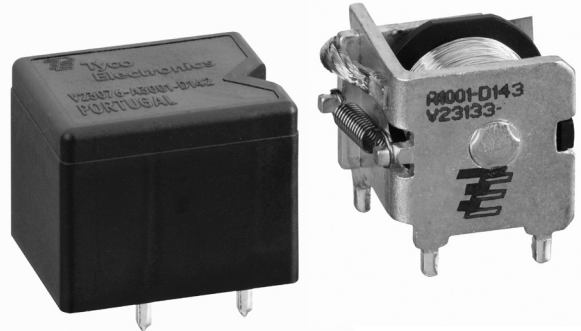


Power Relay K (Open – Sealed)

- Limiting continuous current 45A
- Wide voltage range
- 24VDC coil versions available
- For high current version refer to Power Relay K-S

Typical applications

ABS control, blower fans, car alarm, cooling fan, engine control, fuel pump, hazard warning signal, heated front screen, heated rear screen, ignition, lamps front/rear/fog light, interior lights, main switch/supply relay, seat control, seatbelt pretensioner, sun roof, turn signal, valves, window lifter, wiper control.

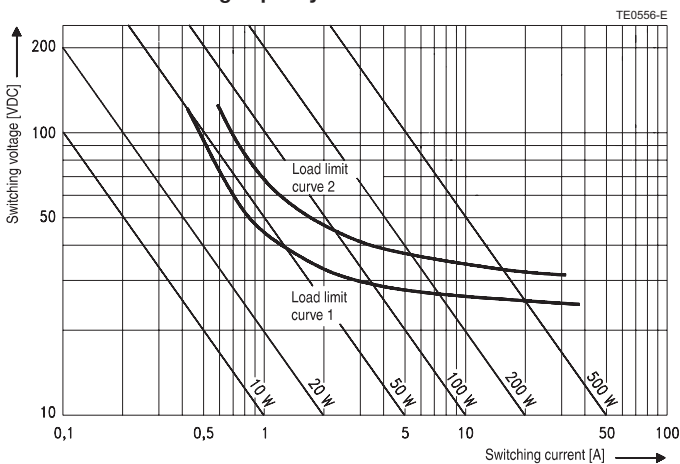


Contact Data

| Typical applications | Resistive/inductive loads | Resistive/inductive loads | Indicator lamps | Headlights, capacitive loads | Headlights capacitive loads |
|---|--|--|--|--------------------------------------|--------------------------------------|
| Contact arrangement | 1 form A, 1 NO | 1 form C, 1 CO | 1 form A, 1 NO | 1 form A, 1 NO | 1 form C, 1 CO |
| Rated voltage | 12VDC | 12VDC | 12VDC | 12VDC | 12VDC |
| Rated current | 45A | A/B (NO/NC) 45/30A | 30A | 40A | A/B (NO/NC) 40/25A |
| Limiting continuous current | | | | | |
| 23°C | 45A | 45/30A | 30A | 40A | 40/25A |
| 85°C | 30A | 30/25A | 25A | 25A | 25/20A |
| Limiting making current ¹⁾ | 100A | 100/30A | 120A ³⁾ | 180A | 180/60A |
| Limiting breaking current ²⁾ | 60A | 60/30A | 60A | 60A | 60/30A |
| Contact material | AgNi0.15 | AgNi0.15 | AgSnO ₂ | AgSnO ₂ | AgSnO ₂ |
| Min. recommended contact load | | 1A at 5VDC ⁴⁾ | | | |
| Initial voltage drop, at 10A, typ./max. | | 20/300mV | | | |
| Operate/release time | | typ. 5/3ms ⁵⁾ | | | |
| Electrical endurance | >2x10 ⁵ ops. at 13.5VDC, 40A | >2x10 ⁵ ops. at 13.5VDC, 40A | >2.2x10 ⁶ ops. up to 8x21W | >10 ⁵ ops. up to 4x60W | >10 ⁵ ops. up to 4x60W |
| Mechanical endurance, DC coil | | >10 ⁷ ops. | | | |

- 1) The values apply to a resistive or inductive load with suitable spark suppression and at maximum 13.5VDC for 12VDC or 27VDC for 24VDC load voltages.
- 2) For a load current duration of maximum 3s for a make/break ratio of 1:10.
- 3) Corresponds to a peak inrush current on initial actuation (cold filament).
- 4) See chapter Diagnostics of Relays in our Application Notes or consult the internet at <http://relays.te.com/appnotes/>
- 5) For unsuppressed relay coil. A low resistive suppression device in parallel to the relay coil increases the release time and reduces the lifetime caused by increased erosion and/or higher risk of contact tack welding.

