



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 V _{ac} , 120 V _{dc} (see diagram)	
Max. switching power	150 VA, 50 W	250 VA, 70 W
Min. switching load	10 μA, 10 mV _{dc}	5V _{dc} , 100 mA
Contact resistance (new relay)	≤ 50 mΩ (10 mA, 30mV _{dc})	≤ 100 mΩ (100 mA, 24V _{dc})
Max. operating frequency	1800 / h - rat. load 36000 / h - min. l.	600 / h - rat. load 36000 / h - min. l.
Capacitance cont.-cont.	≤ 1,5 pF	
Mechanical life	≥ 2 X 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} ≤ 75% U_n
standard U_{op} ≤ 70% U_n

Release voltage: U_{re} ≥ 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	U _{max}
U _n (Vdc)	R _n (Ω) ± 10%	U _{op} ≤ (Vdc)	U _{re} ≥ (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 ≥ 1000 Vrms, 50 Hz

contact - contact ≥ 660 Vrms, 50 Hz

Rated impulse voltage (1,2/50 μs):

contact - coil ≥ 1.5 kVimp

Overvoltage category: 2, IEC 60664-1

Degree of pollution: II, IEC 60664-1

Operate time at U_n: see diagram

Release time: abt. 4 ms

Insulation resistance (500 V_{DC}): > 10³ MΩ

Vibrations resistance (10-200Hz): 10 g_n

Shock resistance (11 ms)

