



# Power Relay

# TR91

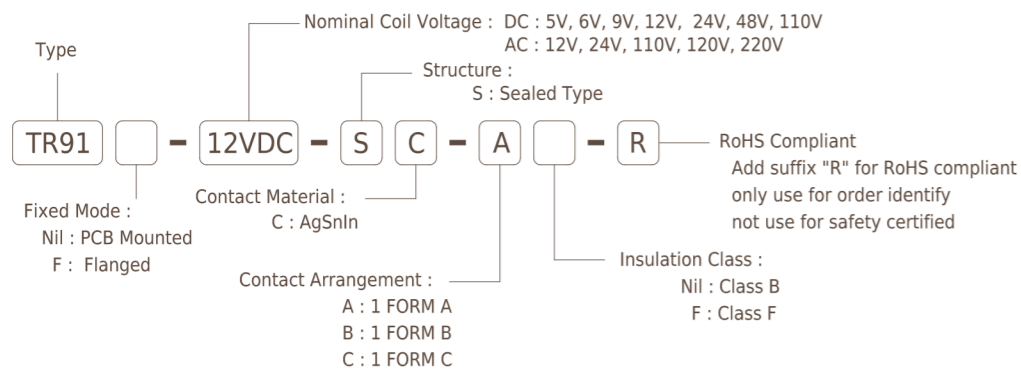
## MAIN FEATURES

- Up to 30A switching in SPST and 20A switching in SPDT arrangements.
- Available as an open-frame relay, with a snap-on dust cover or with an immersion cleanable, plastic sealed case.
- Meets UL508 and UL873 spacing requirements.
- Available with UL class B & class F Insulation materials.
- UL, cUL recognized.

## APPLICATIONS

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

## ORDERING INFORMATION



## COIL DATA CHART(at 20°C )

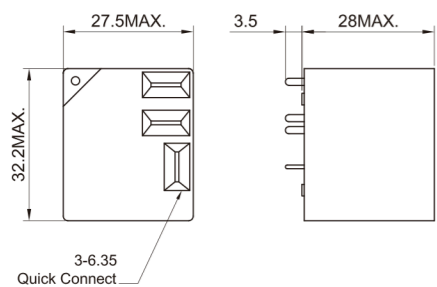
Coil Sensitivity	Nominal Coil Voltage (VDC)	Nominal Current (mA)	Coil Resistance (Ω) ±10%	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Max-Allowable Voltage (VDC)
TR91	DC Type	5	185	28	abt. 0.9	75% Max.	10% Max.
		6	150	40			
		9	93	90			
		12	77	160			
		24	36	640			
		48	19	2560			
TR91	AC Type	110	8	13445	abt. 2.0	75% Max.	30% Max.
		12	167	27			
		24	83	120			
		110	19	2360			
		120	17	3040			
		220	9.5	13490			

## CONTACT RATING

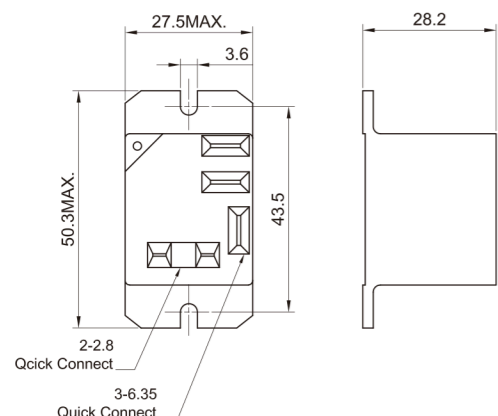
Item	TR91		
	1 Form A	1 Form C	
		N/O	N/C
UL/CUL	40A 240VAC 30A 277VAC 2HP 250VAC	40A 240VAC 30A 277VAC 2HP 250VAC	30A 240VAC 30A 30VDC 20A 277VAC 1.5HP 250VAC
Switching Voltage(Max.)	277VAC		
Switching Current(Max.)	40A	40A	30A
Switching Power(Max.)	7200VA	4800VA	2400VA
Contact material	Silver Alloy		

## DIMENSION(unit:mm)

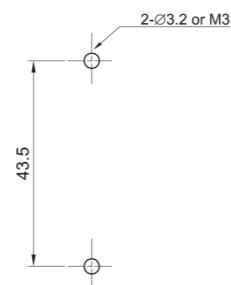
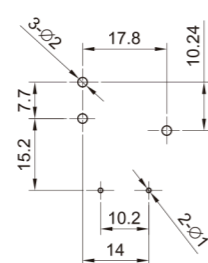
### PCB Type - Quick Connect



### Flanged Type - Quick Connect

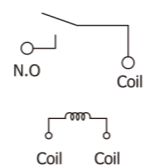


## DRILLING(unit:mm)



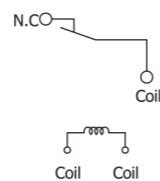
## WIRING DIAGRAM

### 1 Form A



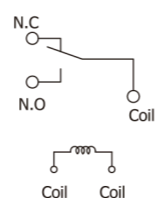
(De-energized Position)

### 1 Form B



(De-energized Position)

### 1 Form C



(De-energized Position)

## PERFORMANCE(at initial value)

Item	TR91
Contact Resistance	100mΩ Max.
Operation Time	DC : 15msec Max. / AC : 20msec Max.
Release Time	DC : 10msec Max. / AC : 15msec Max.
Dielectric Strength Between coil & contact Between contacts	1500VAC 50/60Hz (1 minute) 1500VAC
Insulation Resistance	1000 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 80% 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	1000 m/sec (abt. 100g's) 100 m/sec (abt. 10g's)
Life Expectancy Mechanically Electrically	1 × 10 <sup>7</sup> 1 × 10 <sup>5</sup>
Weight	abt. 33g.
UL&cUL	E156406

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