Max. DC load breaking capacity



Load limit curve 1: arc extinguishes, during transit time (changeover contact).
 Load limit curve 2: safe shutdown, no stationary arc (make contact).
 Load limit curves measured with low inductive resistors verified for 1000 switching events.

Power Relay K (Open – Sealed) (Continued)

Coil Data

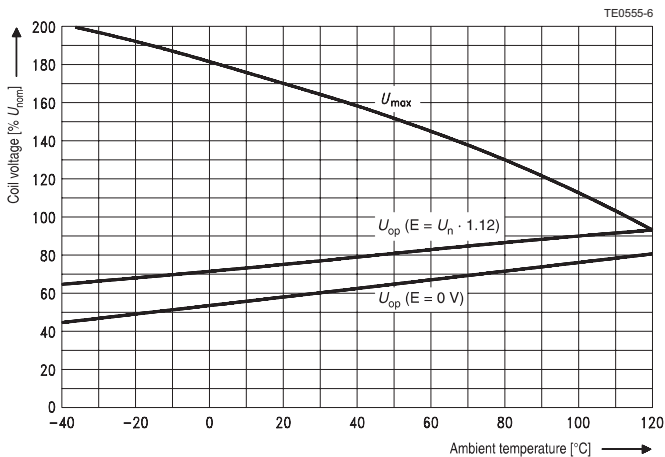
Rated coil voltage 12VDC / 24VDC

Coil versions, DC coil

| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance $\Omega \pm 10\%$ | Rated coil power W |
|-----------|-------------------|---------------------|---------------------|-----------------------------------|--------------------|
| 001 | 12 | 6.9 | 1.2 | 90 | 1.6 |
| 022 | 24 | 14.1 | 2.4 | 362 | 1.6 |

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

Coil operating range



Does not take into account the temperature rise due to the contact current
E = pre-energization

Insulation Data

Initial dielectric strength
between open contacts 500VAC_{rms}
between contact and coil 500VAC_{rms}

Other Data

EU RoHS/ELV compliance compliant
Ambient temperature, DC coil -40 to +105°C⁶⁾
Climatic cycling with condensation, EN ISO 6988 3 cycles, storage 8/16h
Temperature cycling (shock), IEC 60068-2-14, Na 20 cycles, -40/+85°C (dwell time 1h)
Damp heat cyclic, IEC 60068-2-30, Db, Variant 1 6 cycles, upper air temperature 55°C
Damp heat constant, IEC 60068-2-3, method Ca 56 days, upper air temperature 55°C
Degree of protection, IEC 61810 RT 0/II – open version
RT III – immersion cleanable version
Corrosive gas, IEC 60068-2-42 10 days
IEC 60068-2-43 10 days
Vibration resistance (functional), IEC 60068-2-6 (sine pulse form), acceleration, acc. to position 10 to 200Hz, 20 to 40g⁷⁾
Shock resistance (functional), IEC 60068-2-27 (half sine form single pulses), acceleration, acc. to position 8ms 30g⁷⁾
Terminal type PCB
Weight sealed version approx. 22g (0.77oz)
open version approx. 19g (0.67oz)
Solderability (aging 3: 4h/155°C) for leaded process ($T_m = 183^\circ\text{C}$), for Pb-free process ($T_m = 217^\circ\text{C}$), IEC 60068-2-20 Ta, method 1, hot dip 5s, 215°C
Storage conditions according IEC 600688⁸⁾
Packaging unit sealed version 300 pcs.
open version 500 pcs.

