

# Time Delay Relays

## DELAY-ON-MAKE

### TRM Series



### Description

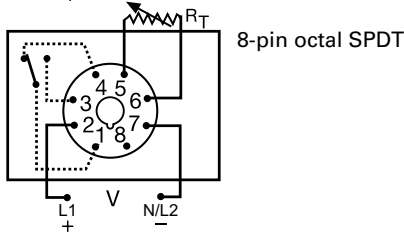
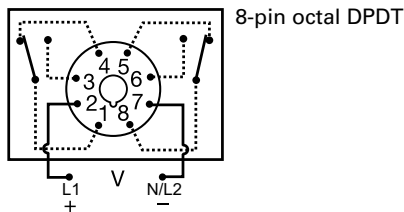
The TRM series is a combination of digital electronic circuitry and electromechanical relay output. It provides input to output isolation with a wide variety of input voltages and time ranges. Standard plug-in base wiring, fast reset, rugged enclosure, and good repeat accuracy make the TRM a select choice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



V = Voltage  
 $R_T$  is used when external adjustment is ordered. Relay contacts are isolated.

### Features & Benefits

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

### Ordering Information

MODEL	INPUT VOLTAGE	ADJUSTMENT	OUTPUT	TIME TOLERANCE	TIME DELAY
TRM120A2X30	120 V ac	Knob	Octal, DPDT	+/- 20%	1–30 s
TRM120A2Y120	120 V ac	Knob	Octal, DPDT	+/- 10%	2–120 s
TRM120A2Y180	120 V ac	Knob	Octal, DPDT	+/- 10%	2–180 s
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

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### 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.



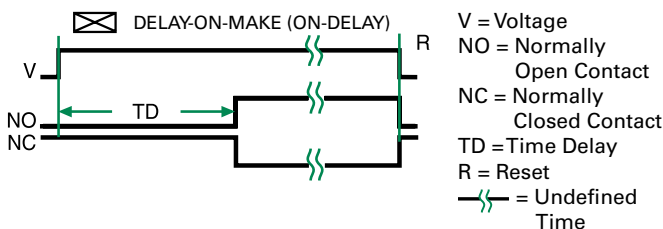
**C103PM (AL) DIN Rail**  
35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.

### Selection Guide

External R <sub>T</sub> 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



### Specifications

#### Time Delay

<b>Type</b>	Digital circuitry
<b>Range</b>	See "Ordering Information" table
<b>Repeat Accuracy</b>	±2 %
<b>Fixed Time Tolerance &amp; Setting Accuracy</b>	±5, 10, or 20 %
<b>Reset Time</b>	≤ 50 ms
<b>Recycle Time</b>	After timing: ≤ 20 ms During timing: 0.1 % of max. time delay or 75 ms, whichever is greater

#### Time Delay vs Temp. & Voltage Indicator

≤±5 %  
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  
Mechanical - 1 x 10<sup>7</sup>; Electrical - 1 x 10<sup>6</sup>

#### Life

#### Protection

**Isolation Voltage** ≥ 1500 V rms between input & output terminals

≥ 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")

Octal 8-pin or 11-pin plug-in

#### Termination

#### 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.

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