

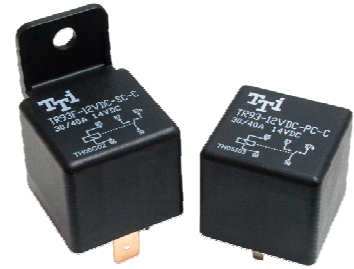
# TR93

## MAIN FEATURES

- Small size, heavy duty, capable of 40A.
- Low contacts voltage drop ( $\leq 3\text{mV/A}$ ), reduce circuit consumption and contacts noise.
- Contact structure, performance reliable, with plug-in pins, bracket model available, handle with ease.

## APPLICATIONS

- Car compressor, light, starter, horn. Automatic devices, communication equipment, control and switch circuit, etc.



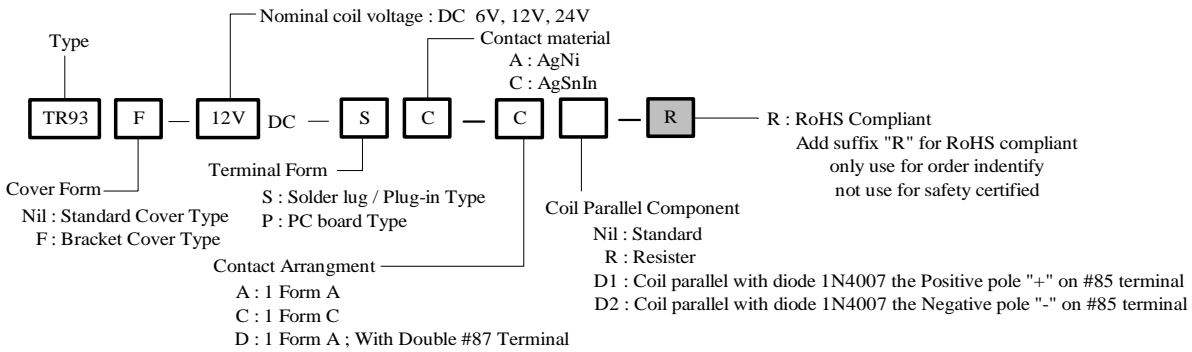
### Option Socket :

Please refer appendix P103



- OD07-0011A
- OD07-0012A
- OD07-0013A
- OD07-0014A
- OD07-0022A

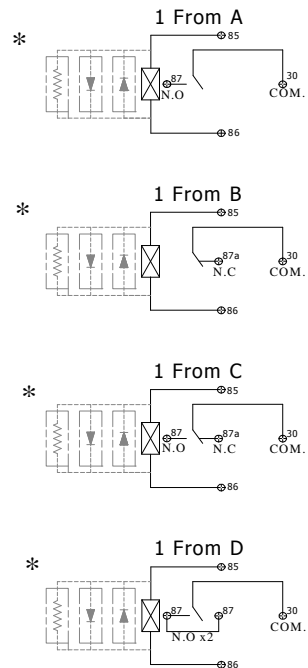
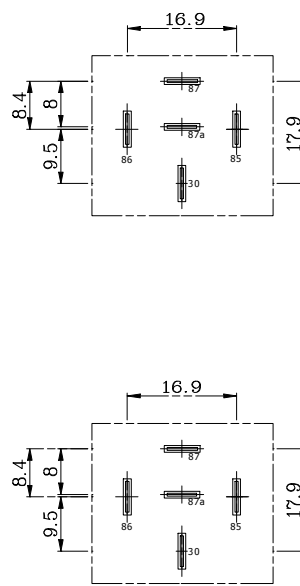
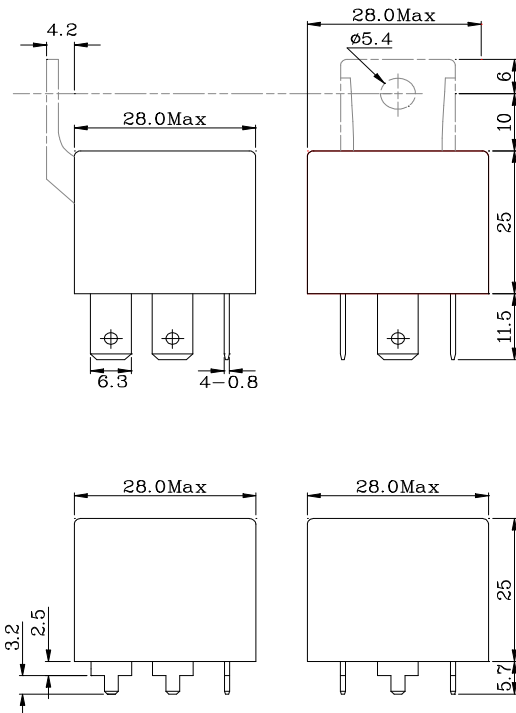
## ORDERING INFORMATION



