



## Miniature Signal Relay TRK 22R



- Rated coil power 0.2 W, 0.3 W, 0.4 W,
- Max. contact load 3 A, 230 Vac, 220 Vdc
- Two change-over, twin cross contacts
- Direct instalation on PCB
- UL approval
- Ambient temperature up to +85°
- Washable version Qc/2
- Non-flammable material V-0
- Plastic bars packing

## Technical data

Relay TRK 22R is a neutral, monostable, electromagnetic relay for DC coil energizing with two contact systems. 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 telecommunication, data processing, computer peripherals, measuring equipment and for general purposes.

## Contact data

Relay type	TRK22R33	TRK22R43
Contact form	2 Change-over	
Contact type	twin cross contacts	
Contact material	AgPd30 + AuAg8	AgNi10 + AuAg8
Rated current	2 A	3 A
Max. operating voltage	230 V <sub>ac</sub> , 220 V <sub>dc</sub>	
Max. switching power	120 VA, 60 W (see diagram)	
Min. switching load	10 mA, 10 mV <sub>dc</sub> ,	
Contact resistance	≤ 100 mΩ (10 mA, 30mV <sub>dc</sub> ) new relay	
Max. operating frequency	1800 / h - rated load 36000 / h - min. load	
Capacitance cont.-cont.	≤ 1,5 pF	
Mechanical life	≥ 2 X 10 <sup>7</sup> operations	
Electrical life	See diagram CO contact at 70°C	

## Coil data

Coil rated voltage	Coil resistance at 20°C	Operative coil voltage range at 20°C		
		Must operate	Must release	U <sub>max</sub>
Un (Vdc)	Rn(Ω) ± 10%	U <sub>op</sub> ≤ (Vdc)	U <sub>re</sub> ≥ (Vdc)	(Vdc)
<b>High sensitive version - 0.2 W</b>				
H 3	45	2.3	0.3	5.4
H 5	125	3.9	0.5	9.0
H 6	180	4.6	0.6	10.8
H 9	405	7.0	0.9	16.1
H 12	720	9.3	1.2	21.5
H 24	2880	18.7	2.4	43.0
H 48	11520	37.4	4.8	86.4
<b>Sensitive version - 0.3 W</b>				
F 5	82	3.8	0.5	8.2
F 6	120	4.5	0.6	9.8
F 9	270	6.8	0.9	14.7
F 12	480	9.1	1.2	19.6
F 24	1920	18.2	2.4	39.3
<b>Standard version - 0.4 W</b>				
S3	22.5	2.1	0.3	4.5
S5	62	3.5	0.5	7.5
S6	90	4.2	0.6	9
S9	203	6.3	0.9	13.5
S12	360	8.4	1.2	18
S18	810	12.6	1.8	27
S24	1440	16.8	2.4	36
S48	5760	33.6	4.8	72

## Coil data for energizing at 20°C

Rated power:

high sensitive - H      abt. 0.2 W  
sensitive - F            abt. 0.3 W  
standard – S            abt. 0.4 W

Max. coil temperature:      155°C

Thermal coil resistance:

high sensitive - H      abt. 250 K/W  
sensitive - F            abt. 200 K/W  
standard                abt. 150 K/W

Operate voltage: (cold coil)

high sensitive - H      U<sub>op</sub> ≤ 78% U<sub>n</sub>  
sensitive - F            U<sub>op</sub> ≤ 76% U<sub>n</sub>  
standard                U<sub>op</sub> ≤ 70% U<sub>n</sub>

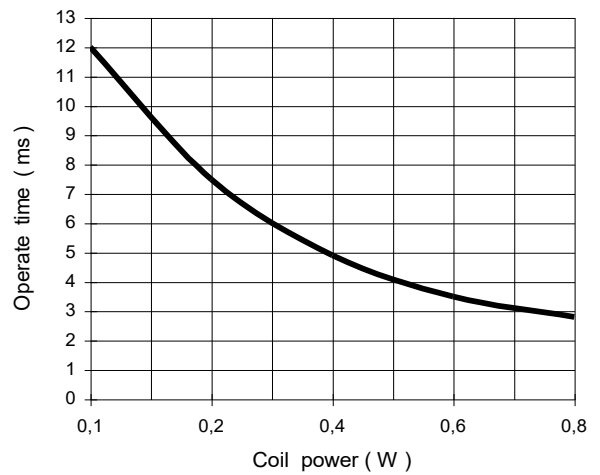
Release voltage:            U<sub>re</sub> ≥ 5% U<sub>n</sub>

