

# Power Relay

# TR90



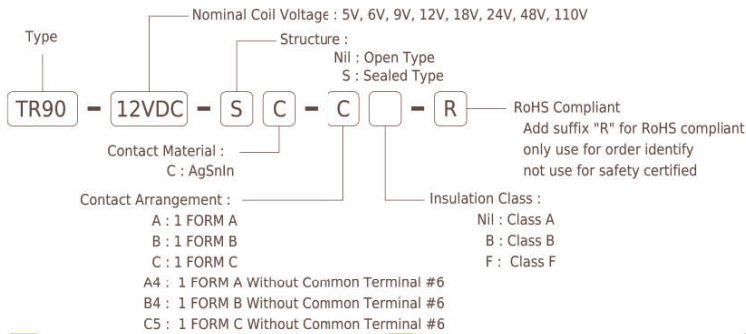
## MAIN FEATURES

- Up to 30A switching in SPST and 20A switching in SPDT arrangements
- Available as an open-frame relay, with an immersion cleanable, plastic sealed case.
- Meet UL F Insulation class.
- UL, cUL and TUV recognized.

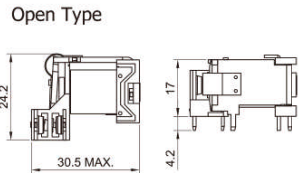
## APPLICATIONS

- Used for power switching, Electrical Heater, ventilator, Air conditioning, Refrigerating, Automobile and House-hold Appliance.

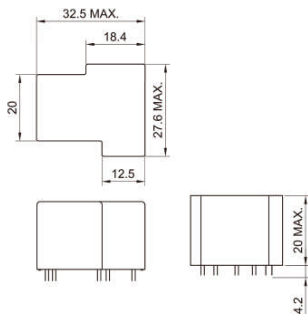
## ORDERING INFORMATION



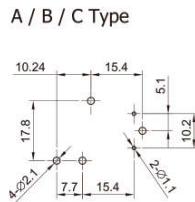
## DIMENSION(unit:mm)



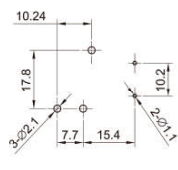
### Sealed Type



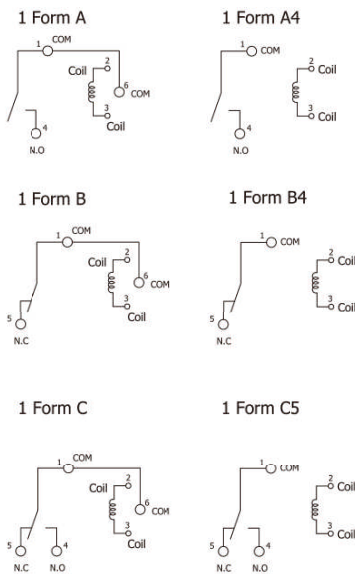
## DRILLING(unit:mm)



### A4 / B4 / C5 Type



## WIRING DIAGRAM



(De-energized Position)

## COIL DATA CHART(at 20°C)

Coil Sensitivity	Nominal Coil Voltage (VDC)	Nominal Current (mA)	Coil Resistance (Ω) ±10%	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Max-Allowable Voltage (VDC)
TR90	5	185	27	abt. 0.93	80% Max.	10% Max.	120% Max.
	6	150	40				
	9	93	97				
	12	77	155				
	18	47	380				
	24	36	660				
	48	19	2560				
110	8	13450 ±15%					

## CONTACT RATING

Item	TR90			
	- A / - A4	- C / - C5		
		N/O	N/C	
Resistive Load (cosφ=1) General	UL	40A 240VAC 30A 277VAC	40A 240VAC 30A 277VAC	30A 240VAC/30VDC 20A 277VAC
		TUV	(*B:AgCdO) 40A 240VAC/14VDC	(*B:AgCdO) 40A 240VAC/14VDC
Motor		2HP 250VAC	2HP 250VAC	1.5HP 250VAC
Contact material	Silver Alloy			

## PERFORMANCE(at initial value)

Item	TR90	
	UL508	UL873
Contact Resistance	100mΩ Max.	
Operation Time	15msec Max.	
Release Time	10msec Max.	
Dielectric Strength Between coil & contact Between contacts	1500VAC 50/60Hz (1 minute) 1500VAC	2500VAC
Insulation Resistance	10 MΩ Min. (at 500VDC)	
Max. ON/OFF Switching Mechanically Electrically	300 operation/min 30 operation/min	
Operating Ambient Temperature	-55°C to +85°C (operating) -55°C to +155°C (storage)	
Operating Humidity	45% to 85% RH	
Coil Temperature Rise	60 deg. Max.	
Vibration Endurance Error Operation	10 to 55Hz Double Amplitude 1.5mm 10 to 55Hz Double Amplitude 1.5mm	
Shock Endurance Error Operation	100 m/sec <sup>2</sup> (abt. 100g's) 10 m/sec <sup>2</sup> (abt. 10g's)	
Life Expectancy Mechanically Electrically	1 × 10 <sup>7</sup> 1 × 10 <sup>5</sup>	
Weight	abt. 22g. . 28g.(SEALED)	
UL & CUL	E156406	

1. Tolerance ±0.5mm on all dimensions unless otherwise stated.  
2. Tolerance ±0.1mm on PCB DRILLING dimension unless otherwise stated.