

## TRM SERIES



\*8-pin models UL listed when used in combination with P1011-6 socket only.



8-PIN



11-PIN

### Description

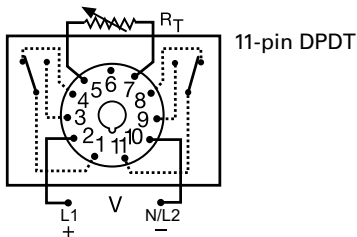
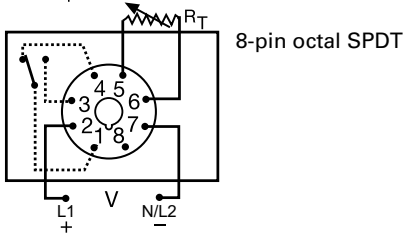
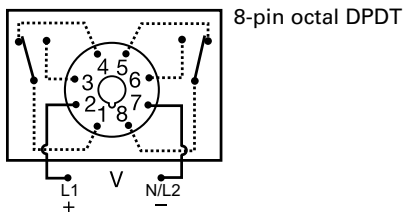
The TRM Series is a combination of analog electronic circuitry and electromechanical relay output. It provides input to output isolation with a wide variety of input voltages and time ranges. Standard plug-in base wiring, fast reset, rugged enclosure, and good repeat accuracy make the TRM a select choice 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 10A, SPDT or DPDT output contacts</b>	Allows control of loads for AC or DC voltages.

### Accessories



#### BZ1 Front Panel Mount Kit

Provides an easy method of through-the-panel mounting of 8- or 11-pin plug-in timers, flashers, and other controls.



#### NDS-8 Octal 8-pin Socket

8-pin 35mm DIN rail or surface mount. Surface mounted with two #6 screws or snaps onto a 35 mm DIN rail. Uses PSC8 hold-down clips.



#### NDS-11 11-pin Socket

11-pin 35mm DIN rail or surface mount. Surface mounted with two #6 screws or snaps onto a 35 mm DIN rail. Uses PSC11 hold-down clips.



#### PSC8 or PSC11 Hold-down Clips

Securely mounts plug-in controls in any position. Provides protection against vibration. Use PSC8 with NDS-8 Octal Socket or PSC11 with NDS-11 Socket. Sold in sets of two.

### Ordering Information

MODEL	INPUT VOLTAGE	ADJUSTMENT	OUTPUT	TIME TOLERANCE	TIME DELAY
TRM120A2X30	120VAC	Knob	Octal, DPDT	+/- 20%	1 - 30s
TRM120A2Y120	120VAC	Knob	Octal, DPDT	+/- 10%	2 - 120s
TRM120A2Y180	120VAC	Knob	Octal, DPDT	+/- 10%	2 - 180s
TRM24A8Y5	24VAC	External	Octal, SPDT without potentiometer	+/- 10%	0.1 - 5s
TRM24D1X10	24VDC/28VDC	Fixed	Octal, DPDT	+/- 20%	10s
TRM24D1X2	24VDC/28VDC	Fixed	Octal, DPDT	+/- 20%	2s

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## Accessories



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



**P1004-13, P1004-13-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.

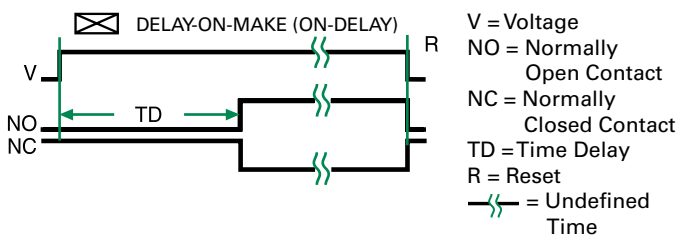
## Selection Guides

R <sub>T</sub> Selection Chart	
Time Delay*	
Range	R <sub>T</sub>
Seconds	Megohm
0.05...1	1.0
0.05...2	2.0
0.05...3	3.0
0.1...5	5.0
0.1...10	3.0
1...30	1.5
1...60	3.0
2...120	2.0
2...180	3.0
7...240	1.5
7...300	2.0
7...360	2.0
7...420	3.0
7...480	3.0
7...600	5.0

External R <sub>T</sub> P/N Selection Table	
VALUE	PART NUMBER
1M ohm	P1004-16
1.5M ohm	P1004-15
2M ohm	P1004-14
3M ohm	P1004-12
5M ohm	P1004-13
1M ohm	P1004-16-X
1.5M ohm	P1004-15-X
2M ohm	P1004-14-X
3M ohm	P1004-12-X
5M ohm	P1004-13-X

\* When selecting an external R<sub>T</sub> add at least 15...30% for tolerance of unit and the R<sub>T</sub>.

## Function Diagram



## Specifications

### Time Delay

**Type** Analog circuitry  
**Range** 50ms - 10m in 15 adjustable ranges or fixed  
**Repeat Accuracy** ±2% or 20 ms, whichever is greater

### Fixed Time Tolerance &

**Setting Accuracy** ±5, 10, or 20%

**Reset Time** ≤ 50ms

**Recycle Time** After timing: ≤ 20ms

During timing: 0.1% of max. time delay or 75ms, whichever is greater

### Time Delay vs Temp.

### & Voltage

≤±10%

### Input

### Voltage

24 or 110VDC; 24, 120, or 230VAC

### Tolerance

### 24VDC/AC

-15% - 20%

### 110 to 230VAC/DC

-20% - 10%

### AC Line Frequency

50/60 Hz

### Power Consumption

≤ 2.25W

### Output

### Type

Electromechanical relay

### Form

Isolated DPDT or SPDT

### Rating

10A resistive @ 120/240VAC & 28VDC;

1/3 hp @ 120/240VAC

Mechanical - 1 x 10<sup>7</sup>; Electrical - 1 x 10<sup>6</sup>

### Life

### Protection

### Isolation Voltage

≥ 1500V RMS between input & output terminals

### Insulation Resistance

≥ 100 MΩ

### Polarity

DC units are reverse polarity protected

### Mechanical

### Mounting

Plug-in socket

### Dimensions

**H** 91.6 mm (3.62"); **W** 60.7 mm (2.39");

**D** 45.2 mm (1.78")

### Termination

Octal 8-pin or 11-pin plug-in

### Environmental

### Operating/Storage

### Temperature

-20° to 65°C / -30° to 85°C

### Weight

≈ 6 oz (170 g)