functional: 10 g_n

destructive: 100 g_n

Ambient temperature

for operating: - 40°C to + 70°C

for storage: - 40°C to + 85°C

Protection degree: IP 67, IEC 529

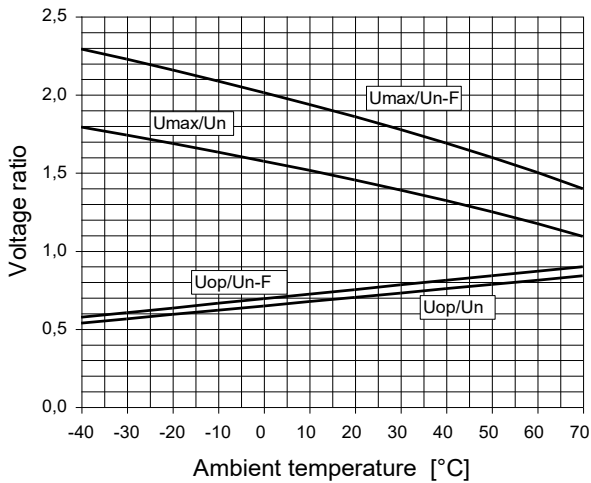
Seal test: (1min): Qc/2, IEC 60068-2-17

Flammability class: V-0, UL 94

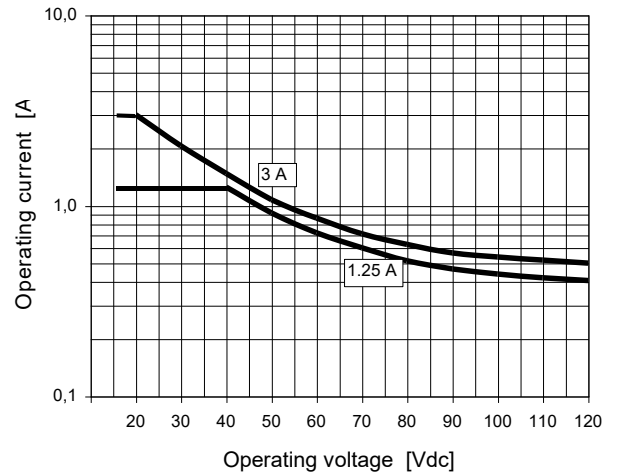
Mounting position: optional

Relay weight: abt. 4.2 g

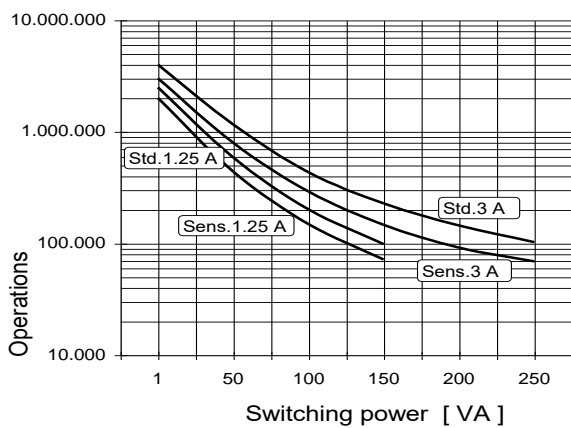
Operative coil voltage range



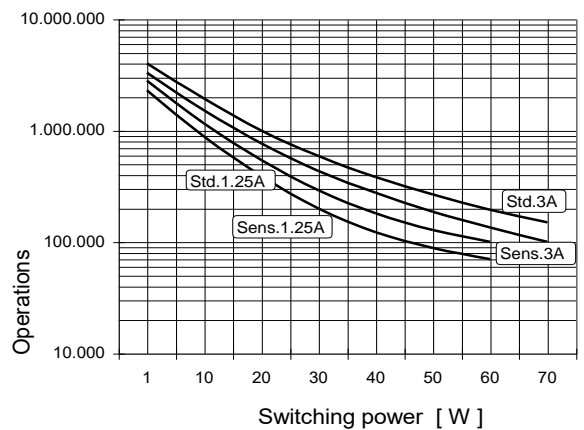
Max. switching capacity at resistive DC load



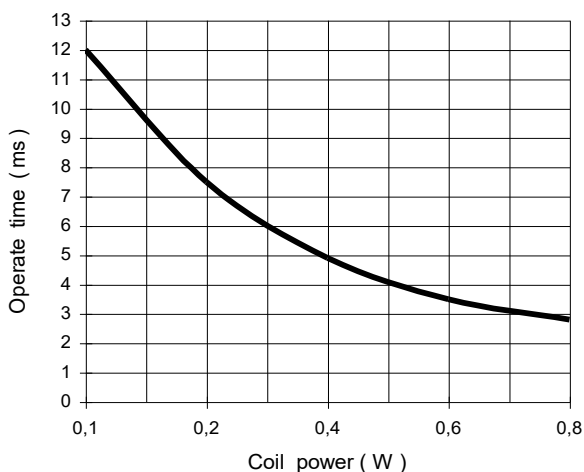
Electrical life at resistive AC load



Electrical life at resistive DC load



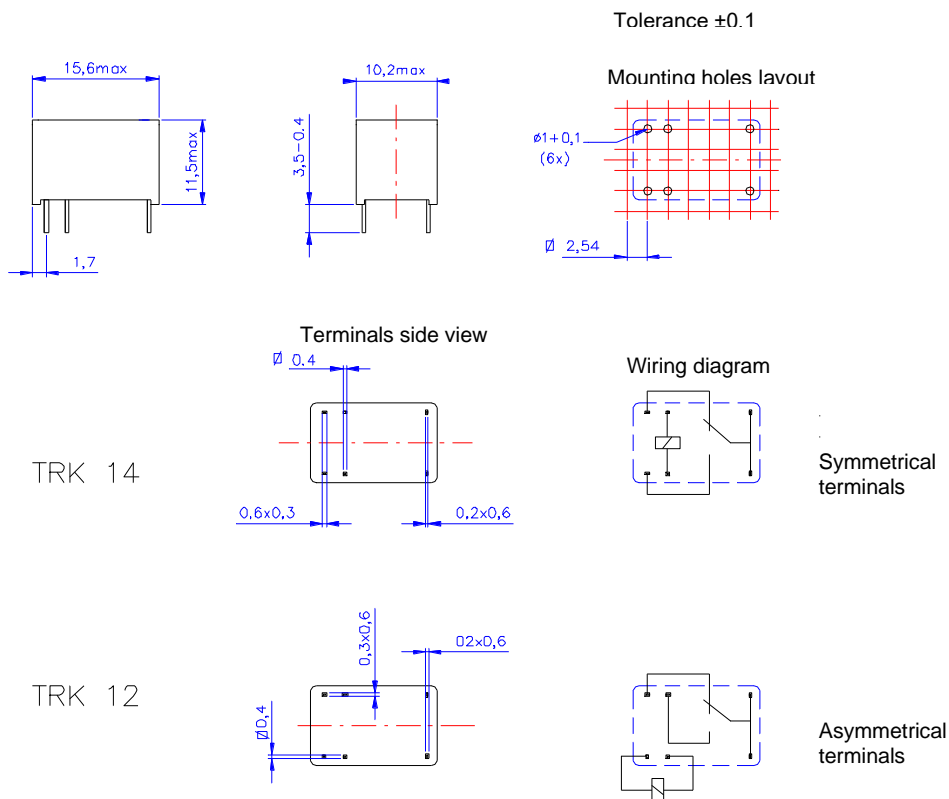
Max. operate time at Un



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

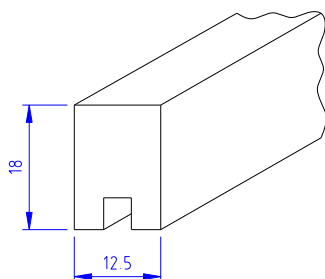


Packing information

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

Bar length: 420 mm.

Contents: 25 relays



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