## DIMENSION (unit:mm)

## DRILLING (unit:mm)

## WIRING DIAGRAM



## COIL DATA CHART (AT20°C)

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)
TR93	6	6	267	22	abt. 1.6	65% Max.	10% Min.	150% but for short time carrying current
	12	12	134	90				
	24	24	67	360				

## CONTACT RATING

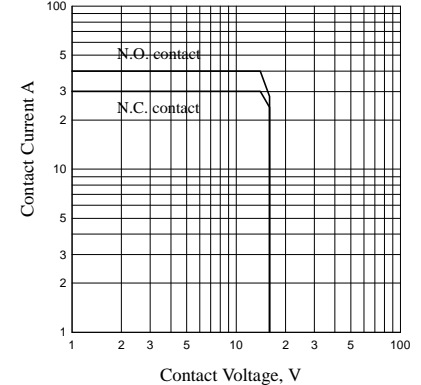
Item \ Type	1 Form A	1 Form D	1 Form B	1 Form C	
				N/C	N/O
Contact Capacity Resistive Load $\cos\phi=1$	40A 14VDC	2x20A 14VDC (N/O x 2)	20A 14VDC	30A 14VDC	40A 14VDC
Max. Carrying Current	30A			30A	30A
Max. Make Current	120A			45A	120A
Max. Break Current	40A			30A	30A
Initial Voltage Drop	200mV (at 40A)			250mV (at 10A)	200mV (at 10A)
Min. Load	0.1A, 12VDC				
Contact Material	Ag Alloy				

## PERFORMANCE (at initial value)

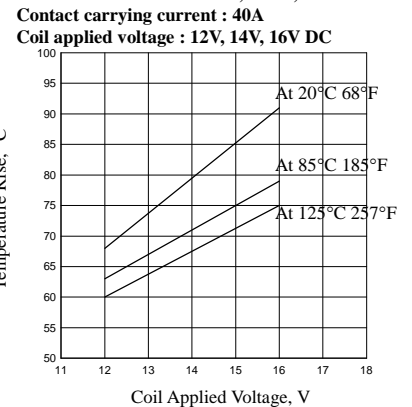
Item \ Type	TR93
Contact Resistance	100m $\Omega$ Max.
Operation Time	15msec Max.
Release Time	15msec Max.(type with diode inside : 20msec max.)
Dielectric Strength	Between coil & contact 500VAC 50/60Hz (1 minute) Between contacts 500VAC 50/60Hz (1 minute)
Insulation Resistance	100 M $\Omega$ Min .(500VDC)
Max. ON/OFF Switching	Mechanically 300 operation/min Electrically 30 operation/min
Operating Ambient Temperature	-40°C to +80°C (No water drop condensation)
Operating Humidity	45 to 85% RH
Coil Temperature Rise	60 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 $10 \times 10^6$ Electrically $1 \times 10^5$ for 1 Form A 30000 for 1 Form C
Weight	abt. 34grs.

## REFERENCE DATA

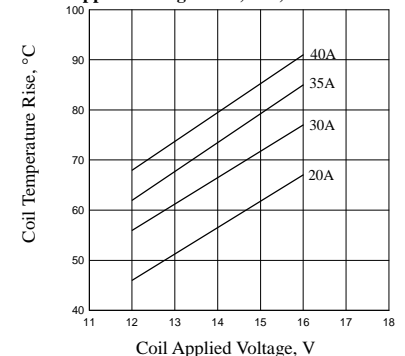
1. Maximum value for switching capacity No. of operations :  $10^5$



2-(1). Coil temperature rise (resistive)  
Ambient temperature : 20°C, 85°C, 125°C  
68°F, 185°F, 257°F



2-(1). Coil temperature rise (resistive)  
Ambient temperature : 20°C, 68°C  
Contact carrying current : 20A, 30A, 35A, 40A  
Coil applied voltage : 12V, 14V, 16V DC



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