

# Miniature Power PCB Relay MSR V23061

- 1 pole 8/10A, 1form C (CO) or 1 form A (NO) contact
- High inrush currents with AgSnO<sub>2</sub> contacts (TV4 0 65A)
- 4kV/8mm coil-contact
- Reinforced insulation (protection class II)
- Ambient temperature up to 85°C at 8A

domestic appliances, Hi-Fi products, timers.

Plastic materials according to IEC 60335-1 (domestic appliances)

HVAC, interface technology. PLC's, power supplies, TV-/monitor control,



#### Approvals

Typical applications

VDE Cert. No. 40017849, UL E214025 Technical data of approved types on request.

#### **Contact Data**

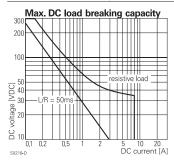
| Contact arrangement 1                     | form C (CO) or 1 form A (NO)   |
|---|--------------------------------|
| Rated voltage                             | 250VAC                         |
| Max. switching voltage                    | 400VAC                         |
| Rated current                             |                                |
| versions A,B                              | 8A                             |
| versions C, D                             | 10A                            |
| Limiting making current, max 4s, df 10%   | 15A                            |
| version A302, max 20ms                    | 65A                            |
| Breaking capacity max.                    | 2000VA                         |
| Contact material                          | AgSnO <sub>2</sub> , AgNi90/10 |
| Frequency of operation, with/without load | l 6/1200min-1                  |
| Operate/release time max.                 | 10/5ms                         |
| Bounce time max., form A/form B           | 3/10ms                         |

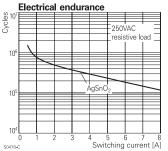
#### Contact ratings

| Туре              | Contact | Load                        | Cycles              |
|-------------------|---------|-----------------------------|---------------------|
| IEC 61810         |         |                             |                     |
| V23061-A1***-A302 | A (NO)  | 8A, 250VAC, cosφ=1, 85°C    | 100x10 <sup>3</sup> |
| V23061-C2***-A802 | A (NO)  | 10A, 250VAC, cosφ=1, 85°C   | 100x10 <sup>3</sup> |
| V23061-C2***-A802 | A (NO)  | 5A, 250VAC, cosφ=1, 105°C   | 100x10 <sup>3</sup> |
| UL 508            |         |                             |                     |
| V23061-A1***-A302 | A (NO)  | TV4, Tungsten, 120VAC, 40°C | 25x10 <sup>3</sup>  |
| V23061-A1***-A302 | A (NO)  | Pilot duty, A300, 40°C      | 6x10 <sup>3</sup>   |
| V23061-C2***-A802 | A (NO)  | 10A, 240VAC,                |                     |
|                   |         | general purpose ,40°C       | 30x103              |
| EN60730-1         |         |                             |                     |
| V23061-A1***-A302 | A (NO)  | 2(2)A, 250VAC, 85°C         | 100x10 <sup>3</sup> |
| V23061-C2***-A802 | A (NO)  | 4(4)A, 250VAC, 85°C         | 100x10 <sup>3</sup> |
|                   |         |                             |                     |

#### Mechanical endurance, DC coil

## 10x10<sup>6</sup> operations





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Catalog and product specification according to IEC 61810-1 and to be used only together with the 'Definitions' section.

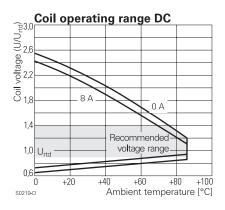
| Coil volta             | ge range                            |         | 3 to 60VDC |                        |            |  |
|------------------------|-------------------------------------|---------|------------|------------------------|------------|--|
| Operative              | Operative range, IEC 61810          |         |            | 2                      |            |  |
| Coil insula            | Coil insulation system according UL |         |            | classA or classF       |            |  |
| Coil versions, DC coil |                                     |         |            |                        |            |  |
| Coil                   | Rated                               | Operate | Release    | Coil                   | Rated coil |  |
| code                   | voltage                             | voltage | voltage    | resistance             | power      |  |
|                        | VDC                                 | VDC     | VDC        | $\Omega \pm 10\%^{1)}$ | mW         |  |
| 001                    | 3                                   | 2.1     | 0.3        | 40                     | 225        |  |
| 002                    | 5                                   | 3.4     | 0.5        | 118                    | 212        |  |

