

■ MAIN FEATURES

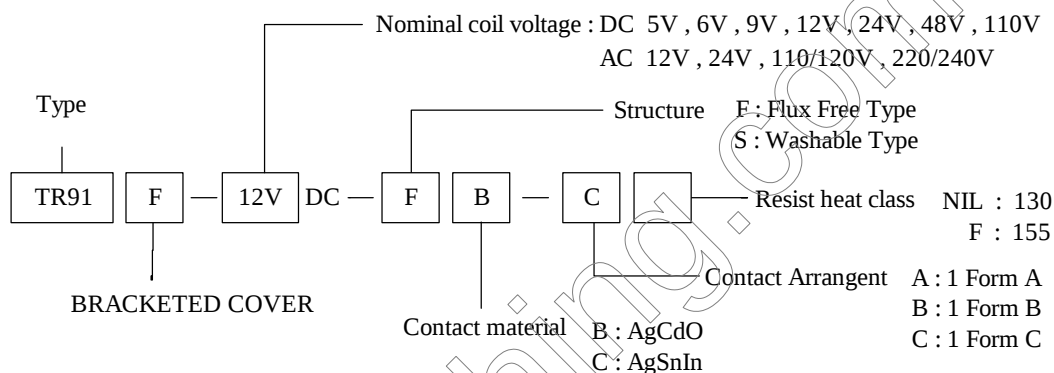
- ü Up to 30A switching in SPST and 20A switching in SPDT arrangements.
- ü Available as an open-frame relay, with a snap-on dust cover or with an immersion cleanable, plastic sealed case.
- ü Meets UL508 and UL873 spacing requirements.
- ü Available with UL class B & class F Insulation materials.

■ APPLICATIONS

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



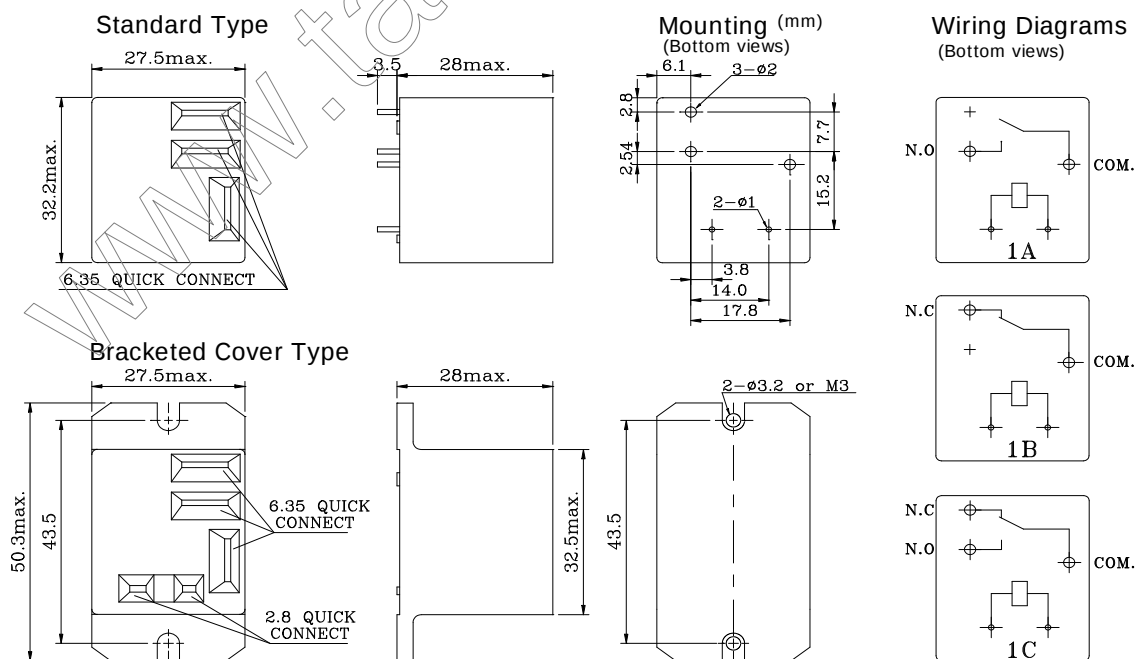
■ ORDERING INFORMATION



■ DIMENSION(unit:mm)

■ DRILLING(unit:mm)

■ WIRING DIAGRAM



■ COIL DATA CHART (AT20°C)

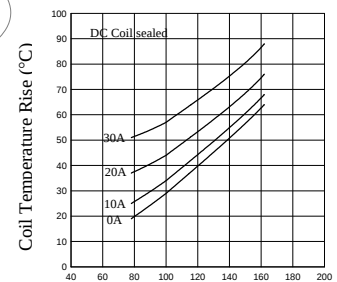
Coil Sensitivity	Coil Voltage Code	Nominal Voltage	Nominal Current	Coil Resistance	Power Consumption	Pull-In Voltage	Drop-Out Voltage	Max-Allowable Voltage
TR91	DC Type (at 20°C)							
	VDC	VDC	mA	Ω±10%	VA	VDC	VDC	VDC
	05	5	185	27	abt. 0.93	75%Max.	10%Max.	110%
	06	6	150	40				
	09	9	93	97				
	12	12	77	155				
	24	24	36	660				
	48	48	19	2560				
	110	110	8	10330				
	AC Type (at 20°C)							
	VAC	VAC	mA	Ω±10%	VA	VAC	VAC	VAC
	12	12	167	26	abt. 2.0	85%Max.	15%Max.	110%
	24	24	83	106				
	110/120	110/120	19/17	2300/2950				
	220/240	220/240	9.5/8.3	8950/13110				

■ CONTACT RATING

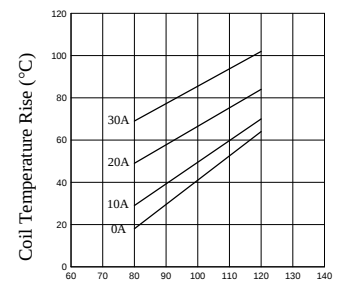
Type	TR91			
	FORM A	FORM B	FORM C	
Item			N/O	N/C
Resistive Load (cosΦ=1)	30A 240VAC	15A 240VAC	20A 240VAC	10A 240VAC
General	30A 28VDC	10A 28VDC	20A 28VDC	10A 28VDC
Motor	240VAC 2HP	240VAC 0.5HP	240VAC 2HP	240VAC 0.5HP
	120VAC 1HP	120VAC 0.25HP	120VAC 1HP	120VAC 0.25HP
Tungsten	TV-5	TV-3	TV-5	TV-3
Ballast	10A 277VAC	3A 277VAC	10A 277VAC	3A 277VAC
LRA/FLA	240VAC 80/30	240VAC 30/10	240VAC 50/20	240VAC 20/7

■ USEFUL CURVES

DC Coil Sealed



Coil Voltage (% of Nominal Voltage)



Coil Voltage (% of Nominal Voltage)

■ PERFORMANCE (at initial value)

Type	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	1500VAC 50/60HZ (1 minute)
Between contacts	1500VAC
Insulation Resistance	1000 MΩ Min. (500VDC)
Max. ON/OFF Switching	
Mechanically	300 operation/min
Electrically	30 operation/min
Operating Ambient Temperature	-55° to +85°C (operating) -55° to +155°C (storage)
Operating Humidity	45 to 80% 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	1000 m/sec (abt. 100g's)
Error Operation	100 m/sec (abt. 10g's)
Life Expectancy	
Mechanically	10 × 10 ⁶
Electrically	10 × 10 ⁴
Weight	abt. 33grs.
UL File No.	E156521
CSA File No.	LR700159