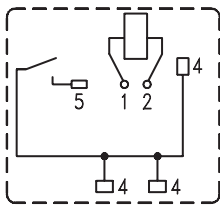
6) See coil operating range DC.
7) No change in the switching state >10 μ s.
8) For general storage and processing recommendations please refer to our Application Notes and especially to Storage in the Definitions or at <http://relays.te.com/appnotes/>

Terminal Assignment (Open and Sealed Version)

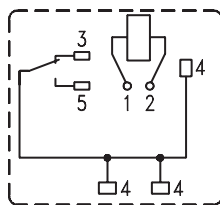
Bottom view on solder pins

1 form A, 1 NO

1 form C, 1 CO



TE1091-B1



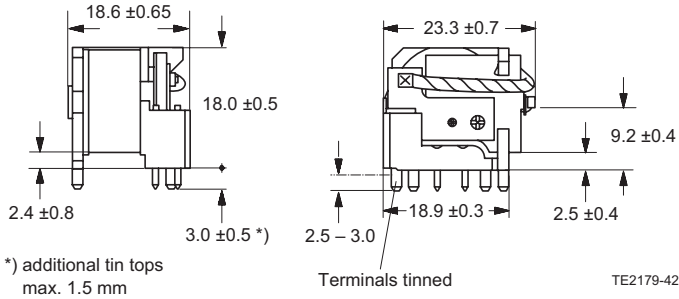
TE1086-A1

*) Terminal 4 to be bridged

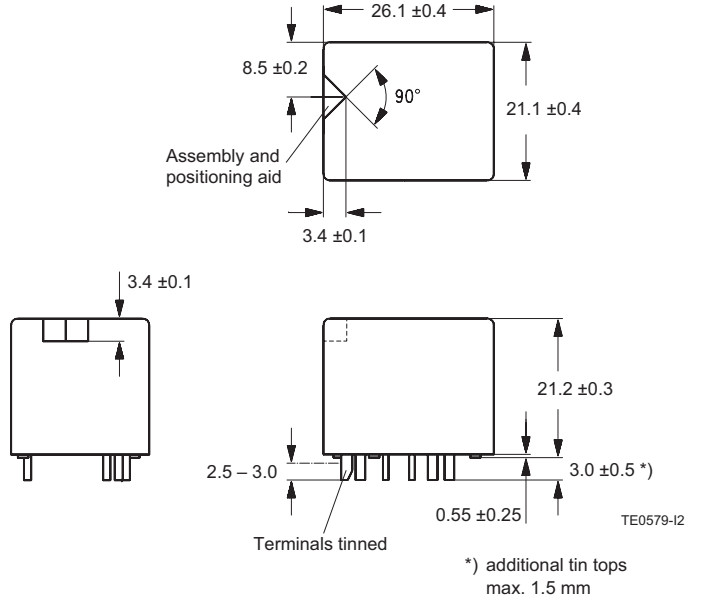
Power Relay K (Open – Sealed) (Continued)

Dimensions

Power Relay K open version



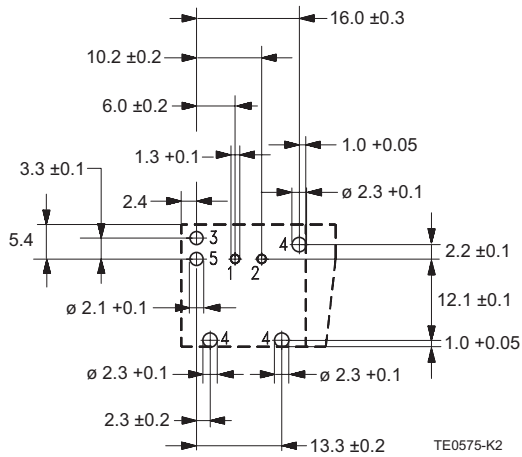
Power Relay K sealed version



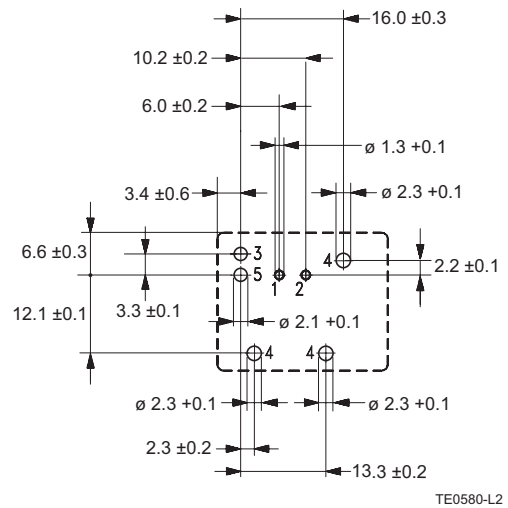
Mounting Hole Layout

Bottom view on solder pins

Power Relay K open version



Power Relay K sealed version



Power Relay K (Open – Sealed) (Continued)