| 001 | 3  | 2.1  | 0.3 | 40                  | 225 |
|-----|----|------|-----|---------------------|-----|
| 002 | 5  | 3.4  | 0.5 | 118                 | 212 |
| 003 | 6  | 4.1  | 0.6 | 165                 | 218 |
| 004 | 9  | 6.1  | 0.9 | 364                 | 223 |
| 005 | 12 | 8.2  | 1.2 | 652                 | 221 |
| 007 | 24 | 16.3 | 2.4 | 2270                | 254 |
| 009 | 48 | 32.6 | 4.8 | 8790                | 262 |
| 010 | 60 | 40.8 | 6.0 | 15265 <sup>1)</sup> | 236 |

1) Coil resistance ±15%

**Coil Data** 

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



#### **Insulation Data**

| moulation Data                     |          |
|------------------------------------|----------|
| Initial dielectric strength        |          |
| between open contacts              | 1000V    |
| between contact and coil           | 4000V_ms |
| Clearance/creepage                 | mo       |
| between contact and coil           | ≥8/8mm   |
| Material group of insulation parts | Illa     |
|                                    |          |

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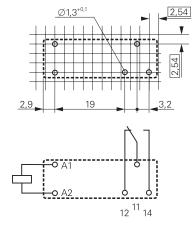
# Miniature Power PCB Relay MSR V23061 (Continued)

### **Other Data**

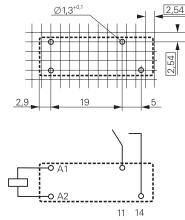
| Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content |   |  |  |  |  |  |
|--|---|--|--|--|--|--|
| refer to the Product Compliance Support Center at                    |   |  |  |  |  |  |
| www.te.com   | www.te.com/customersupport/rohssupportcente |  |  |  |  |  |
| Ambient temperature  | - 40 to +85°C                               |  |  |  |  |  |
| Category of environmental protection                                 |   |  |  |  |  |  |
| IEC 61810  | RTII - flux proof,                          |  |  |  |  |  |
|  | RTIII - wash tight                          |  |  |  |  |  |
| Vibration resistance (functional)                                    |   |  |  |  |  |  |
| form A (NO) / form B (NC)  | 10/4g                                       |  |  |  |  |  |
| Vibration resistance (destructive)                                   |   |  |  |  |  |  |
| form A (NO) / form B (NC)  | 20/5g                                       |  |  |  |  |  |
| Shock resistance (destructive)                                       | 100g  |  |  |  |  |  |
| Terminal type  | PCB-THT                                     |  |  |  |  |  |
| Weight   | 11g   |  |  |  |  |  |
| Resistance to soldering heat THT                                     |   |  |  |  |  |  |
| IEC 60068-2-20   | RTII: 270°C/10s                             |  |  |  |  |  |
|  | RTIII: 260°C/5s                             |  |  |  |  |  |
| Packaging/unit   | tube/20 pcs., box/500 pcs.                  |  |  |  |  |  |

#### PCB layout / terminal assignment

1 form C, 1 CO contact, 3.2mm

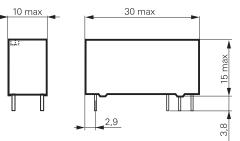


#### 1 form A, 1 NO contact, 5mm

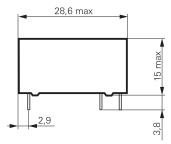


#### Dimensions

1 form C, 1 CO contact, 3.2mm



1 form A, 1 NO contact, 5mm



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# General Purpose Low Power PCB Relays

