

# PROGRAMMABLE | MULTI-RANGE ON DELAY, INTERVAL ON, FLASHER & TRUE OFF DELAY

## TR-6 SERIES TIME RANGER™



- ◆ Each unit has 16 timing ranges built-in (8 on True Off Delay)
- ◆ Selecting a range is easy using a rotary switch (no math is required or DIP switches to set)
- ◆ Timing ranges up to 2 hours (30 minutes on True Off Delay)
- ◆ Uses industry-standard 8 pin octal sockets
- ◆ 10A DPDT output contacts



with appropriate  
socket



Better. By Design.

**800.238.7474**

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| FUNCTION ■                              | INPUT VOLTAGE<br>50/60Hz.                       | PRODUCT<br>NUMBER                            | WIRING/<br>SOCKETS                                            |
|-----------------------------------------|-------------------------------------------------|----------------------------------------------|---------------------------------------------------------------|
| <b>ON DELAY</b><br><b>A</b>             | 120V AC/DC<br>12V AC/DC<br>24V AC/DC<br>240V AC | TR-60222<br>TR-60226<br>TR-60228<br>TR-60221 | <p><b>8 PIN OCTAL<br/>70169-D</b></p> <p><b>DIAGRAM 1</b></p> |
| <b>INTERVAL ON</b><br><b>B</b>          | 120V AC/DC<br>12V AC/DC<br>24V AC/DC<br>240V AC | TR-60522<br>TR-60526<br>TR-60528<br>TR-60521 |                                                               |
| <b>FLASHER</b><br>(OFF 1st)<br><b>E</b> | 120V AC/DC<br>12V AC/DC<br>24V AC/DC<br>240V AC | TR-60822<br>TR-60826<br>TR-60828<br>TR-60821 |                                                               |
| <b>FLASHER</b><br>(ON 1st)<br><b>F</b>  | 120V AC/DC<br>12V AC/DC<br>24V AC/DC<br>240V AC | TR-60922<br>TR-60926<br>TR-60928<br>TR-60921 |                                                               |
| <b>TRUE OFF DELAY</b><br><b>R</b>       | 120V AC/DC<br>12V AC/DC<br>24V AC/DC<br>240V AC | TR-60622<br>TR-60626<br>TR-60628<br>TR-60621 |                                                               |

■ See "Definitions of Timing Functions".

## TIMING RANGES

Select one of the 8 or 16 built-in time ranges by setting the rotary switch per a chart on the unit and adjust within that range using the knob on top:

### TR-602, 605, 608 & 609 SERIES

| Dial<br>Setting | Timing<br>Range |
|-----------------|-----------------|
| A               | 0.1 - 0.25 Sec. |
| B               | 0.2 - 0.5 Sec.  |
| C               | 0.3 - 1 Sec.    |
| D               | 0.5 - 2 Sec.    |
| E               | 1 - 4 Sec.      |
| F               | 2 - 8 Sec.      |
| G               | 4 - 15 Sec.     |
| H               | 8 - 30 Sec.     |
| I               | 15 - 60 Sec.    |
| J               | 30 - 120 Sec.   |
| K               | 1 - 4 Min.      |
| L               | 2 - 8 Min.      |
| M               | 4 - 15 Min.     |
| N               | 8 - 30 Min.     |
| O               | 15 - 60 Min.    |
| P               | 30 - 120 Min.   |

### TR-606 SERIES

| Dial<br>Setting | Timing<br>Range |
|-----------------|-----------------|
| A               | 0.05 - 5 Sec.   |
| B               | 0.1 - 10 Sec.   |
| C               | 0.3 - 30 Sec.   |
| D               | 0.6 - 60 Sec.   |
| E               | 1.8 - 180 Sec.  |
| F               | 3 - 300 Sec.    |
| G               | 0.1 - 10 Min.   |
| H               | 0.3 - 30 Min.   |

Sockets & Accessories available

Build your Time Delay Relays with the Online Product Builder

# TR-6 SERIES TIME RANGER™

## APPLICATION DATA

### Voltage Tolerance:

AC Operation: +10/-15% of nominal at 50/60 Hz.  
DC Operation: +10/-15% of nominal.

### Load (Burden):

2 VA

### Setting Accuracy:

Maximum Setting (Adjustable): +5%, -0%  
Minimum Setting (Adjustable): +0%, -50%

### Repeat Accuracy (constant voltage and temperature):

> 2 Seconds Delay ±0.1%  
0.1 - 2 Seconds Delay ±2%

### Reset Time:

On Delay/Interval/Repeat Cycle/Delayed Interval: 0.1 Seconds  
Off Delay/Single Shot/Watchdog/  
Triggered Delayed Interval: 0.04 Seconds

### Start-up Time:

(Time from when power is applied until unit is timing)

120 & 240V units 0.05 Seconds  
12, 24 & 48V units 0.08 Seconds

### Maintain Function Time:

(Time unit continues to operate after power is removed)  
0.01 Seconds for all units

### Temperature:

12-120V Input Voltage: -28° to 65°C (-18° to 150°F)  
240V Input Voltage: -28° to 50°C (-18° to 122°F)

### Triggering Off Delay, Single Shot or Watchdog Units:

Timing sequence must be initiated only after input voltage is applied to unit. Minimum required trigger switch closure time is 0.1 seconds.

### Compatibility:

Using a solid state switch to initiate the time sequence is acceptable. See [www.macromatic.com/leakage](http://www.macromatic.com/leakage) or contact Macromatic for information regarding leakage current limits and other solid state design considerations.

### Output Contacts:

(All TR-6 Series Products except TR-606 True Off Delay)  
DPDT 10A @ 240V AC/30V DC,  
1/2HP @ 120/240V AC (N.O.), 1/3HP @ 120/240V AC (N.C.)  
B300 & R300; AC15 & DC13

### (TR-606 True Off Delay)

DPDT 10A @ 240V AC; 8A @ 28V DC,  
1/2 HP @ 240V AC, 1/4HP @ 120V AC  
B300 & R300

### Life:

Mechanical: 10,000,000 operations (2,000,000 operations on TR-606 Series only)  
Full Load: 100,000 operations

**IMPORTANT FOR TR-606 SERIES ONLY:** These relays are shipped from the factory in the OFF state. A shock to the relay during shipping or installation may cause it to change to the ON state. It is recommended that input voltage be applied to the product for at least 0.1 second and removed to cycle the unit to the OFF state prior to use in the application. Please note that it will take as long as the OFF Delay setting to reset the unit once input voltage has been removed.

### Approvals:

(All TR-6 Series Products except TR-606 True Off Delay)



File #E109466 File #LR45565



(TR-606 True Off Delay only)



File #E109466

(All TR-6 Series Products)



Low Voltage &  
EMC Directives  
EN60947-1, EN60947-5-1



IND. CONT. EQUIP.  
5007  
with  
appropriate  
socket  
File #E109466

## DIMENSIONS

