



Bistable Power PCB Relay TRK 28

**650 mW rated power (2 coils) or
400 mW rated power (1 coil)
16 A, 250 V_{AC} contact load
5 KV test voltage between coil and contact
Flammability class V-0**



- Small dimensions 29 x 12.7 x 15.7 mm
- Reduced coil power
- Low self-heating (impuls energization)
- Ambient temperature up to +105°C
- High insulation resistance
- Non-flammable material V- 0
- High inrush currents with AgSnO₂ contacts
- Clearance/creepage ≥ 10 mm
- Direct instalation on PCB
- Washable version Qc/2
- Plastic bars packing

Application

Relay TRK28 is a polarized, bistabile, 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 electronic components on PC board.

As a switching element with ability of galvanic separation it is designed to control power devices in industrial automatisation, 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 relay is mounted on the PCB and the cleaning process is completed.

Technical Data

Contact data

Form	1 Change-over, 1 Make, 1 Break
Contact material	Ag Sn O ₂ , AgNi10
Rated current	16 A
Max. operating voltage	400 V AC, 300V DC
Max. switching power	4000 VA, 380 W
Min. switching load	5V DC, 100 mA
Contact resistance:	≤ 100 mΩ (100mA, 24VAC) - new relay
Max.operating frequency	360 operations /h - rated load 36000 operations/h - min. load
Capacitance cont.-cont.	≤ 1,5 pF
Mechanical life	≥ 2x10 ⁶
Electrical life	≥ 3x10 ⁴ (NO contact, 250V/16A AC) at 85°C

General coil data for energizing at 20°C

Rated power: abt. 650 mW
 Max. coil temperature: 155° C
 Operative range: class 2, IEC 61810 - 1
 Operate voltage: $U_{op} \leq 70\% U_n$
 Release voltage: $U_{re} \leq 70\% U_n$
 Minimum energization duration: 20 ms
 Maximum energization duration: 30 s at < 10% DF

Other data

Test voltage (1 min.):
 contact - coil ≥ 5 kV_{rms}, 50 Hz
 contact - contact ≥ 1 kV_{rms}, 50 Hz
 Creepage distances:
 contact - coil ≥ 10 mm
 Clearances:
 contact - coil ≥ 10mm
 Impulse voltage test (1,2/50 μs):
 contact - coil ≥ 5 kV_{imp}
 Operate time at U_n: abt. 6 ms
 Release time: abt. 6 ms
 Insulation resistance (500 V_{DC}): > 10³ MΩ
 Vibrations resistance (10-200Hz): 5 g_n(NO)/3g_n(NC)
 Shock resistance (11 ms)
 functional: 10 g_n
 destructive: 100 g_n
 Ambient temperature for operating: - 40°C to + 85°C
 option up to +105 °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. 9.8 g

Unless otherwise stated the relays are wash tight according to Qc2 IEC 60068-2-17, tested with a water immersion test at 70°C for 1 min.

2 coils

Coil rated voltage	Coil resistance at 20°C	Operative coil voltage range at 20°C		
		Operate voltage	Reset voltage	Rated coil power
U _n (V _{DC})	R _n (Ω) ± 10%	U _{op} ≤ (V _{DC})	U _{re} ≤(V _{DC})	(mW)
3	13.8	2.1	2.1	650
5	38	3.5	3.5	650
12	221	8.4	8.4	650
24	886	16.8	16.8	650
48	3544	33.6	33.6	650

2 coils – operation

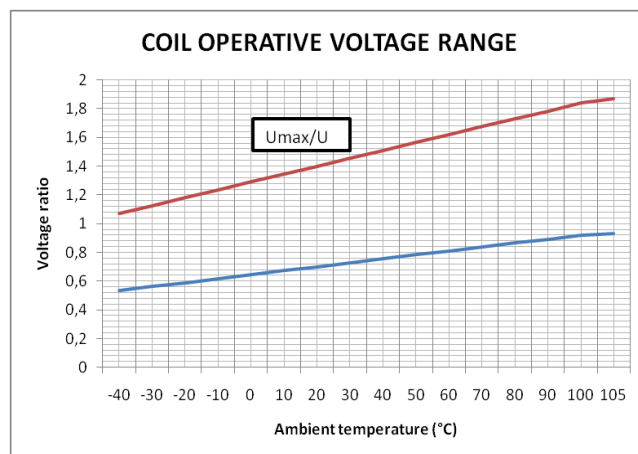
Coil terminal	A1	A3	A2
Set		+	-
Reset	-	+	

