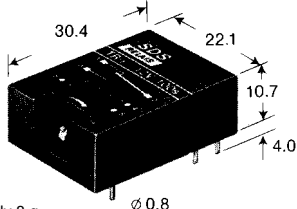


Panasonic
ideas for life

PROVEN PCB TIME DELAY RELAY WITH ADJUSTABLE TIME-ON OR TIME-OFF DELAY OR PULSE RELAY

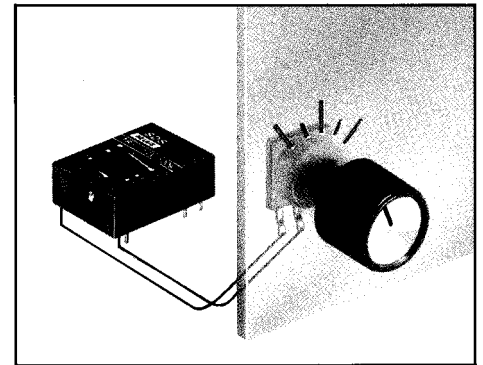
TR-RELAYS



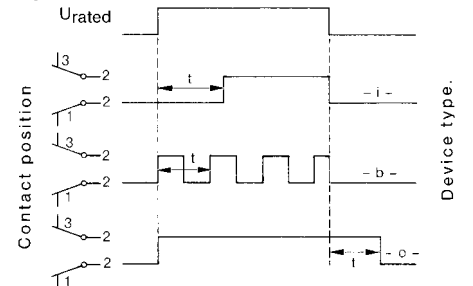
Approximately 8 g
Housing material: CRASTIN SK-615 FR
Basic grid 2.54 mm
PCB hole dia. \varnothing 1.0 mm \pm 0.1 mm
Housing tolerance \pm 0.3 mm

- Not susceptible to external disturbance.
- Increase in timing range by using an external capacitor with time-off delay device – o –.
- No „first cycle effect“, with the time-on delay device. The first and following operations are of the same duration.

Characteristics		Remarks	
Type of contacts (CO = changeover)		1 CO	
Max. make/rated/break current	A	3 / 1 / 1	
Voltage switching range	VDC (VAC)	10 ⁵ -110 (240)	240 V using only
Power switching range	W (VA)	10 ⁴ -20 (30)	1 circuit
Contact material		AuCo	See also the R relay data sheet
Volumetric/contact resistance (at 5 V, 10 mA)	m Ω	50/30	
Operat. life ¹⁾ mech. with contact loading	switching ops.	10 ⁹	
0.5 A, 10 W / 1 A, 1 W	switching ops.	10 ⁷ /10 ⁸	
0.2 A, 12 V / 1 mA, 1 mV	switching ops.	10 ⁸ /10 ⁹	
Voltage withstand: cont./cont.-control circuitry	V _{eff}	500/750	
Insulation resistance: cont./cont.-control circuitry		10 ⁹ /10 ¹⁰	
Shock and vibration resistance	g-g/Hz	50-20/2000	Independant of position
Life of trimmer		>100 operations	typically 1000 ops.
Type of protection		dust tight / IP50	
Storage temperature	$^{\circ}$ C	-20/ +85	
Permiss. ambient temp. at max. load	$^{\circ}$ C	-20/ +65	Consequently, time tol: < 4% with -i- devices 30% with -o- devices
Min. control pulse duration at rated voltage.	ms	100	



Operation



+ The trimmer is omitted on the -i/-o- 0s device. This must be replaced by an external potentiometer. The time delay thus achievable is 20s per 100 k Ω with the -i- devices and approx 20s per 1 M Ω with the -o- devices. The minimum time delays are 1s (with -i-) and 0.1 s (with -o-).
* With the -o- 0s device, the pulse frequency is 5 Hz. max., and is inversely proportional to R_{ext} (e.g. at 20 k Ω the pulse frequency is 1 Hz).

Operating characteristics

Type: -i- "on" delay -b- pulse relay	Operating voltage V	Current Consumpt. mA	Type: -o- "off" delay	Operating voltage V	Current Consumpt. mA
TR - i - 5 V/TR - b - 5 V	4.0 - 9.0	30	TR - o - 5 V	4.5 - 9.0	65
TR - i - 12 V/TR - b - 12 V	8.5 - 18.0	15	TR - o - 12 V	8.5 - 18.0	35
TR - i - 24 V/TR - b - 24 V	17.0 - 30.0	14	TR - o - 24 V	18.0 - 28.0	25
Rated time: „on“ delay „i“ 0 s +) 10 s 100 s 800 s			Rated time: „off“ delay „o“ 0 s +) 10 s 100 s		
Minimum timing range [s] at rated voltage	1-1000	0.1-10	1-100	8-800	
Time tolerance at U _{rated} \pm 20% < 2%			Time tolerance at U _{rated} \pm 20%	- approx 5%	
Pulse relay „b“ pulse frequency	0.04 ... 5 Hz*		Time delay increase with C _{ext} per μ F	- 1.5s 4.7s	

Connection diagram (bottom view) Warning! No revers battery protection

<p>TR - i - 5, 12, 24 V - 0 s TR - b - 5, 12, 24 V - 0 s</p> <p>0 < R_{ext} < 5 MΩ</p>	<p>TR - o - 5, 12, 24 V - 0 s</p> <p>10 kΩ < R_{ext} < 2.2 MΩ</p>	<p>TR - o - 5, 12, 24 V - 10 s or 100 s TR - i - 5, 12, 24 V - 10 s, 100 s or 800 s TR - b - 5, 12, 24 V - 25 s</p> <p>C_{ext.} valid only for -o-</p>
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Ordering example

TR - i - 24 V - 10s

Type _____
i = time-„on“, o = time-„off“ delay
b = pulse relay
Rated voltage _____
Rated time _____

Note:
Excitation voltage ripple should be maintained below 5% by use of appropriate smoothing.
Strong external magnetic fields influence relay data.
1) Data concerning operational life is based on resistive loads and ambient temperature of 20-30 $^{\circ}$ C.

TR-W Wiping function on request

With surge voltages (1.2/50 μ sec) over DC 500V TR-i. b. w relays may not operate as intended.

单击下面可查看定价，库存，交付和生命周期等信息

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