

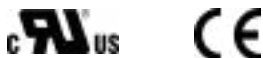
# PROGRAMMABLE | MULTI-RANGE REPEAT CYCLE & DELAYED INTERVAL

## TR-6 SERIES TIME RANGER™

The TR-6 Series offers the flexible programmability of a multi-range time delay relay together with a universal control voltage. These products provide an easy method to select one of 16 time ranges between 0.05 seconds and 100 hours using a rotary switch. The actual time delay is then set by using the potentiometer to adjust within the selected time range.



- ◆ Each unit has 16 timing ranges built-in covering 0.05 seconds-100 hours
- ◆ Selecting a range is easy using a rotary switch (no math is required or DIP switches to set)
- ◆ Independently selectable & adjustable ON & OFF times
- ◆ Universal control voltage : 24-240V AC & 12-125V DC
- ◆ Uses industry-standard 8 or 11 pin octal sockets
- ◆ 10A DPDT output contacts can handle most pilot duty & fractional HP loads

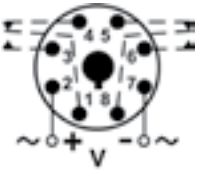
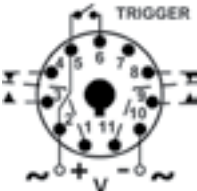


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**800.238.7474**

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**SALES@MACROMATIC.COM**

FUNCTION ■	CONTROL VOLTAGE 50/60Hz.	CATALOG NUMBER	WIRING/SOCKET
<b>REPEAT CYCLE*</b> (OFF Time First Followed By ON Time and Repeating) <b>L</b>	24-240V AC & 12-125V DC	TR-6312U	8 PIN OCTAL <b>70169-D</b>
<b>REPEAT CYCLE*</b> (ON Time First Followed By OFF Time and Repeating) <b>M</b>	24-240V AC & 12-125V DC	TR-6512U	 <b>DIAGRAM 1</b>
<b>DELAYED INTERVAL*</b> (OFF Time Followed by ON Time Followed by OFF State Until Reset) <b>N</b>	24-240V AC & 12-125V DC	TR-6612U	
<b>DELAYED INTERVAL*</b> Control Switch Trigger (OFF Time Followed by ON Time Followed by OFF State Until Reset) <b>P</b>	24-240V AC & 12-125V DC	TR-6652U	11 PIN OCTAL <b>70170-D</b>  <b>DIAGRAM 212</b>

\* These units have independently selectable & adjustable ON & OFF times. See [www.macromatic.com/onoff](http://www.macromatic.com/onoff) for more information.

■ See "Definitions of Timing Functions".

## TIMING RANGES

Select one of the 16 built-in time ranges by setting the rotary switch per a chart on the unit (see below) and then adjust within that range using the knob on top.

Dial Setting	Timing Range
A	0.05 - 0.5 Sec.
B	0.1 - 1 Sec.
C	0.5 - 5 Sec.
D	1 - 10 Sec.
E	3 - 30 Sec.
F	6 - 60 Sec.
G	0.2 - 2 Min.
H	0.5 - 5 Min.
I	1 - 10 Min.
J	3 - 30 Min.
K	6 - 60 Min.
L	0.2 - 2 Hr.
M	0.5 - 5 Hr.
N	1 - 10 Hr.
O	2.4 - 24 Hr.
P	10 - 100 Hr.

Sockets & Accessories available

Build your Time Delay Relays with the [Online Product Builder](#)

# PROGRAMMABLE | MULTI-RANGE

## TR-6 SERIES TIME RANGER™

### APPLICATION DATA

#### Voltage Tolerance:

AC Operation: 20.4 – 264V at 50/60 Hz

DC Operation: 10.2 – 137.5V

#### Load (Burden):

Maximum of 3 VA for all voltages

#### Setting Accuracy:

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

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

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

±0.1% or ±50ms, whichever is greater

#### Reset Time:

Functions Triggered with Control voltage : 0.1 Seconds

Functions Triggered with Control Switch: 0.04 Seconds

#### Start-up Time:

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

0.05 Seconds

#### Maintain Function Time:

(Time unit continues to operate after power is removed)

0.01 Seconds

#### Temperature:

Operating: -28° to 65°C (-18° to 150°F)

Storage: -40° to 85°C (-40° to 185°F)

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

Timing sequence must be initiated only after control 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:

DPDT 10A @ 240V AC/30V DC,

1/2HP @ 120/240V AC (N.O.), 1/3HP @ 120/240V AC (N.C.)

B300 & R300 (N.O.); AC15 & DC13

#### Life:

Mechanical: 10,000,000 operations

Full Load: 100,000 operations

#### Approvals:

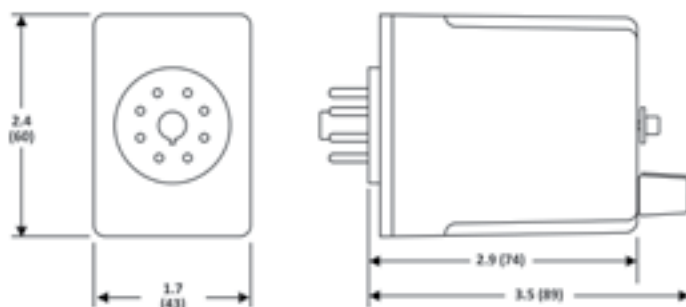


Low Voltage &  
EMC Directives

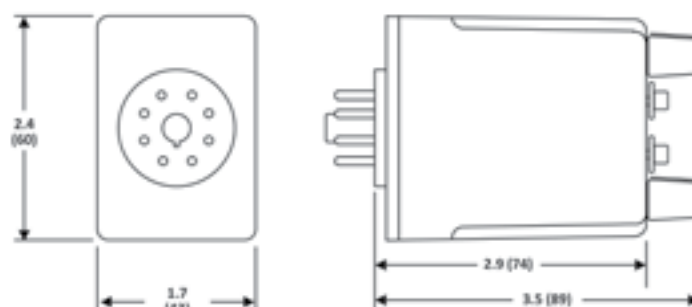
EN60947-1, EN60947-5-1

### DIMENSIONS

TR-602, TR-605, TR608, TR609, TR-613, TR-615, TR-616,  
TR-617, TR-618 & TR-619



TR-631-TR-651, TR-661 & TR-665



All Dimensions in  
Inches (Millimeters)