

TR93

MAIN FEATURES

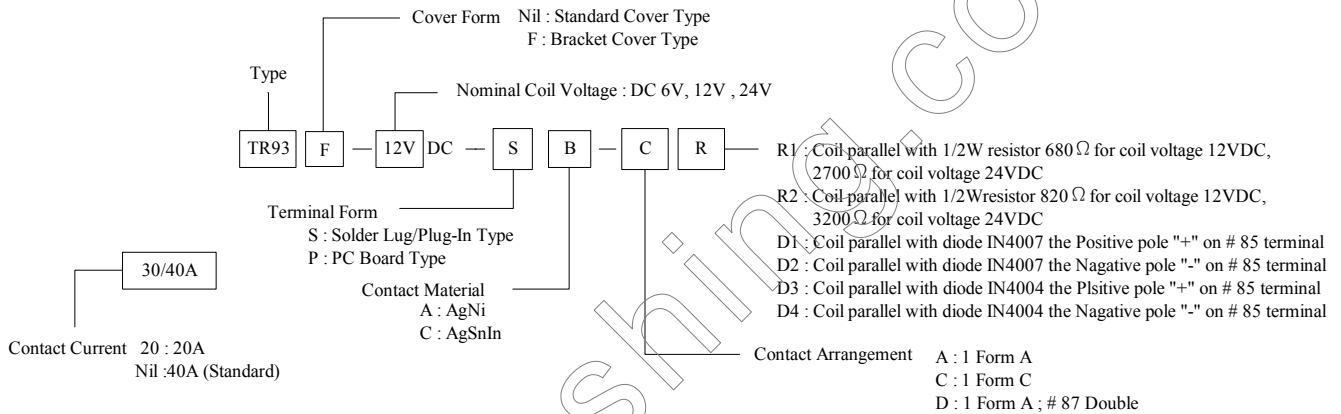
- Small size, heavy duty, capable of 40A.
- Low contacts voltage drop ($\leq 3mV/A$), reduce circuit consumption and contacts noise.
- Contact structure, performance reliable, with plug-in pins, bracket model available, handle with ease.
- Apply ISO standard, compliance with specification TL932 of VOIKSWSGEN AUTOMATIVE COMPANY FRG.



APPLICATIONS

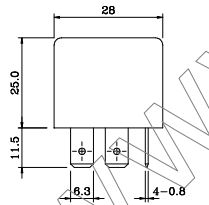
- Car compressor, light, starter, horn. Automatic devices, communication equipment, control and switch circuit, etc.

ORDERING INFORMATION



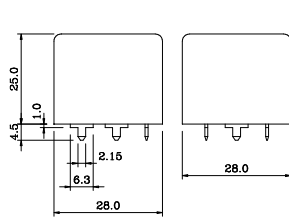
DIMENSION (unit:mm)

Standard Cover Type



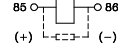
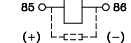
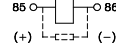
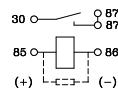
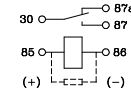
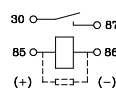
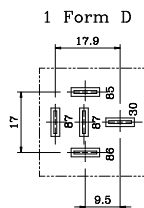
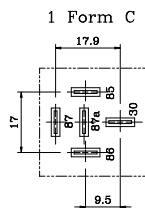
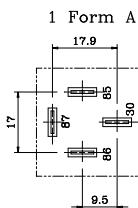
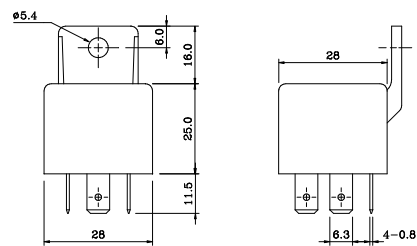
DRILLING (unit:mm)

P.C.B. Terminal Type



WIRING DIAGRAM

Bracketed Cover Type



■ COIL DATA CHART (AT20°C)

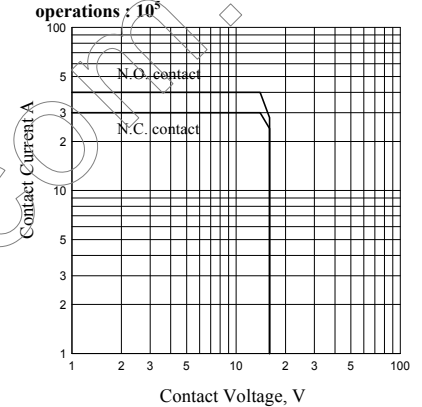
Coil Sensitivity	Coil Voltage Code	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance (Ω) $\pm 10\%$	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Max-Allowable Voltage (VDC)
TR93	6	6	267	22.5	abt. 1.6	65% Max.	10% Min.	150% but for short time carrying current
	12	12	134	90				
	24	24	67	360				

■ CONTACT RATING

Item	Type	1 Form A	1 Form C	
			N/C	N/O
Contact Capacity		40A 14VDC	30A 14VDC	40A 14VDC
Resistive Load		20A 14VDC	20A 14VDC	30A 14VDC
cos $\Phi=1$				
Max. Carrying Current		40A	30A	40A
Max. Make Current		60A	40A	60A
Max. Break Current		40A	30A	30A
Initial Voltage Drop		200mV (at 40A)	250mV (at 10A)	200mV (at 10A)
Max. Allowable Power Force		50—500W		
Max. Switching Voltage		75VDC (max.)		
Contact Material		Silver Alloy		

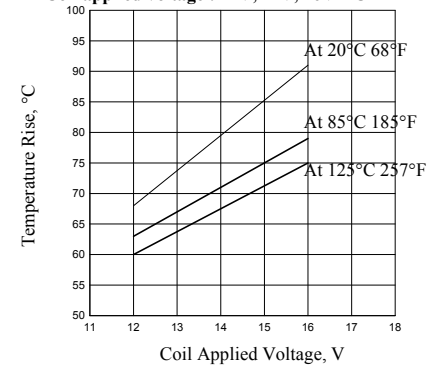
■ REFERENCE DATA

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

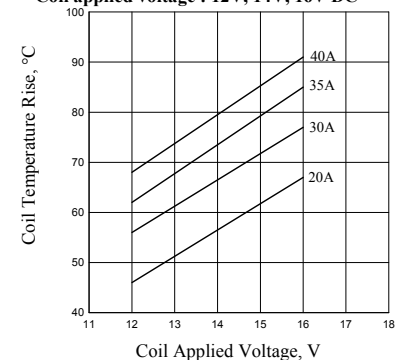


2-(1). Coil temperature rise (resistive)
Ambient temperature : 20°C, 85°C, 125°C
68°F, 185°F, 257°F

Contact carrying current : 40A
Coil applied voltage : 12V, 14V, 16V DC



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



■ PERFORMANCE (at initial value)

Item	Type	TR93
Contact Resistance		100m Ω Max.
Operation Time		15msec Max.
Release Time		15msec Max.
Dielectric Strength		
Between coil & contact		500VAC 50/60Hz (1 minute)
Between contacts		500VAC 50/60Hz (1 minute)
Insulation Resistance		100 M Ω 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		10×10^6
Electrically		1×10^5 for 1 Form A 30000 for 1 Form C
Weight		abt. 34grs.