

➤ **COIL DATA CHART**(at 20°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 | abt. 1.6 | 65% Max. | 10% Min. | 150% but for short time carrying current |
| | 12 | 12 | 134 | 90 | | | | |
| | 24 | 24 | 67 | 360 | | | | |

➤ **CONTACT RATING**

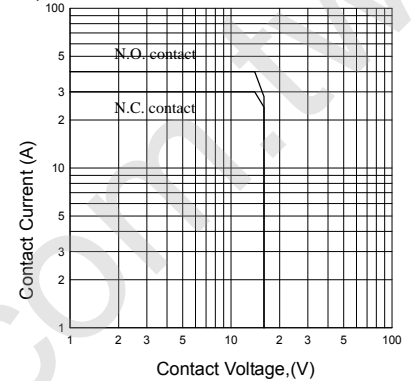
| Item | Type | TR93 | | | |
|--|------|-------------------|-------------------------|-------------------|-------------------|
| | | 1 Form A | 1 Form D | 1 Form C | |
| | | | | N.O. | N.C |
| Contact Capacity Resistive Load $\cos\phi=1$ | | 40A14VDC | 2x20A14VDC (N/O x 2) | 40A14VDC | 30A 14VDC |
| Max. Carrying Current | | 30A | | 40A | 30A |
| Max. Make Current | | 120A | | 60A | 40A |
| Max. Break Current | | 40A | | 30A | 30A |
| Initial Voltage Drop | | 200mV (at 40A) | | 200mV (at 10A) | 200mV (at 10A) |
| Min. Load | | 0.1A 12VDC | | | |
| Contact Material | | Ag Alloy | | | |

➤ **PERFORMANCE** (at initial value)

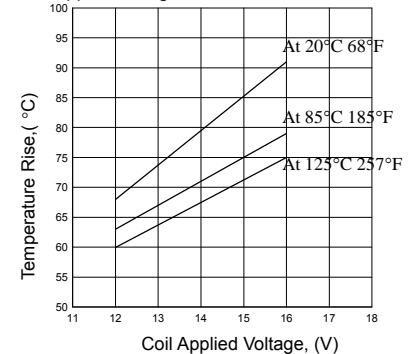
| Item | Type | TR93 |
|-------------------------------|------|--|
| Contact Resistance | | 100m Ω Max. |
| Operation Time | | 15msec Max. |
| Release Time | | 15msec Max.(type with diode inside : 20msec Max.) |
| Dielectric Strength | | 500VAC 50/60Hz (1 minute) |
| Between coil & contact | | 500VAC 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 | | 980m/s ² . |
| Error Operation | | 98m/s ² . |
| Life Expectancy | | |
| Mechanically | | 1×10^7 |
| Electrically | | 1×10^5 for 1 Form A 3×10^4 for 1 Form C |
| Weight | | abt. 34grs. |

➤ **REFERENCE DATA**

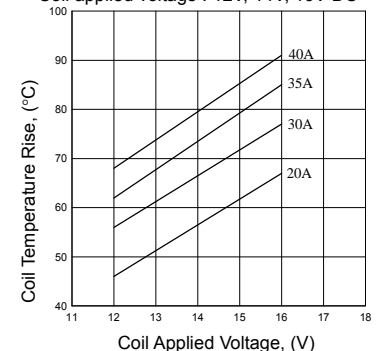
1. Maximum value for switching capacity No. of operations : 10^5



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



This datasheet for reference and subject to change without notice. Please double check final specification with Tai-Shing. (1010AA08VOL01)