# SCHRACK

# Miniature Power PCB Relay MSR V23061 (Continued)

| Product code structure  | Typical product code | V23061 | -A | 1 | 007 | -A | 3 | 02 |
|---|----------------------|--------|----|---|-----|----|---|----|
| Type     V23061   Miniature Power PCB Relay MSR   |                      | ,      |    |   |     |    |   |    |
| Version   A 1 form A contact (1 NO), UL-class A   B 1 form C contact (1 CO), UL-class A   C 1 form A contact (1 NO), UL-class F   D 1 form C contact (1 CO), UL-class F |                      |        |    |   |     |    |   |    |
| Version<br>1 Wash tight<br>2 Flux proof   |                      |        |    | - |     |    |   |    |
| Coil<br>Coil-code: please refer to coil versions table  |                      |        |    |   |     |    |   |    |
| Contact system<br>A Standard  |                      |        |    |   |     |    |   |    |
| Contact material<br>3 AgSnO <sub>2</sub><br>8 AgNi 90/10  |                      |        |    |   |     |    |   |    |
| Contact information011 form C (CO) contact021 form A (NO) contact   |                      |        |    |   |     |    |   |    |
| Other types on request  |                      |        |    |   |     |    |   |    |

| Product code      | Version    | Contacts     | Contact material   | Coil  | Part Number |
|-------------------|------------|--------------|--------------------|-------|-------------|
| V23061-A1002-A302 | Wash tight | 1 form A     | AgSnO <sub>2</sub> | 5VDC  | 1393222-4   |
| V23061-A1003-A302 |            | 1 NO contact |                    | 6VDC  | 1393222-9   |
| V23061-A1005-A302 |            |              |                    | 12VDC | 2-1393222-0 |
| V23061-A1007-A302 |            |              |                    | 24VDC | 3-1393222-9 |
| V23061-A1009-A302 |            |              |                    | 48VDC | 1-1416200-0 |
| V23061-B1002-A301 |            | 1 form C     |                    | 5VDC  | 7-1393222-2 |
| V23061-B1005-A301 |            | 1 CO contact |                    | 12VDC | 9-1393222-1 |
| V23061-B1007-A301 |            |              |                    | 24VDC | 1-1393223-7 |
| V23061-B1009-A301 |            |              |                    | 48VDC | 3-1393223-7 |
| V23061-C2001-A802 | Flux proof | 1 form A     | AgNi 90/10         | 3VDC  | 5-1416200-3 |
| V23061-C2002-A802 |            | 1 NO contact |                    | 5VDC  | 5-1416200-4 |
| V23061-C2003-A802 |            |              |                    | 6VDC  | 5-1416200-5 |
| V23061-C2004-A802 |            |              |                    | 9VDC  | 5-1416200-6 |
| V23061-C2005-A802 |            |              |                    | 12VDC | 5-1416200-0 |
| V23061-C2007-A802 |            |              |                    | 24VDC | 5-1416200-8 |
| V23061-C2009-A802 |            |              |                    | 48VDC | 6-1416200-0 |
| V23061-C2010-A802 |            |              |                    | 60VDC | 6-1416200-1 |
| V23061-D2001-A801 |            | 1 form C     |                    | 3VDC  | 6-1416200-2 |
| V23061-D2002-A801 |            | 1 CO contact |                    | 5VDC  | 6-1416200-3 |
| V23061-D2003-A801 |            |              |                    | 6VDC  | 6-1416200-4 |
| V23061-D2004-A801 |            |              |                    | 9VDC  | 6-1416200-5 |
| V23061-D2005-A801 |            |              |                    | 12VDC | 6-1416200-6 |
| V23061-D2007-A801 |            |              |                    | 24VDC | 6-1416200-7 |
| V23061-D2009-A801 |            |              |                    | 48VDC | 6-1416200-9 |
| V23061-D2010-A801 |            |              |                    | 60VDC | 7-1416200-0 |

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