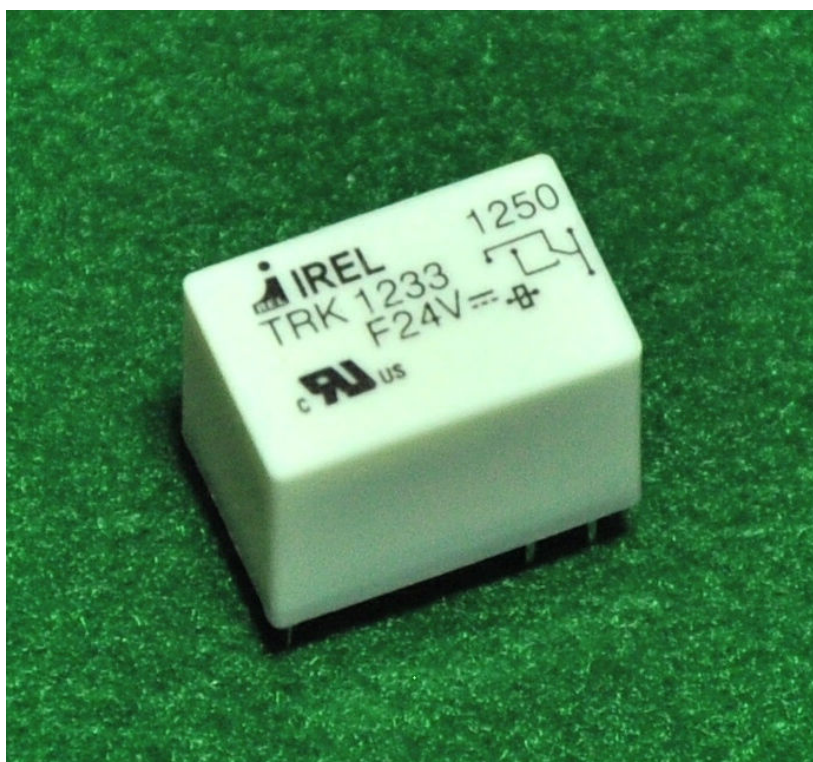




Miniature Relay TRK 12, TRK 14



- Small dimensions
- Rated coil power 0.2 W or 0.45 W
- Max. contact current 1.25 A or 3 A
- Direct instalation on PCB
- UL approval
- Ambient temperature up to +70°
- Washable version Qc/2
- Non-flammable material V - 0
- Plastic bars packing

Technical data

Relay TRK 12 and TRK 14 are neutral, monostable, electromagnetic relays for DC coil energizing with one contact system. Small dimensions and low self-heating of this relays enable high density of electronics components on PC board.

As a switching element with ability of galvanic separation it is designed to control small power devices in telecommunication, data processing, computer peripherals, bureau appliances, measuring equipment and for general purposes.

According to the arrangement of terminals the relay is made in two variants, that is, symmetrical TRK 14 and asymmetrical TRK 12(see terminals layout).

In case of full load on contacts and operating with max. switching rate and max. ambient temperature it is recommended to open the vent hole provided for this purpose, the relay is mounted on the PCB and the cleaning process is completed

Contact data

| | | |
|--------------------------------|---|--|
| Contact form | 1 Change-over, 1 Make , 1 Break | |
| Contact material | AgNi10* + AuAg8 | AgNi10 |
| Rated current | 1.25 A | 3 A |
| Max. operating voltage | 120 Vac, 120 Vdc (see diagram) | |
| Max.switching power | 150 VA, 50 W | 250 VA, 70 W |
| Min.switching load | 10 μ A, 10 mVdc | 5Vdc, 100 mA |
| Contact resistance (new relay) | $\leq 50 \text{ m}\Omega$ (10 mA, 30mVdc) | $\leq 100 \text{ m}\Omega$ (100 mA, 24Vdc) |
| Max.operating frequency | 1800 / h - rat. load 36000 / h - min. l. | 600 / h - rat. load 36000 / h - min. l. |
| Capacitance cont.-cont. | $\leq 1,5 \text{ pF}$ | |
| Mechanical life | $\geq 2 \times 10^7$ operations | |
| Electrical life | See diagram | |

