



Miniature Power Relay TRK 10

**200 mW rated power (125 mW operate power)
6 A, 250 V_{AC} contact load
4 kV test voltage between coil and contact
According to EN 60950 (IEC 950, VDE 0805)
Approvals: UL, VDE**



- Small dimensions 10.1 x 10.7 x 20.2 mm
- Reduced coil power
- Low self-heating during operation
- Direct instalation on PCB
- High insulation resistance
- High contact load material AgCdO
- Washable version Qc/2
- Ambient temperature up to +85°C
- Non-flammable material V-0
- Plastic bars packing

Application

Relay TRK 10 is a neutral, monostable, electromagnetic relay for DC coil energizing with one change-over 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 medium power devices in industrial automatisaton, automotive industry, safety and alarm devices, office equipment, and for general purposes.

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, after the relay is mounted on the PCB and the cleaning process is completed.

Technical Data

Contact data

Form	1 Change-over , 1 Make , 1 Break	
Material	Ag CdO, Ag Sn O ₂	AgNi10+Au
Rated current	6 A	5A
Max. operating voltage	380 V _{AC} , 220 V _{DC}	
Max. switching power	1500 VA, 60 W to 144 W	
Min. switching load	5V _{DC} , 100 mA	
Contact resistance:	≤ 100 mΩ (100mA, 24V _{AC}) - new relay	
Max. operating frequency	360 operations /h - rated load 36000 operations/h - min. load	
Capacitance cont.-cont.	≤ 1.5 pF	
Mechanical life	≥ 2 X 10 ⁷ operations	
Electrical life	see diagram NO contact at 23°C	

Coils

Coil rated voltage	Coil resistance at 20°C	Operative coil voltage range at 20°C		
		Must operate	Must release	U _{max}
U _n (V _{DC})	R _n (Ω) ± 10%	U _{op} ≤ (V _{DC})	U _{re} ≥ (V _{DC})	(V _{DC})
3	45	2.3	0.3	6
5	125	3.9	0.5	11
6	180	4.7	0.6	13
9	405	7.0	0.9	19
12	720	9.4	1.2	26
18	1620	14.0	1.8	39
24	2880	18.7	2.4	52
36	6480	28.1	3.6	78
48	11520	37.4	4.8	104

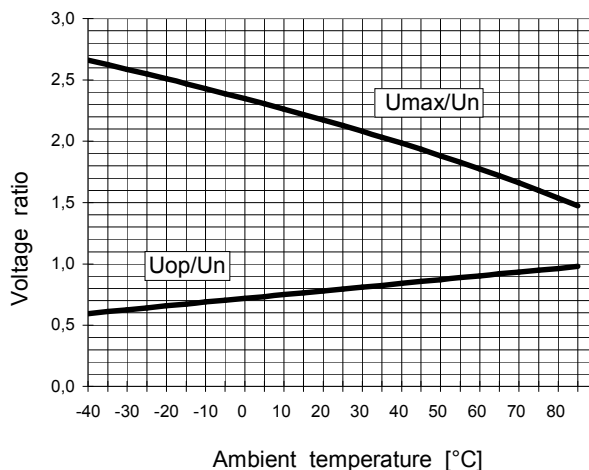
General coil data for energizing at 20°C

Operate power: abt. 125 mW
 Rated power: abt. 200 mW
 Max. coil temperature: 155° C
 Thermal resistance: abt. 155 K/W
 Operative range: class 1, IEC 61810 - 1
 Operate voltage: U_{op} ≤ 78% U_n
 Release voltage: U_{re} ≥ 10% U_n