1 coil

Coil rated voltage	Coil resistance at 20°C	Operative coil voltage range at 20°C		
		Operate voltage	Reset voltage	Rated coil power
U _n (V _{DC})	R _n (Ω) ± 10%	U _{op} ≤ (V _{DC})	U _{re} ≤(V _{DC})	(mW)
3	22,5	2.1	2.1	400
5	62,5	3.5	3.5	400
12	360	8.4	8.4	400
24	1440	16.8	16.8	400
48	5760	33.6	33.6	400

1 coil – operation

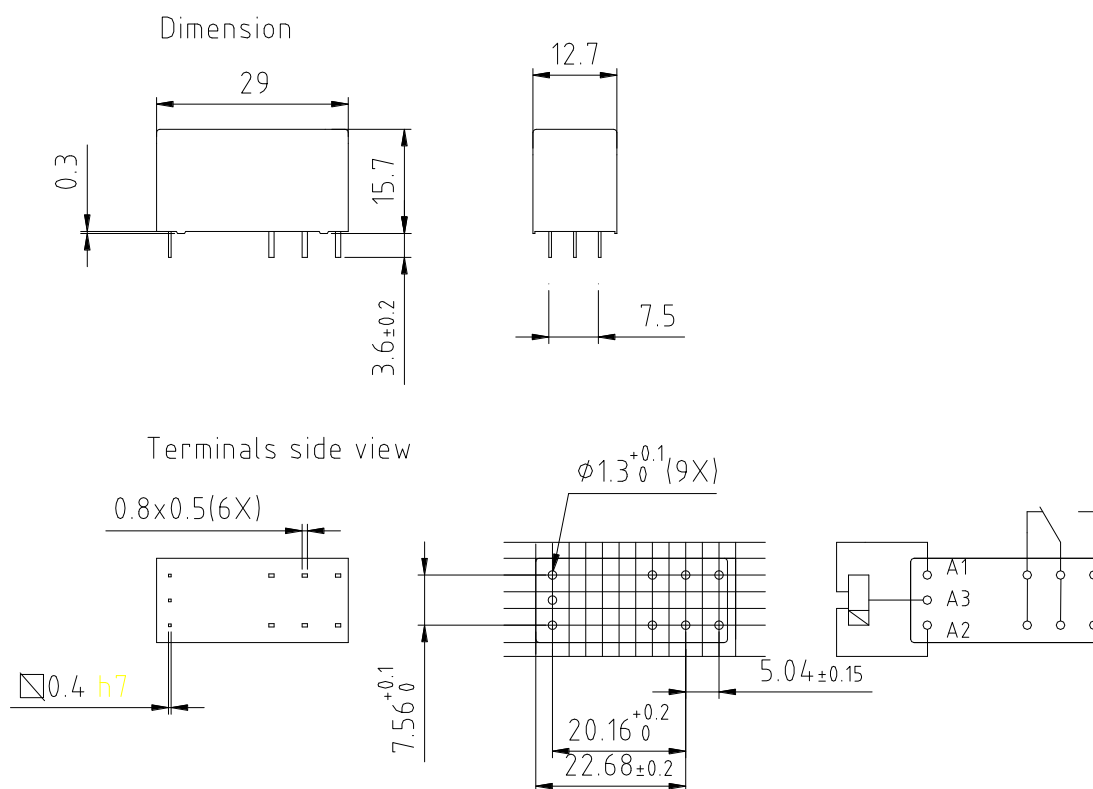
Coil terminal	A1		A2
Set	+		-
Reset	-		+



Ordering data

	TRK 28	X	X	XXX DC
Basic designation				
Contact material: 0 - AgNi10 2 - AgSnO ₂				
Contact form: 1 - Make (SPST-NO) 2 - Break (SPST-NC) 3 - Change over (SPDT)				
Coil rated voltage: - D and voltage for 2 coils (D24 DC)				

Dimensions and terminals layout



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