



# TR90

## MAIN FEATURES

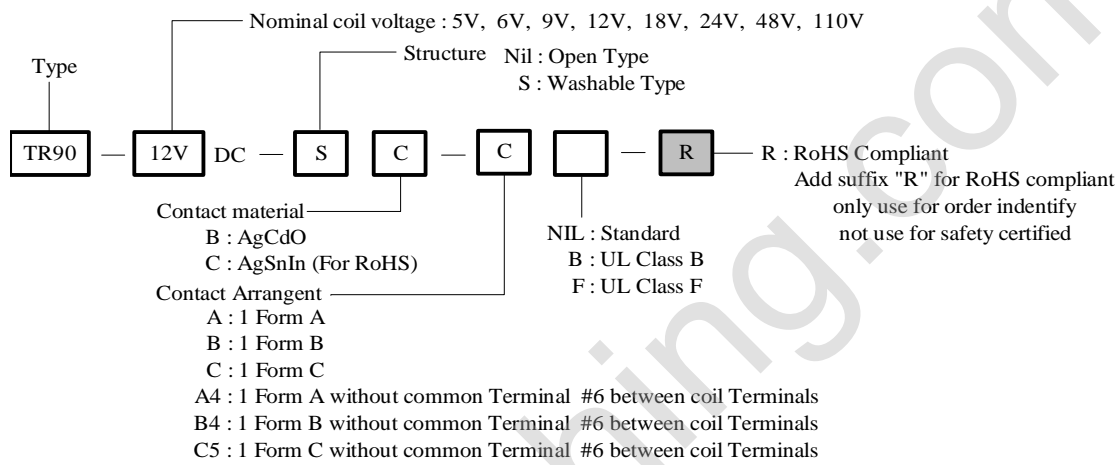
- Up to 30A switching in SPST and 20A switching in SPDT arrangements.
- Available as an open-frame relay, with an immersion cleanable, plastic sealed case.
- Meet UL F Insulation class.
- UL - cUL and TUV recognized.