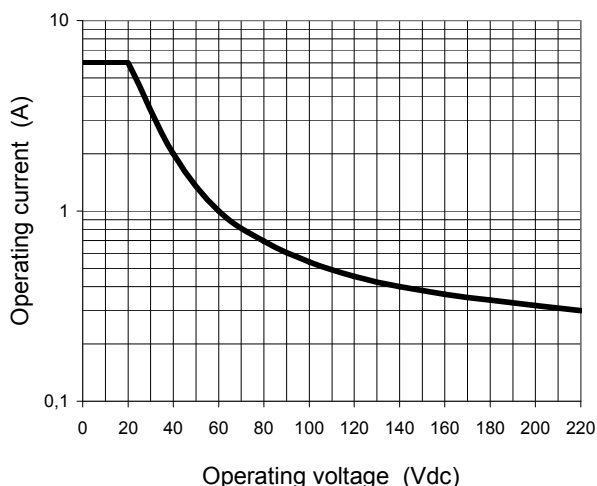
Other data

Test voltage (1 min.):
 contact - coil ≥ 4 kV_{rms}, 50 Hz
 contact - contact ≥ 1 kV_{rms}, 50 Hz
 Creepage distances:
 contact - coil ≥ 5.5 mm
 Clearances: contact - coil ≥ 4.5 mm
 Impulse voltage test (1,2/50 μs):
 contact - coil ≥ 5 kV_{imp}
 Operate time at U_n: abt. 6 ms
 Release time: abt. 4 ms
 Bouncing time: abt. 2 ms - make, abt. 10 ms - break
 Insulation resistance (500 V_{DC}): > 10³ MΩ
 Vibrations resistance (10-200Hz): 10 g_n
 Shock resistance (11 ms)
 functional: 20 g_n
 destructive: 100 g_n
 Ambient temperature
 for operating: - 40°C to + 85°C
 for storage: - 40°C to + 95°C
 Protection degree: IP 67, IEC 529
 Seal test: (1min), IEC60068-2-17: Qc/2
 Flammability class: V-0, UL 94
 Mounting position: optional
 Relay weight: abt. 5 g

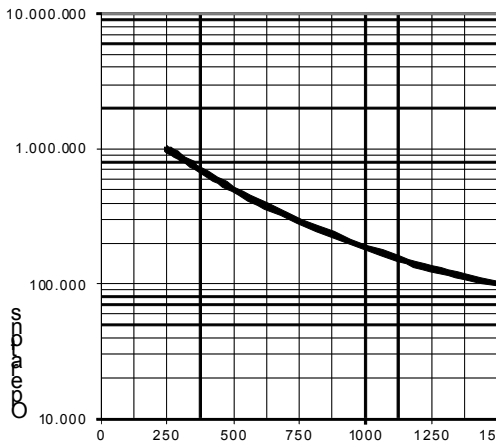
Coil operative voltage range



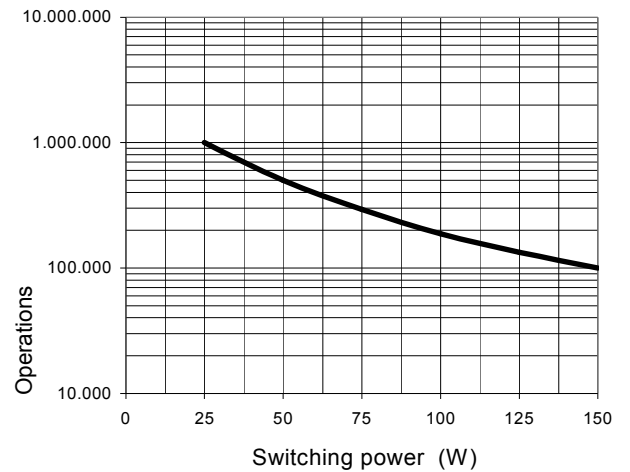
Max. switching capacity, resistive DC load



Electrical life at resistive AC load



Electrical life at resistive DC load



Ordering data

	TRK 10	X	X	XX DC
Basic designation	_____			
Contact material:	_____			
0 – AgNi10	_____			
1 - Ag CdO	_____			
2 - AgSnO ₂	_____			
3 – AgNi+Au	_____			
Contact form:	_____			
1 - Make (SPST-NO)	_____			
2 - Break (SPST-NC)	_____			
3 - Change over (SPDT)	_____			
Coil rated voltage	_____			

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Dimensions and terminals layout

