

TRP 312 - 314
TRP 322 - 324
Miniature Power
Relays



- Monostable, neutral relay
- DC or AC coil
- High switching power
- 2 or 4 change-over contacts
- Print or plug-in, soldering terminals
- Flag or LED switch indication
- Manual test key (latchable)
- Protection diode for DC types
- VDE Approval, CE, UL Approval request

Technical data

Characteristics

- Contact Form: 2 and 4 Change-over
- Contact Material: AgNi10
- Rated Current: 10A 2 Change-over 5A 4 Change-over
- Max. Switch-on Current: 20A 2 Change-over - 10A 4 Change-over
- Max. Operating Voltage: 250VAC, VDC
- Max. Switching Power: 2 Change-over 2500VA 400W
4 Change-over 1250VA 200W
- Min. Switching Load: 6VDC 100mA
- Contact Resistance: $\leq 100 \text{ m}\Omega$ (New relay)
- Max. Operating Frequency:
1200 operations/h rated load (4 CO)
1500 operations/h rated load (2 CO)
30000 operations/h min. load
- Mechanical Life: $> 2 \times 10^7$ operations
- Electrical Life: See diagram
- Rated Power: abt. 1 W 1.2 VA
- Operate Power: abt. 0.6 W 0.7 VA
- Max. Coil Temperature: 155°C
- Thermal Coil Resistance: abt. 65 K / W
- Operate Voltage: $U_{op} \leq 80\% U_n$
- Release Voltage: $U_{re} \geq 10\% U_n$ (DC) - $\geq 15\% U_n$ (AC)
- Operative Range: 1 (IEC 255-1-00)
- Pick up Class: a (IEC 255-1-00)
- Test Voltage (1 min.):
contact-coil $\geq 2 \text{ kV rms } 50 \text{ Hz}$
contact-contact $\geq 1 \text{ kV rms } 50 \text{ Hz}$
between contact sets:
2 CO $\geq 2 \text{ kV rms } 50 \text{ Hz}$
4 CO $\geq 1 \text{ kV rms } 50 \text{ Hz}$
- Operate Time at U_n : $\leq 15 \text{ ms}$
- Release Time: $\leq 14 \text{ ms}$
- Bounce Time: $\leq 5 \text{ ms}$
- Insulation Resistance (500 VDC): $> 10^9 \text{ M}\Omega$
- Vibration Resistance (15–55Hz): $3 g_n$
- Shock Resistance (11 ms): functional $20 g_n$
destructive $100 g_n$
- Ambient Temperature: operating $-25^\circ\text{C}/+60^\circ\text{C}$,
storage $-40^\circ\text{C}/+85^\circ\text{C}$
- Protection Degree: IP 50, IEC 529
- Mounting Position: as desired, relay distance 10 mm
- Relay Weight: 35 g

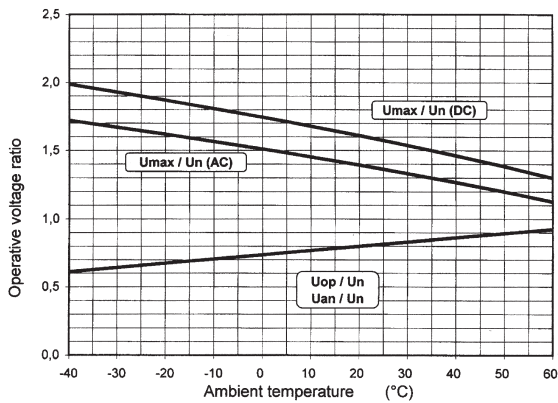
Coil data at 20 °C

Coil Rated Voltage U_n (V) DC / AC	Coil Resistance		Operative Voltage Range		
	DC	AC	Operate $U_{op} \leq$ (V)	$U_{MAX DC}$ \leq (V)	$U_{MAX AC}$ \leq (V)
	$R_n(\Omega) \pm 10\%$				
6	40	12	4.8	9.6	8.3
12	160	49	9.6	19.2	16.7
24	650	192	19.2	38.7	33.5
48	2600	785	38.4	77.5	66.9
60	4000	1240	48	96	83
110	13500	3880	88	176	153
220	53000	17400	176	350	306
230	58000	18200	184	366	320