Operative range:            1, IEC61810 - 1

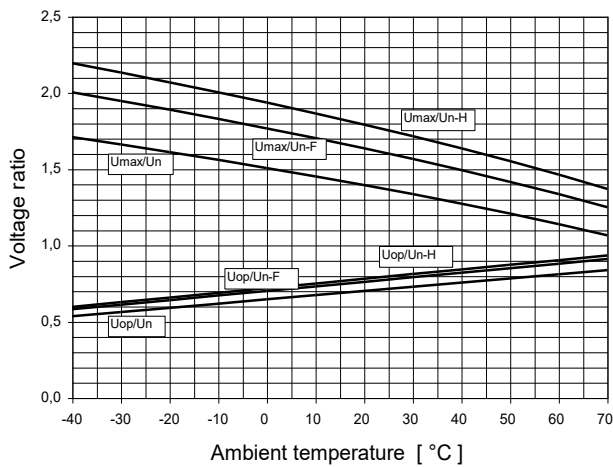
## Other data

Test voltage (1 min.):	
contact - coil	≥ 1500 Vrms, 50 Hz
contact - contact	≥ 750 Vrms, 50 Hz
between contact systems	≥ 1500 Vrms, 50 Hz
Impulse voltage test (1,2/50 μs):	
contact - coil	≥ 2000 Vimp
Operate time at Un:	see diagram
Release time:	< 4 ms
Contact bounce time:	< 2 ms at operate < 8 ms at release
Insulation resistance (500 VDC):	> 10 <sup>3</sup> MΩ
Vibrations resistance (10-200Hz):	10 gn
Shock resistance (11 ms)	
functional:	10 gn
destructive:	100 gn
Ambient temperature	
for operating: F, S Coil power	- 40°C to + 70°C
H Coil power	- 40°C to + 85°C
for storage:	- 40°C to + 85°C
Protection degree:	IP 67
Seal test: (1min):	Qc/2, IEC 60068-2-17
Flammability class:	V-0, UL 94
Cleaning: ultrasonic cleaning over 30s	is not recommended
Mounting position:	optional
Relay weight:	abt. 5 g

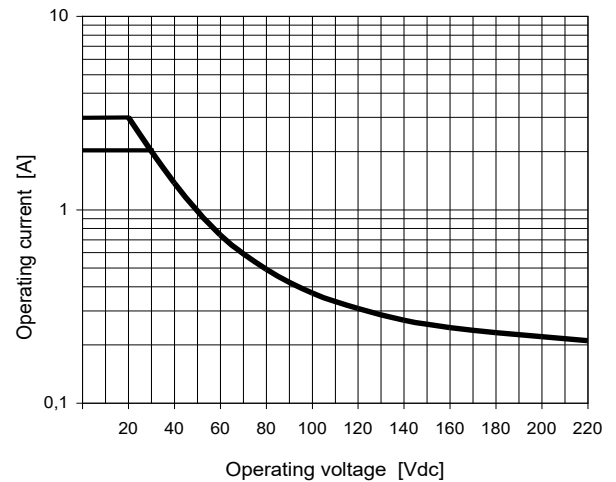
## Max. operating time at Un



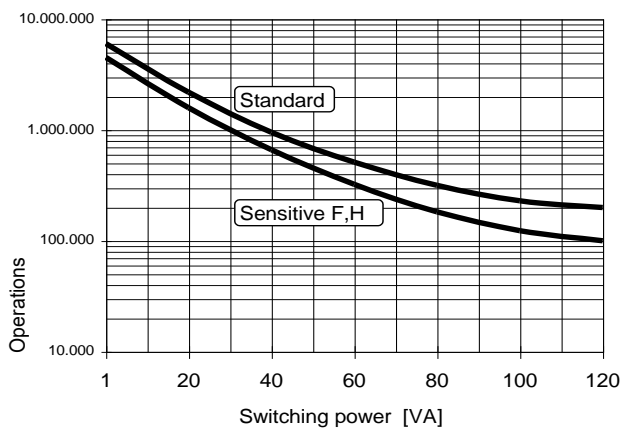
## Operative coil voltage range



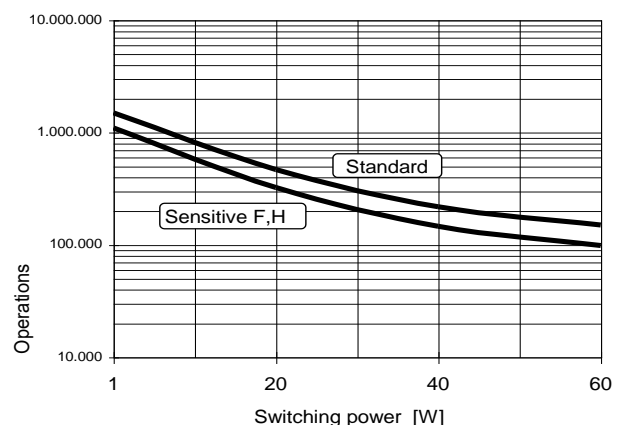
## Max. switching capacity at resistive DC load



## Electrical life at resistive AC load



## Electrical life at resistive DC load

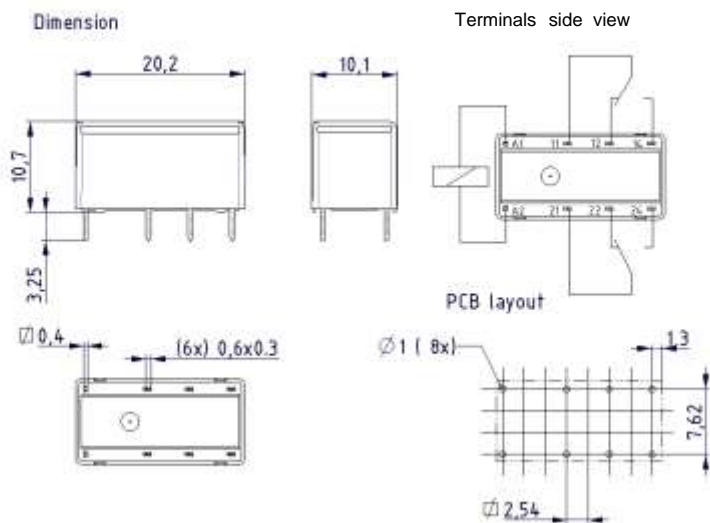


## Ordering data

	TRK 22R	X	3	X	XX dc
Basic designation					
Contact material: 3 – AgPd30 + AuAg8 4 – AgNi10 + AuAg8					
Contact form: 3 - two change over (DPDT)					
Coil version: H - high sensitive, F-sensitive, S –standard,					
Coil rated voltage					

## Dimensions and terminals layout

Tolerance  $\pm 0.1$



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