



# TR99

## MAIN FEATURES

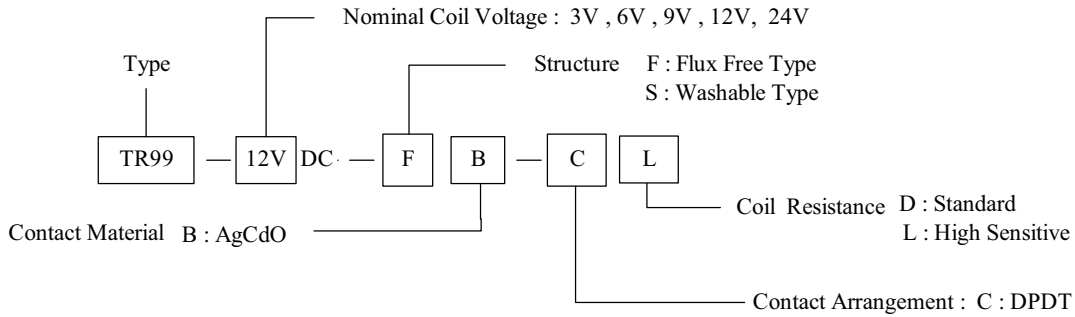
- Small size and low cost.
- Low coil power consumption.
- PCB mounting.
- Switching capacity from 1A to 5A.
- Sealed type available.



## APPLICATIONS

- Audio equipment.
- Communication equipment.
- Remote control.
- Acoustic controlled toys.

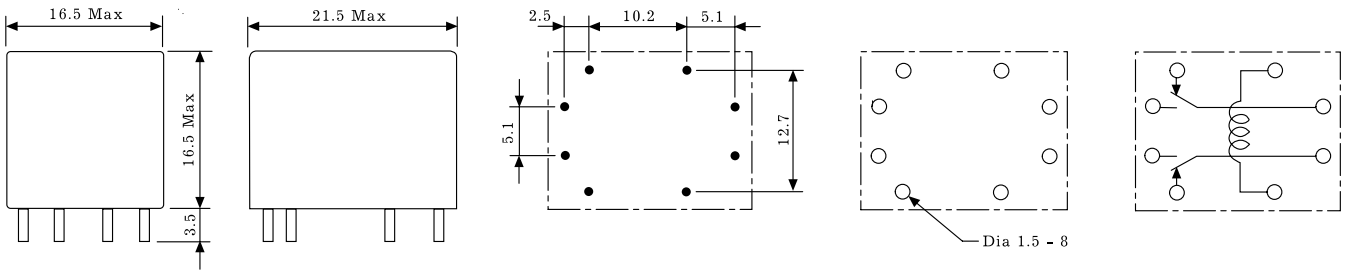
## ORDERING INFORMATION



### n DIMENSION (unit:mm)

### n DRILLING (unit:mm)

### n WIRING DIAGRAM



## ■ COIL DATA CHART (AT20C)

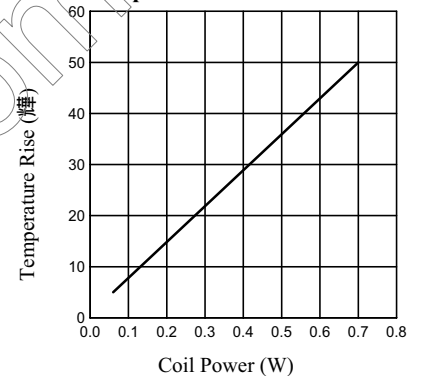
Coil Sensitivity	Coil Voltage Code	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ( $\Omega$ ) $\pm 10\%$	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Max-Allowable Voltage (VDC)
TR99 (High Sensitivity)	03	3	120	25	abt. 0.36W	80% Max.	5% Min.	110%
	06	6	60	100				
	09	9	40	220				
	12	12	30	400				
	24	24	15	1600				
TR99 (Standard)	03	3	150	20	abt. 0.45W	80% Max.	5% Min.	110%
	06	6	75	80				
	09	9	50	180				
	12	12	37.5	320	abt. 0.48W			
	24	24	18.7	1200				

## ■ CONTACT RATING

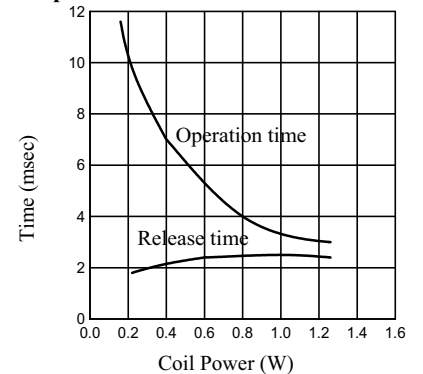
Item	Type	TR99	
Contact Capacity			
Resistive Load ( $\cos\Phi=1$ )		5A 110VAC 5A 28VDC	1A 110VAC 1A 28VDC
Inductive Load ( $\cos\Phi=0.4$ L/R=7msec)		2A 110VAC 2A 28VDC	0.3A 110VAC 0.3A 28VDC
Rated Carrying Current		5A	1A
Max. Allowable Voltage		250VAC 50VDC	
Max. Allowable Current		5A	1A
Max. Allowable Power Force		550VA 140W	110VAC 28W
Referenced Min. Applicable Load		5VDC 110mA	
Contact Material		Ag Alloy	Ag Alloy

## ■ REFERENCE DATA

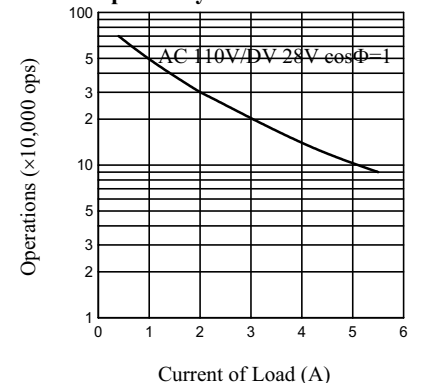
Coil Temperature Rise



Operation Time



Life Expectancy



## ■ PERFORMANCE (at initial value)

Item	Type	TR99
Contact Resistance		100m $\Omega$ Max.
Operation Time		15msec Max.
Release Time		5msec Max.
Dielectric Strength		
Between coil & contact		1000VAC 50/60HZ (1 minute)
Between contacts		750VAC 50/60HZ (1 minute)
Surge Resistiveness		1500V (between coil & contact 1 $\times$ 40 usec)
Insulation Resistance		100 M $\Omega$ Min. (500VDC)
Max. ON/OFF Switching		
Mechanically		300 operation/min
Electrically		30 operation/min
Operating Ambient Temperature		-30°C to +60°C (No water condensation and no water drop)
Operating Humidity		45% to 85%RH
Coil Temperature Rise		35 deg. Max. (at rated coil voltage)
Vibration		
Endurance		10 to 55Hz Double Amplitude 1.5mm
Error Operation		10 to 55Hz Double Amplitude 1.5mm
Shock		
Endurance		100G Min.
Error Operation		10G Min.
Life Expectancy		
Mechanically		10 $\times$ 10 <sup>6</sup> ops. Min. (no load)
Electrically		10 $\times$ 10 <sup>4</sup> ops. Min. (at rated coil voltage)
Weight		abt. 12grs.