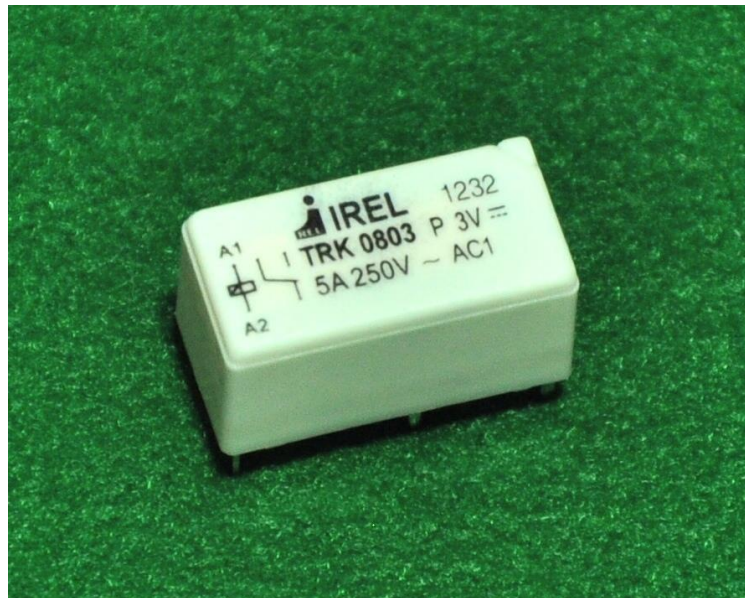




## Miniature Bistable Power Relay TRK 08

**5 A, 250 V<sub>AC</sub> contact load**  
**Coil energizing by voltage impulse**  
**4 kV test voltage between coil and contact**  
**Cadmium-free and Lead-free**



- Small dimensions 10.2 x 10.7 x 20.3mm
- Low coil power consumption
- High insulation resistance  $10^3 \text{ M}\Omega$
- Direct instalation on PCB
- Ambient temperature up to +85°C
- Non-flammable material V- 0
- Plastic bars packing
- Washable version Qc/2

### Application

TRK 08 are polarized, bistable electromagnetic relays for DC coil energizing with one contact system. The great advantage of the bistable relays over monostable lies in continuous operating without energizing. The self-heating of this relays no longer needs to be taken into consideration, what also enables high density of electronics components on PC board. Furthermore, if the power supply voltage fails, the switching status is maintained.

As a switching element with ability of galvanic separation it is designed to control devices with medium power consumption. It can be soldered directly onto the printed circuit board used in industry equipment, bureau appliances, data processing, automotive industry, safety and alarm devices, heating equipment, room thermostats, home automation, battery powered controls and for general purpose.

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 Sn O <sub>2</sub> , Ag Ni 10
Rated current	5 A
Max. operating voltage	380 V <sub>AC</sub> , 220 V <sub>DC</sub>
Max.switching power	1250 VA, 120 W
Min.switching load	5 V <sub>DC</sub> , 100 mA
Contact resistance:	≤ 100 mΩ (100 mA, 24V <sub>DC</sub> )-new relay
Max.operating frequency	360 operations /h - rated load 36000 operations/h - min. load
Capacitance cont.-cont.	≤ 1.5 pF
Mechanical life	≥ 2.10 <sup>6</sup> operations
Electrical life	≥ 50 000 operations ( 5A, 250 V <sub>AC</sub> )

### Coil data

Coil rated voltage	Coil resistance at 20°C	Operating voltage		
		Must operate	U <sub>max</sub>	Must release
U <sub>n</sub> (V <sub>DC</sub> )	R <sub>n</sub> (Ω) ± 10%	U <sub>op</sub> ≤ (V <sub>DC</sub> )	(V <sub>DC</sub> )	U <sub>re</sub> ≤ (V <sub>DC</sub> )
3	25	2.25	4.5	- 2.25
5	70	3.7	7.5	- 3.7
12	400	9,0	18	- 9
18	900	13.5	27	- 13.5
24	1600	18,0	36	- 18
36	3600	27	54	- 27
48	6400	36	72	-36

The best energizing is achieved with rectangular impulse in duration of 20 ms.  
Impulse coil voltage for release U<sub>re</sub> must be opposite polarity as operate coil voltage.