*AgPd30 by special agreement

Coil data for energizing at 20°C

| | |
|------------------------------|------------------------|
| Rated coil power: | |
| sensitive - F | abt. 0.2 W |
| standard | abt. 0.45 W |
| Max.coil temperature: | 155° C |
| Thermal resistance: | |
| sensitive - F | abt. 220 K/W |
| standard | abt. 160 K/W |
| Operate voltage: (cold coil) | |
| sensitive - F | $U_{op} \leq 75\% U_n$ |
| standard | $U_{op} \leq 70\% U_n$ |
| Release voltage: | $U_{re} \geq 10\% U_n$ |
| Operative range: | 1, IEC61810 - 1 |

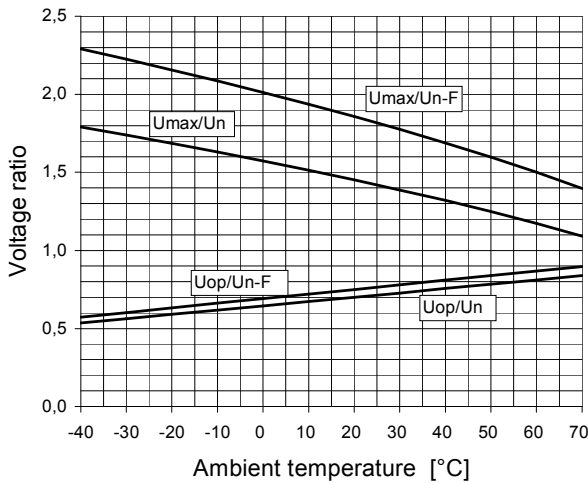
Coil data

| Coil rated voltage | Coil resistance at 20°C | Operative coil voltage range at 20°C | | |
|----------------------------------|---------------------------|--------------------------------------|---------------------|-------|
| | | Must operate | Must release | Umax |
| Un (Vdc) | Rn(Ω) $\pm 10\%$ | $U_{op} \leq (Vdc)$ | $U_{re} \geq (Vdc)$ | (Vdc) |
| Sensitive version - 0.2 W | | | | |
| F 1.5 | 12 | 1.13 | 0.15 | 2.8 |
| F 3 | 45 | 2.3 | 0.3 | 5.6 |
| F 5 | 120 | 3.8 | 0.5 | 9.3 |
| F 6 | 180 | 4.5 | 0.6 | 11 |
| F 9 | 400 | 6.8 | 0.9 | 17 |
| F 12 | 700 | 9.0 | 1.2 | 22 |
| F 18 | 1620 | 13.5 | 1.8 | 33 |
| F 24 | 2800 | 18.0 | 2.4 | 45 |
| Standard version - 0.45 W | | | | |
| 1.5 | 6 | 1.1 | 0.15 | 2.2 |
| 3 | 20 | 2.1 | 0.3 | 4.4 |
| 5 | 56 | 3.5 | 0.5 | 7.3 |
| 6 | 80 | 4.2 | 0.6 | 8.7 |
| 9 | 180 | 6.3 | 0.9 | 13 |
| 12 | 320 | 8.4 | 1.2 | 17 |
| 18 | 720 | 12.6 | 1.8 | 26 |
| 24 | 1280 | 16.8 | 2.4 | 35 |