## APPLICATIONS

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

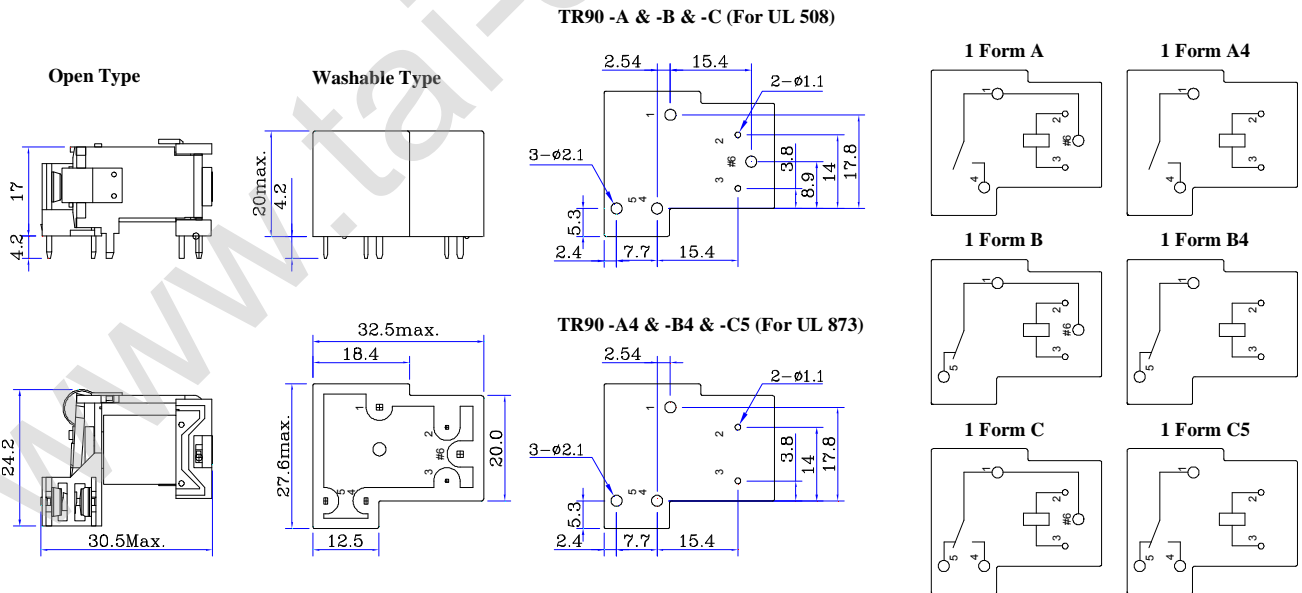
## ORDERING INFORMATION



### DIMENSION (unit:mm)

### DRILLING (unit:mm)

### WIRING DIAGRAM



NOTE : "#6" This Terminal not present for A4 & B4 & C5 Type ( MEET UL873 Spacing )

➤ **COIL DATA CHART(at 20°C)**

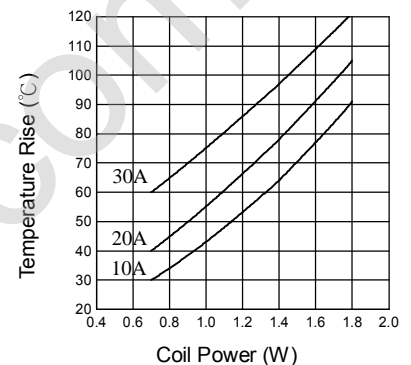
Coil Sensitivity	Nominal Coil Voltage (VDC)	Nominal Current (mA)	Coil Resistance ( $\Omega$ ) $\pm 10\%$	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Max-Allowable Voltage (VDC)
TR90	5	185	27	abt. 0.93	80% Max.	10% Max.	120%Max.
	6	150	40				
	9	93	97				
	12	77	155				
	18	47	380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

➤ **CONTACT RATING**

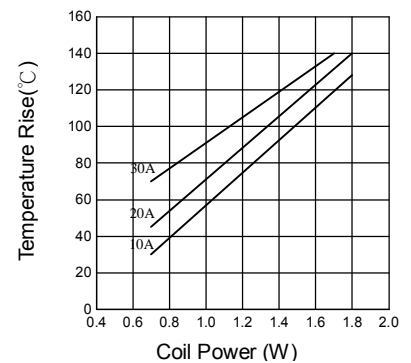
Item	Type	TR90		
		- A / - A4	- C / - C5	
			N/O	N/C
Resistive Load (cos $\phi$ =1) General	UL :	40A 240VAC 30A 277VAC	40A 240VAC 30A 277VAC	30A 240VAC 20A 277VAC
	TUV : (*B:AgCdO)	40A/240VAC 14VDC	40A/240VAC 14VDC	30A/240VAC 14VDC
Motor		2HP 250VAC	2HP 250VAC	1.5HP 250VAC
Tungsten		TV-5	TV-5	-

➤ **REFERENCE DATA**

OPEN-STYCLE RELAY,  
NO DUST COVER



SEALED RELAY



➤ **PERFORMANCE (at initial value)**

Item	Type	TR90	
		UL508	UL873
Contact Resistance		100m $\Omega$ Max.	
Operation Time		15msec Max.	
Release Time		10msec Max.	
Dielectric Strength	Between coil & contact	1500VAC 50/60HZ (1 minute)	2500VAC
	Between contacts	1500VAC	
Insulation Resistance		10 M $\Omega$ Min. (500VDC)	
Max. ON/OFF Switching	Mechanically	300 operation/min	
	Electrically	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	10 to 55Hz Double Amplitude 1.5mm	
	Error Operation	10 to 55Hz Double Amplitude 1.5mm	
Shock	Endurance	100 m/sec <sup>2</sup> (abt. 100g's)	
	Error Operation	10 m/sec <sup>2</sup> (abt. 10g's)	
Life Expectancy	Mechanically	1 $\times$ 10 <sup>7</sup>	
	Electrically	1 $\times$ 10 <sup>5</sup>	
Weight		abt. 22grs, 28grs(SEALED)	
UL & CUL		E156406	
TUV		R50036670	

This datasheet for reference and subject to change without notice. Please double check final specification with Tai-Shing. (0939AA08VOL01)