

TIME DELAY RELAYS

Time Ranger™ Programmable
Multi-Range Plug-in
On Delay, Interval On & Flasher



- 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 8 pin octal sockets
- 10A DPDT output contacts



SINGLE KNOB UNITS

FUNCTION	INPUT VOLTAGE 50/60Hz.	PRODUCT NUMBER	WIRING/ SOCKETS
ON DELAY	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TR-60222 TR-60226 TR-60228 TR-60221	8 PIN OCTAL 70169-D INPUT VOLTAGE DIAGRAM 1
INTERVAL ON	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TR-60522 TR-60526 TR-60528 TR-60521	
FLASHER	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TR-60822 TR-60826 TR-60828 TR-60821	

See Pages 32-33 for definitions & explanations of Timing Functions.

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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:

SINGLE KNOB UNITS

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.



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TIME DELAY RELAYS

Time Ranger™ Programmable
Multi-Range Plug-in
Off Delay, Single Shot & Watchdog



SINGLE KNOB UNITS

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

- 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



ⁿ See Pages 32-33 for definitions & explanations of Timing Functions.

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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:

SINGLE KNOB UNITS

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.

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TIME DELAY RELAYS

Time Ranger™ Programmable
Multi-Range Plug-in
Repeat Cycle & Delayed Interval



- 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 on dual knob timers
- Uses industry-standard 8 or 11 pin octal sockets
- 10A DPDT output contacts



DUAL KNOB UNITS *

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

* All Dual Knob units have independently selectable & adjustable ON & OFF times.
n See Pages 32-33 for definitions & explanations of Timing Functions.

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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:

DUAL KNOB UNITS

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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TIME DELAY RELAYS

Time Ranger™ Programmable
Multi-Range Plug-in
Application Data & Dimensions

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 time 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)

Insulation Voltage:

2,000 volts

Output Contacts:

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

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

B300 & R300; AC15 & DC13

Life:

Mechanical: 10,000,000 operations

Full Load: 100,000 operations

Compatibility:

On all units triggered by input voltage or by a control switch, do not use a solid state switch to initiate the timing sequence—problems with leakage current could occur. On all units with a power trigger, do not use a solid state switch with leakage current exceeding 0.5ma. Contact Macromatic Controls for additional information.

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.

Approvals:



File #E109466



File #LR45565



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



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

Dimensions