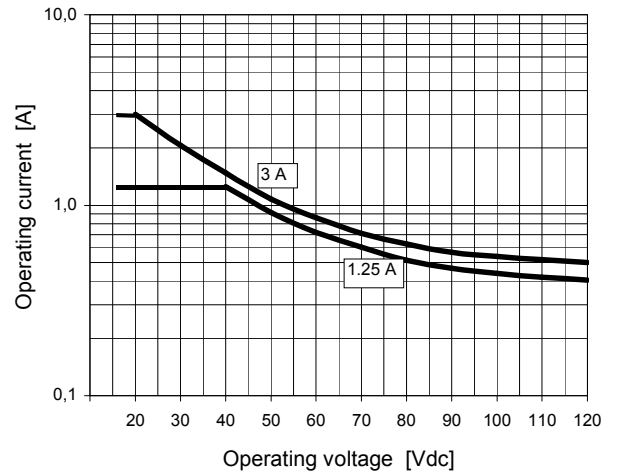
Other data

| | |
|---|---|
| Test voltage (1 min.): | |
| contact - coil | $\geq 1000 \text{ Vrms}, 50 \text{ Hz}$ |
| contact - contact | $\geq 660 \text{ Vrms}, 50 \text{ Hz}$ |
| Rated impulse voltage (1,2/50 μ s): | |
| contact - coil | $\geq 1.5 \text{ kVimp}$ |
| Overvoltage category: | 2, IEC 60664-1 |
| Degree of pollution: | II, IEC 60664-1 |
| Operate time at Un: | see diagram |
| Release time: | abt. 4 ms |
| Bouncing time: | abt. 2 ms - make, abt. 10 ms - break |
| Insulation resistance (500 VDC): | $> 10^3 \text{ M}\Omega$ |
| Vibrations resistance (10-200Hz): | 10 gn |
| Shock resistance (11 ms) | |
| functional: | 10 gn |
| destructive: | 100 gn |
| Ambient temperature | |
| for operating: | - 40°C to + 70°C |
| for storage: | - 40°C to + 85°C |
| Protection degree: | IP 67, IEC 529 |
| Seal test: (1min): | Qc/2, IEC 60068-2-17 |
| Flammability class: | V-0, UL 94 |
| Mounting position: | optional |
| Relay weight: | abt. 4.2 g |

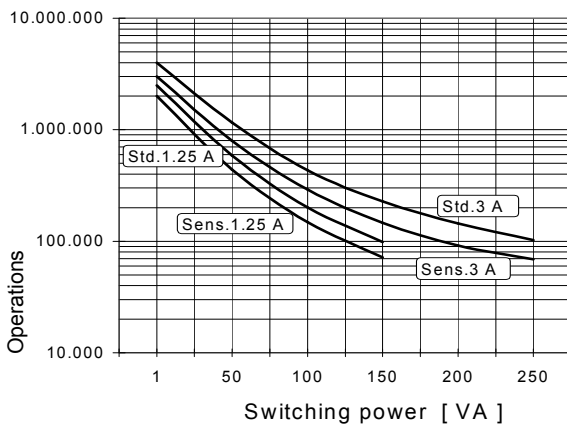
Operative coil voltage range



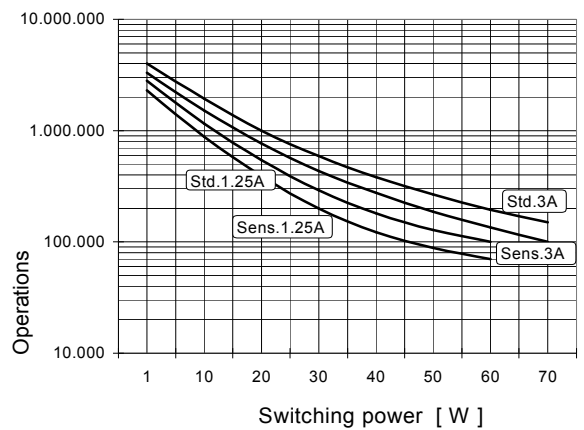
Max. switching capacity at resistive DC load