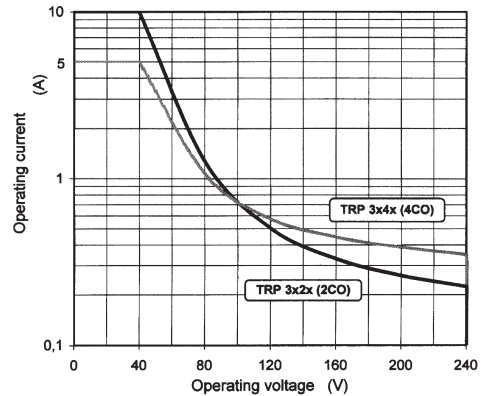
Ordering information

	TRP 3	X	X	X	XXX DC/AC
Basic designation					
1 - Plug-in, soldering terminals 2 - PCB terminals					
Number of change-over contacts: 2 or 4 CO					
Relay version: 1 - Relay with test key 2 - Relay with test key and flag 4 - Relay with test key and LED					
Relay for DC voltage: 6 - Relay with test key and protection diode 7 - Relay with test key, flag and protection diode 9 - Relay with test key, LED and protection diode					
Rated voltage of coil					

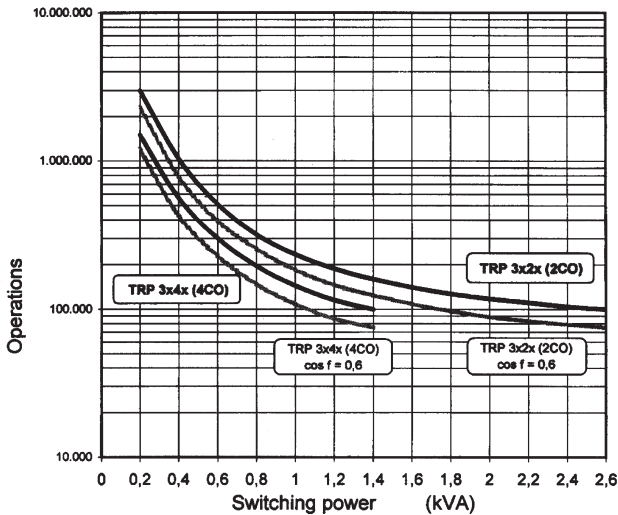
Operative voltage range



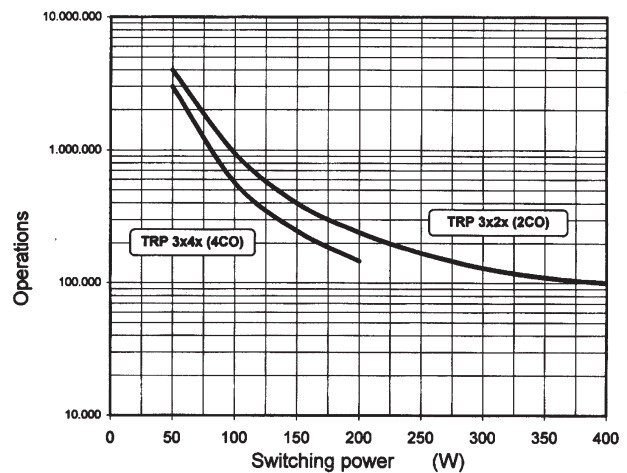
Max. switching capacity, resistive DC load



Electrical life, resistive AC load

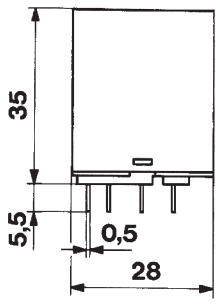


Electrical life, resistive DC load

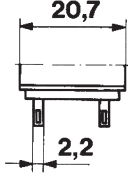


Dimensions and Terminals Layout in mm

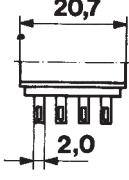
Plug-in, soldering terminals



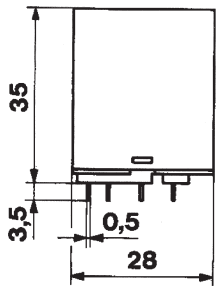
TRP 312



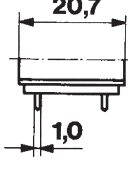
TRP 314



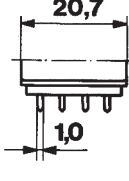
PCB terminals



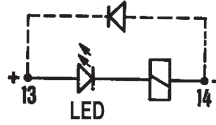
TRP 322



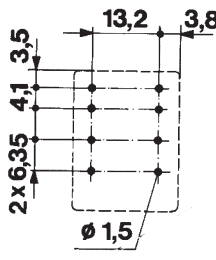
TRP 324



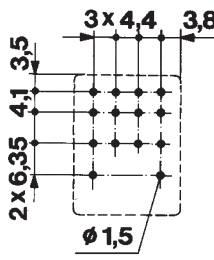
Protection diode




2x6,35 4,1 3,5



3x4,4 3,8





Socket

TLK 1431-4 for TRP 314
 TLK 1431-2 for TRP 312

