1 form A), UL-class A B 1 CO contact (1 form C), UL-class A C 1 NO contact (1 form A), UL-class F D 1 CO contact (1 form C), 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 | | | 8 AgNi 90/10 | | | | |
| Contact configuration | 01 1 CO contact (1 form C) | | | 02 1 NO contact (1 form A) | | | | |

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 | 1393222-4 | | | |
| V23061-A1003-A302 | | | | 6 VDC | 1393222-9 | | | |
| V23061-A1005-A302 | | | | 12 VDC | 2-1393222-0 | | | |
| V23061-A1007-A302 | | | | 24 VDC | 3-1393222-9 | | | |
| V23061-B1002-A301 | | 1 CO contact | | 5 VDC | 7-1393222-2 | | | |
| V23061-B1005-A301 | | | | 12 VDC | 9-1393222-1 | | | |
| V23061-B1007-A301 | | | | 24 VDC | 1-1393223-7 | | | |
| V23061-B1009-A301 | | | | 48 VDC | 3-1393223-7 | | | |
| V23061-C2001-A802 | flux proof | 1 NO contact | AgNi90/10 | 3 VDC | 5-1416200-3 | | | |
| V23061-C2002-A802 | | | | 5 VDC | 5-1416200-4 | | | |
| V23061-C2003-A802 | | | | 6 VDC | 5-1416200-5 | | | |
| V23061-C2004-A802 | | | | 9 VDC | 5-1416200-6 | | | |
| V23061-C2005-A802 | | | | 12 VDC | 5-1416200-7 | | | |
| V23061-C2007-A802 | | | | 24 VDC | 5-1416200-8 | | | |
| V23061-C2009-A802 | | | | 48 VDC | 6-1416200-0 | | | |
| V23061-C2010-A802 | | | | 60 VDC | 6-1416200-1 | | | |
| V23061-D2001-A801 | | | | 1 CO contact | | | 3 VDC | 6-1416200-2 |
| V23061-D2002-A801 | | | | | | | 5 VDC | 6-1416200-3 |
| V23061-D2003-A801 | 6 VDC | 6-1416200-4 | | | | | | |
| V23061-D2004-A801 | 9 VDC | 6-1416200-5 | | | | | | |
| V23061-D2005-A801 | 12 VDC | 6-1416200-6 | | | | | | |
| V23061-D2007-A801 | 24 VDC | 6-1416200-7 | | | | | | |
| V23061-D2009-A801 | 48 VDC | 6-1416200-9 | | | | | | |
| V23061-D2010-A801 | 60 VDC | 7-1416200-0 | | | | | | |