Time Delay Relays
DELAY-ON-MAKE

TRM Series

Description

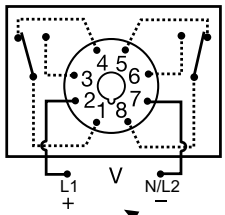
The TRM series is a combination of digital electronic circuitry and electromechanical relay output. It provides input to output isolation with a wide variety of input voltages and time ranges. Standard plug-in base wiring, fast reset, rugged enclosure, and good repeat accuracy make the TRM a select choice in any OEM application.

Operation (Delay-on-Make)

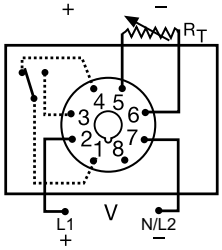
Upon application of input voltage, the time delay begins. The output is de-energized before and during the time delay. At the end of the time delay, the output relay energizes and remains energized until input voltage is removed.

Reset: Removing input voltage resets the time delay and output.

Wiring Diagram



8-pin octal DPDT



8-pin octal SPDT

V = Voltage

R_T is used when external adjustment is ordered. Relay contacts are isolated.

Features & Benefits

FEATURES	BENEFITS
Electronic circuitry with electromechanical relay	Repeat Accuracy +/- 2 %
Isolated 8 A, SPDT or DPDT output contacts	Allows control of loads with independent voltage sources.

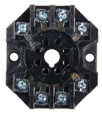
Ordering Information

MODEL	INPUT VOLTAGE	ADJUSTMENT	OUTPUT	TIME TOLERANCE	TIME DELAY
TRM24A8Y5	24 V ac	External	Octal, SPDT without potentiometer	+/- 10%	0.1–5 s
TRM24D1X10	24 V dc/28 V dc	Fixed	Octal, DPDT	+/- 20%	10 s
TRM24D1X2	24 V dc/28 V dc	Fixed	Octal, DPDT	+/- 20%	2 s

Accessories

OT08PC 8-pin Octal Socket for UL listing*
8-pin 35 mm DIN-rail or surface mount. Rated at 10 A @ 600 V ac. Surface mounted with two #6 screws or snaps onto a 35 mm DIN rail.

OT11PC Octal Socket for UL listing*
11-pin surface & DIN rail mountable. Rated for 10 A @ 300 V ac



P1011-6 Octal Socket for UL listing*
8-pin surface mount socket with binder head screw terminals. Rated 10 A @ 600 V ac.

P1004-95, P1004-95-X Versa-Pot
Panel mountable, industrial potentiometer recommended for remote time delay adjustment.

P0700-7 Versa-Knob
Designed for 0.25 in (6.35 mm) shaft of Versa-Pot. Semi-gloss industrial black finish.

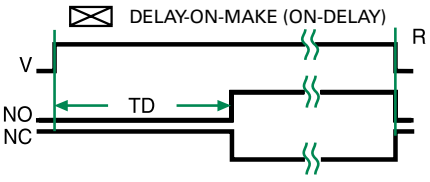
C103PM (AL) DIN Rail
35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.

Selection Guide

External R_T P/N Selection Table	
VALUE	PART NUMBER**
100K ohm	P1004-95
100K ohm	P1004-95-X

**Externally adjustable potentiometers. Numbers with additional "-X" include two pre-soldered 8" wire leads with 1/4" female quick-connect terminals (for clockwise increase).

Function Diagram



V = Voltage
NO = Normally Open Contact
NC = Normally Closed Contact
TD = Time Delay
R = Reset
= Undefined Time

Specifications

Time Delay

Type	Digital circuitry
Range	See "Ordering Information" table
Repeat Accuracy	±2 %
Fixed Time Tolerance & Setting Accuracy	±5, 10, or 20 %
Reset Time	≤ 50 ms
Recycle Time	After timing: ≤ 20 ms During timing: 0.1 % of max. time delay or 75 ms, whichever is greater
Time Delay vs Temp. & Voltage	≤±5 %
Indicator	LED glows after time delay; relay is energized

Input

Voltage	24 V dc; 24, 120 V ac
Tolerance	
24 V dc/ac	-15 %–20 %
120 V ac	-20 %–10 %
AC Line Frequency	50/60 Hz
Power Consumption	≤ 3.25W

Output

Type	Electromechanical relay
Form	Isolated DPDT or SPDT
Rating	8 A resistive @ 120/240 V ac; 1/3 hp @ 120/240 V ac
Life	Mechanical - 1 x 10^7; Electrical - 1 x 10^6

Protection

Isolation Voltage	≥ 1500 V rms between input & output terminals
Insulation Resistance	≥ 100 MΩ
Polarity	Dc units are reverse polarity protected

Mechanical

Mounting	Plug-in socket
Dimensions	**H** 44.45 mm (1.75"); **W** 60.33 mm (2.38"); **D** (with socket) 104.78 mm (4.13")
Termination	Octal 8-pin or 11-pin plug-in

Environmental

Operating/Storage Temperature	-20 °C to 65 °C / -30 °C to 85 °C
Weight	≅ 4 oz (113 g)
Safety Marks UL (socket required)*	UL 508 (E57310)

*UL Listed when used with Part Number OT08-PC or RB08-PC manufactured by Custom Connector Corp.

Note: Manufacturer's recommended screw terminal torque for the OT series sockets is 12 in-lbs.