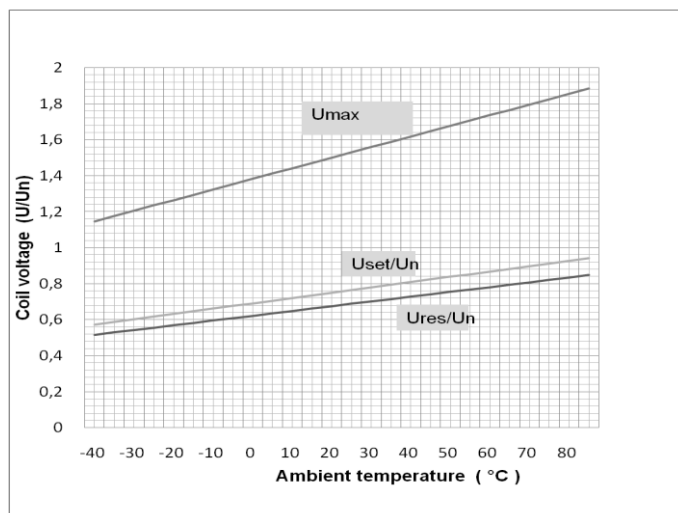
### Polarization of coil energizing

version	P		N	
	A1	A2	A1	A2
operate	+	-	-	+
release	-	+	+	-

### General coil data at ambient temperature 20°C

Rated power: abt. 0.36 W  
 Max.coil temperature: 155° C  
 Operate voltage: U<sub>op</sub> ≤ 75% U<sub>n</sub>  
 Release voltage: U<sub>re</sub> ≤ 75% (- U<sub>n</sub>)  
 Operative range: class 2, IEC 61810 - 1

### Coil operating range DC



### Other data

Test voltage (1 min.):  
 contact - coil ≥ 4 kV<sub>rms</sub>, 50 Hz  
 contact - contact ≥ 1 kV<sub>rms</sub>, 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<sub>imp</sub>

Operate time at U<sub>n</sub>: abt. 5 ms  
 Release time: abt. 5 ms  
 Bouncing time: abt. 5 ms - make, abt. 10 ms - break

Insulation resistance (500 VDC): > 10<sup>3</sup> MΩ  
 Vibrations resistance (10-200Hz): 10 g<sub>n</sub>  
 Shock resistance (11 ms)  
 functional: 10 g<sub>n</sub>  
 destructive: 100 g<sub>n</sub>

Ambient temperature  
 for operating: - 40°C to + 85°C  
 for storage: - 40°C to + 85°C

Protection degree: IP 67, IEC 529  
 Seal test: (1min) Qc/2, IEC60068-2-17  
 Flammability class: V-0, UL 94  
 Mounting position: optional  
 Relay weight: abt. 5g

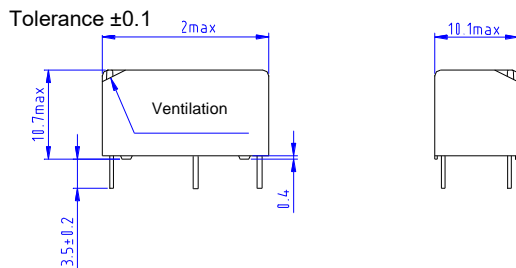
## Ordering data

	TRK 08	X	X	X XX DC
Basic designation				
Contact material: 0 - AgNi10 2 - AgSnO <sub>2</sub>				
Contact form: 1 - Make (SPST-NO) 2 - Break (SPST-NC) 3 - Change over (SPDT)				
Polarization and coil rated voltage: P N				

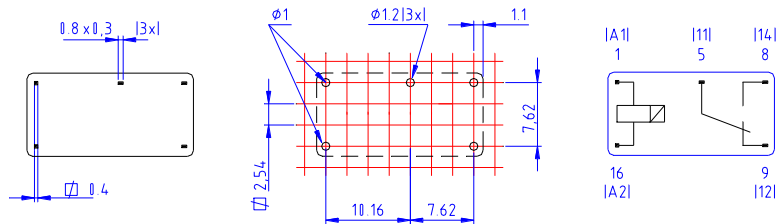
## Polarization of coil energizing

version	P		N	
coil terminals	A1	A2	A1	A2
operate	+	-	-	+
release	-	+	+	-

## Dimensions and terminals layout



Terminals side view



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