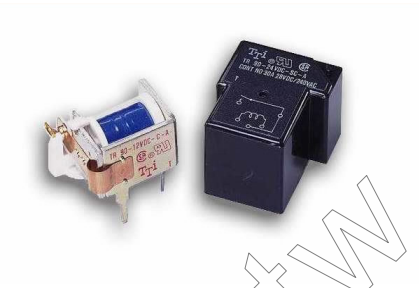
TR90

■ MAIN FEATURES

- Up to 30A switching in SPST and 20A switching in spot arrangements.
- Available as an open-frame relay, with a snap-on dust cover or with an immersion cleanable, plastic sealed case.
- Meet UL F Insulation class.



■ APPLICATIONS

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

■ ORDERING INFORMATION

Nominal Coil Voltage : 5V , 6V , 9V , 12V , 15V , 18V , 24V , 48V , 110V

Type

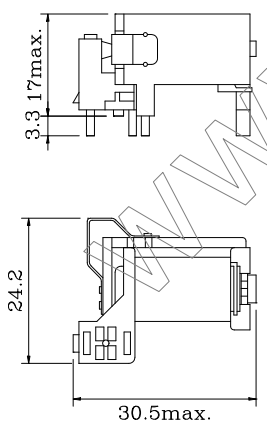
Structure F : Flux Free Type
S : Washable Type
Nil : Open Type

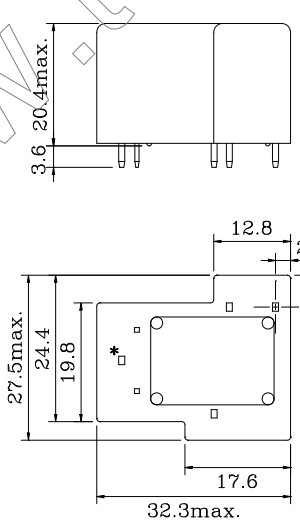
TR90 — 12V DC — F B — C F — Nil : Stand
F : UL Class F insulation standard
(No need for A4 & C5 Type)

Contact Material B : AgCdO
C : AgSnIn

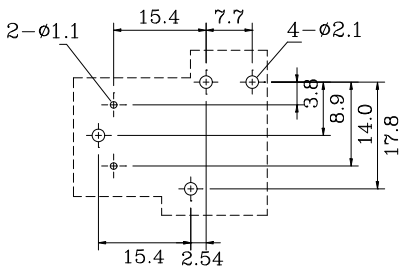
Contact Arrangement
A : 1 Form A
C : 1 Form C
A4 : 1 Form A without common Terminal between coil Terminals
UL class F insulation standard
C5 : 1 Form C without common Terminal between coil Terminals
UL class F insulation standard

■ DIMENSION(unit:mm) ■ DRILLING(unit:mm) ■ WIRING DIAGRAM

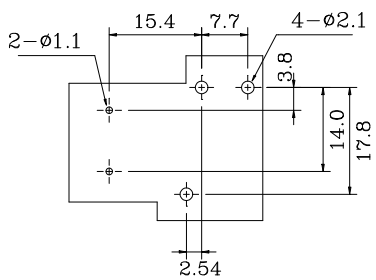


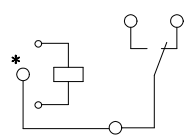


TR90−A &TR90−C (For UL 508)

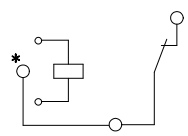


TR90−A4 &TR90−C5 (For UL 873)

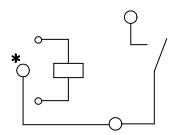




(1 Form C)



(1 Form B)



(1 Form A)

NOTE : “ * ” This Terminal not present for A4 & C5 Type (MEET UL873 Spacing).

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■ COIL DATA CHART (AT20°C)

Coil Sensitivity	Coil Voltage Code	Nominal 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	05	5	185	27	abt. 0.93W	80% Max.	10% Max.	120%Max.
	06	6	150	40				
	09	9	93	97				
	12	12	77	155				
	15	15	59	256				
	18	18	47	380				
	24	24	36	660				
	48	48	19	2560				
	110	110	8	13450 ±15%				

■ CONTACT RATING

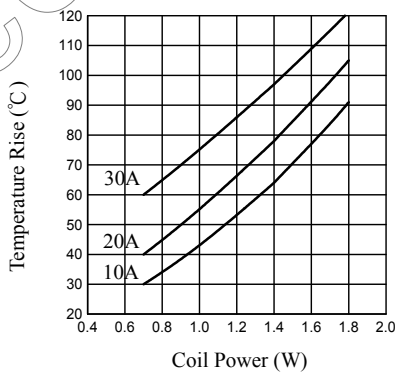
Type / Item	TR90			
	FORM A	FORM B	FORM C	
			N/O	N/C
Resistive Load (cosΦ=1) General Motor	30A 240VAC 30A 28VDC 240VAC 2HP 120VAC 1HP	15A 240VAC 10A 28VDC 240VAC 0.5HP 120VAC 0.25HP	20A 240VAC 20A 28VDC 240VAC 2HP 120VAC 1HP	10A 240VAC 10A 28VDC 240VAC 0.5HP 120VAC 0.25HP
Tungsten	TV-5	TV-3	TV-5	TV-3
Ballast	10A 277VAC	3A 277VAC	10A 277VAC	3A 277VAC
LRA/FLA	240VAC 80/30	240VAC 30/10	240VAC 50/20	240VAC 20/7

■ PERFORMANCE (at initial value)

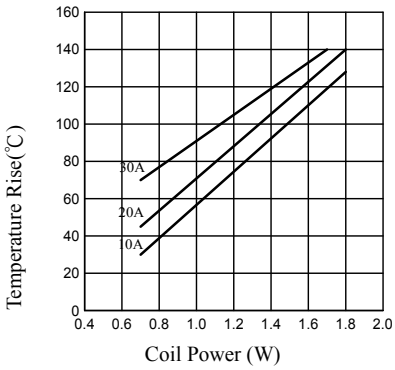
Type / Item	TR90	
	UL508	UL873
Contact Resistance	100mΩ Max.	
Operation Time	15msec Max.	
Release Time	10msec Max.	
Dielectric Strength Between coil & contact Between contacts	 1500VAC 50/60HZ (1 minute) 1500VAC	 2500VAC
Insulation Resistance	10 MΩ Min. (500VDC)	
Max. ON/OFF Switching Mechanically Electrically	 300 operation/min 30 operation/min	
Operating Ambient Temperature	-55° to +85°C (operating)with UL approval -55° to +105°C (operating)without UL approval -55° 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^2(abt. 100g's) 10 m/sec^2(abt. 10g's)	
Life Expectancy Mechanically Electrically	 10×10^6 10×10^4	
Weight	abt. 22grs, 28grs(SEALED)	
UL File No.	E156406	
CSA File No.	LR700159	

■ REFERENCE DATA

OPEN-STYTLE RELAYY, NO DUST COVER



SEALED RELAY



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