| | | | | | | | | | | |
|-------------------------------|--|------------------------------|--|---------------|--------------------|----------|------------|-----------|-----------|----------|
| Product code structure | | Typical product code | | V23076 | -A | 1 | 022 | -C | 13 | 3 |
| Type | | | | | | | | | | |
| V23076 | | Power Relay K, sealed | | | | | | | | |
| V23133 | | Power Relay K, open | | | | | | | | |
| Terminal | | | | | | | | | | |
| A | | PCB | | | | | | | | |
| Design | | | | | | | | | | |
| 1 | | Single relay | | 3 | Single relay | | | | | |
| Coil | | | | | | | | | | |
| 001 | | 12VDC | | 022 | 24VDC | | | | | |
| Contact type | | | | | | | | | | |
| C | | Single contact | | D | Single contact | | | | | |
| Contact material | | | | | | | | | | |
| 13 | | AgNi0.15 | | 14 | AgSnO ₂ | | | | | |
| 15 | | AgSnO ₂ (Special) | | | | | | | | |
| Contact arrangement | | | | | | | | | | |
| 2 | | 1 form A, 1 NO | | 3 | 1 form C, 1 CO | | | | | |

| Product code | Terminal/Encl. | Design | Coil | Contact | Cont. material | Arrangement | Part number | | | | |
|---------------------------------|----------------------------|----------------------------|-------------|---------|----------------------------|--------------------|-------------|--------|--------------------|--------------|-------------|
| V23076-A1001-C133 | PCB, sealed | Single relay | 12VDC | Single | AgNi0.15 | 1 form C, CO | 1393277-4 | | | | |
| V23076-A1001-D143 | | | | | AgSnO ₂ | | 1393277-6 | | | | |
| V23076-A3001-C132 | PCB, open | Single relay | 12VDC | Single | AgNi0.15 | 1 form A, NO | 1-1393277-4 | | | | |
| V23076-A3001-D142 | | | | | AgSnO ₂ | | 1-1393277-7 | | | | |
| V23076-A3001-D152 ¹⁾ | | | | | AgSnO ₂ special | 1-1414175-0 | | | | | |
| V23076-A1022-C133 | | | | | 24VDC | AgNi0.15 | 1393277-8 | | | | |
| V23076-A1022-D143 | | | | | | AgSnO ₂ | 1393277-9 | | | | |
| V23076-A3022-C132 | | | | | 24VDC | Single relay | 12VDC | Single | AgNi0.15 | 1 form A, NO | 1-1393277-8 |
| V23076-A3022-D142 | | | | | | | | | AgSnO ₂ | | 1-1393277-9 |
| V23133-A1001-C133 | | | | | | | | | AgNi0.15 | 1393278-7 | |
| V23133-A1001-D143 | | | | | | | | | AgSnO ₂ | 1-1393278-3 | |
| V23133-A3001-C132 | | | | | | | | | AgNi0.15 | 5-1393278-7 | |
| V23133-A3001-D142 | AgSnO ₂ | 5-1393278-9 | | | | | | | | | |
| V23133-A3001-D152 ¹⁾ | AgSnO ₂ special | 1-1414173-0 | | | | | | | | | |
| V23133-A1022-C133 | AgNi0.15 | 3-1393278-7 | | | | | | | | | |
| V23133-A1022-D143 | AgSnO ₂ | 3-1393278-9 | | | | | | | | | |
| V23133-A3022-C132 | 1 form A, NO | AgNi0.15 | 7-1393278-1 | | | | | | | | |
| V23133-A3022-D142 | | AgSnO ₂ | 7-1393278-2 | | | | | | | | |
| V23133-A3022-D152 ¹⁾ | | AgSnO ₂ special | 1-1414174-0 | | | | | | | | |

1) For indicator lamps.

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- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
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JONHON

«JONHON» (основан в 1970 г.)

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ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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