

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



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



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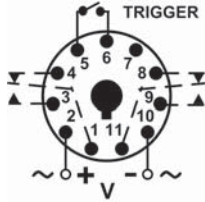
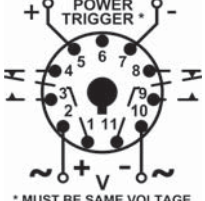
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Sockets & Accessories available

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PROGRAMMABLE | MULTI-RANGE OFF DELAY, SINGLE SHOT & WATCHDOG

TR-6 SERIES TIME RANGER™

FUNCTION ■	INPUT VOLTAGE 50/60Hz.	PRODUCT NUMBER	WIRING/ SOCKETS
OFF DELAY Control Switch Trigger C	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TR-61622 TR-61626 TR-61628 TR-61621	11 PIN OCTAL 70170-D 
SINGLE SHOT Control Switch Trigger D	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TR-61522 TR-61526 TR-61528 TR-61521	DIAGRAM 2
WATCHDOG Control Switch Trigger (Retriggerable Single Shot) J	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TR-61322 TR-61326 TR-61328 TR-61321	DIAGRAM 2
OFF DELAY Power Trigger C	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TR-61922 TR-61926 TR-61928 TR-61921	11 PIN OCTAL 70170-D 
SINGLE SHOT Power Trigger D	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TR-61722 TR-61726 TR-61728 TR-61721	DIAGRAM 4
WATCHDOG Power Trigger (Retriggerable Single Shot) J	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TR-61822 TR-61826 TR-61828 TR-61821	DIAGRAM 4

■ 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 and adjust within that range using the knob on top:

TR-613, 615, 616, 617,
618 & 619 SERIES

Dial Setting	Timing 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.

Sockets & Accessories available



- ◆ Each unit has 16 timing ranges built-in
- ◆ Selecting a range is easy using a rotary switch (no math is required or DIP switches to set)
- ◆ Timing ranges up to 2 hours
- ◆ Uses industry-standard 11 pin octal sockets
- ◆ 10A DPDT output contacts



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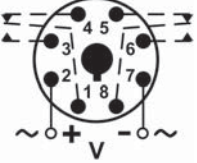
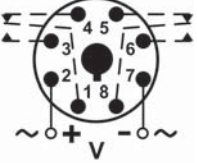
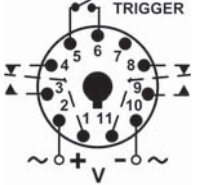
PROGRAMMABLE | MULTI-RANGE REPEAT CYCLE & DELAYED INTERVAL

TR-6 SERIES TIME RANGER™



- ◆ Each unit has 16 timing ranges built-in
- ◆ Selecting a range is easy using a rotary switch (no math is required or DIP switches to set)
- ◆ Timing ranges up to 24 hours
- ◆ Independently selectable & adjustable ON & OFF times
- ◆ Uses industry-standard 8 or 11 pin octal sockets
- ◆ 10A DPDT output contacts



FUNCTION ■	INPUT VOLTAGE 50/60Hz.	PRODUCT NUMBER	WIRING/SOCKET
REPEAT CYCLE* (OFF Time First Followed By ON Time and Repeating) L	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TR-63122 TR-63126 TR-63128 TR-63121	8 PIN OCTAL 70169-D 
REPEAT CYCLE* (ON Time First Followed By OFF Time and Repeating) M	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TR-65122 TR-65126 TR-65128 TR-65121	
DELAYED INTERVAL* (OFF Time Followed by ON Time Followed by OFF State Until Reset) N	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TR-66122 TR-66126 TR-66128 TR-66121	DIAGRAM 1
DELAYED INTERVAL* Control Switch Trigger (OFF Time Followed by ON Time Followed by OFF State Until Reset) P	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TR-66522 TR-66526 TR-66528 TR-66521	11 PIN OCTAL 70170-D 
			DIAGRAM 2

* These units have independently selectable & adjustable ON & OFF times. See 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 and adjust within that range using the knob on top:

TR-631, 651, 661 & 665 SERIES

Dial Setting	Timing Range
A	0.6 - 2.5 Sec.
B	1.5 - 5 Sec.
C	2.5 - 10.5 Sec.
D	5 - 21 Sec.
E	10 - 42 Sec.
F	0.4 - 1.4 Min.
G	0.7 - 2.8 Min.
H	1.5 - 5.5 Min.
I	3 - 11 Min.
J	5.5 - 22.5 Min.
K	11 - 45 Min.
L	0.4 - 1.5 Hr.
M	0.8 - 3 Hr.
N	1.5 - 6 Hr.
O	3 - 12 Hr.
P	6 - 24 Hr.

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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 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)



(TR-606 True Off Delay only)



(All TR-6 Series Products)



DIMENSIONS