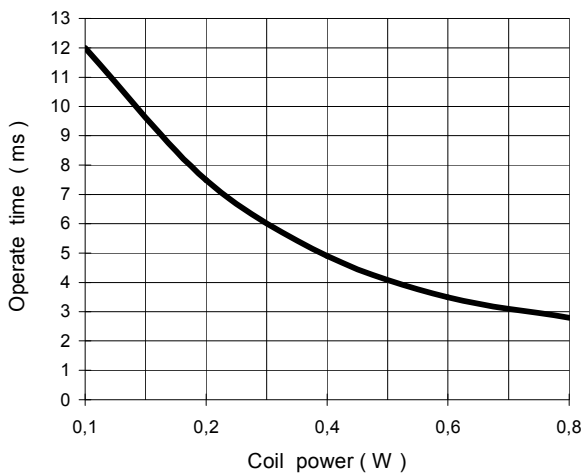
Electrical life at resistive AC load



Electrical life at resistive DC load



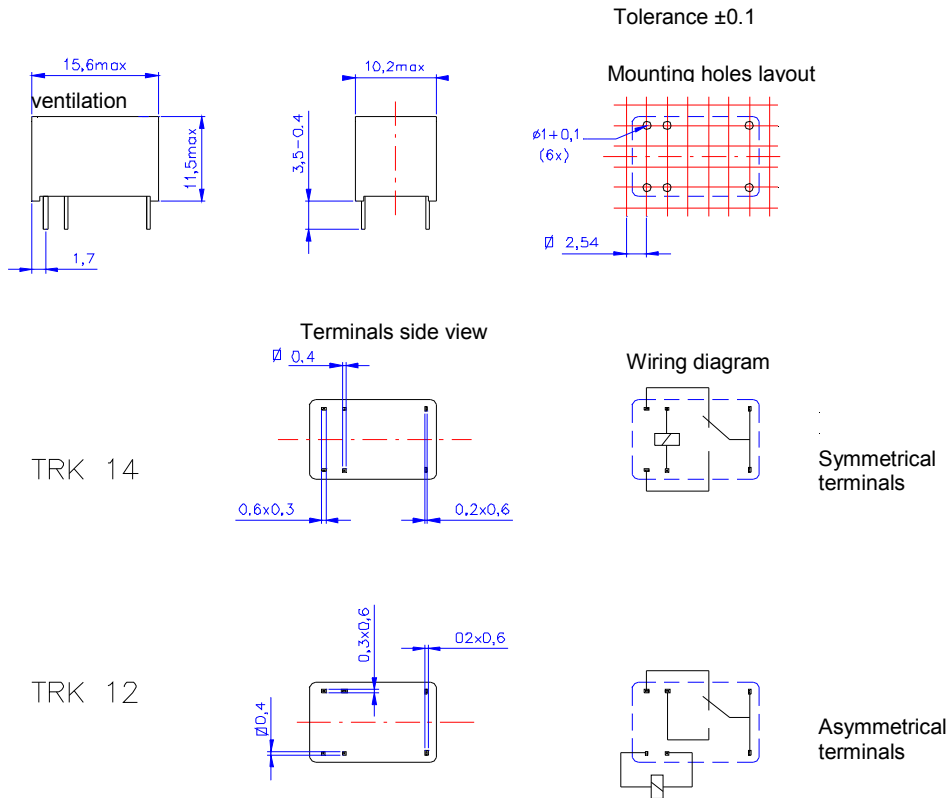
Max. operate time at Un



Ordering data

| | | | | | |
|--|---|---|---|---|-------|
| TRK 1 | X | X | X | X | XX dc |
| Basic designation | | | | | |
| Terminals layout 2 - Asymmetrical 4 - Symmetrical | | | | | |
| Contact material: 0 - AgNi10 (3A) 3 - AgPd30 + AuAg8 (1.25A) 4 - AgNi10 + AuAg8 (1.25A) | | | | | |
| Contact form: 1 - Make (NO) 2 - Break (NC) 3 - Change over (SPDT) | | | | | |
| Coil version: F - sensitive, without - standard | | | | | |
| Rated coil voltage | | | | | |

Dimensions and terminals layout

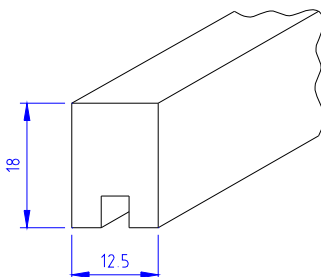


Packing information

Relays supplied in re-usable and antistatic plastic bar packing.

Bar length: 420 mm.

Contents: 25 relays



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