PROGRAMMABLE | MULTI-RANGE
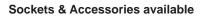## Digital-Set | TD-7 Series Time Ranger™

The TD-781 Series offers an easy and accurate way to select a function and any time delay between 10ms and 999 hours. Programming is accomplished by using a pushbutton thumbwheel to select one of seven built-in time ranges and three pushbutton thumbwheels to digitally set the time delay required. This method provides a greater setting accuracy than is found on other units with an analog potentiometer. These units have a fifth pushbutton thumbwheel to select one of ten built-in functions. An LED indicates timing mode and time out condition.

Single-function versions available.

Multi-Function Product

FUNCTION ■	INPUT VOLTAGE	PRODUCT NUMBER	WIRING/ SOCKETS
MULTI-FUNCTION (10 Functions in One Unit)	120V AC/DC	TD-78122	11 PIN OCTAL
A On Delay	12V AC/DC	TD-78126	**70170-D**
B Interval On	24V AC/DC	TD-78128	
C Off Delay *	240V AC	TD-78121	
D Single Shot *			
E Flasher (OFF 1st)			
F Flasher (ON 1st)			
G On/Off Delay *			
H Single Shot Falling Edge *			
J Watchdog *			
K Triggered On Delay *			**DIAGRAM 121**

■ See "Definitions of Timing Functions".
* These are the only functions requiring use of the Control Switch shown in Wiring Diagrams above.

Sockets & Accessories available

◆ Ten user-selectable modes in one unit

◆ Pushbutton Thumbwheels for digital set of time delay & function

◆ 10ms - 999 hour programmable time range

◆ Uses industry-standard 11 pin octal socket

◆ 10A DPDT output contacts

◆ LED indicates timing mode and time out conditions

with appropriate socket

TIME DELAY RELAYS | PLUG-IN

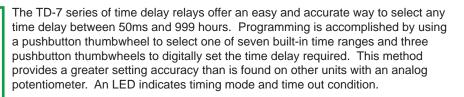# PROGRAMMABLE | MULTI-RANGE
Digital-Set | TD-7 Series Time Ranger™

◆ Pushbutton Thumbwheels for digital set of time delay

◆ 50ms - 999 hour programmable time range

◆ Uses industry-standard 8 or 11 pin octal sockets

◆ 10A DPDT output contacts

◆ LED indicates timing mode and time out conditions

with appropriate socket

The TD-7 series of time delay relays offer an easy and accurate way to select any time delay between 50ms and 999 hours. Programming is accomplished by using a pushbutton thumbwheel to select one of seven built-in time ranges and three pushbutton thumbwheels to digitally set the time delay required. This method provides a greater setting accuracy than is found on other units with an analog potentiometer. An LED indicates timing mode and time out condition.

Multi-function versions available.

Single Function Products

FUNCTION ■	INPUT VOLTAGE	PRODUCT NUMBER	WIRING/ SOCKETS
ON DELAY A	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TD-70222 TD-70226 TD-70228 TD-70221	8 PIN OCTAL **70169-D**
INTERVAL ON B	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TD-70522 TD-70526 TD-70528 TD-70521	
FLASHER (OFF 1st) E	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TD-70822 TD-70826 TD-70828 TD-70821	DIAGRAM 1
OFF DELAY C	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TD-71622 TD-71626 TD-71628 TD-71621	11 PIN OCTAL **70170-D**
SINGLE SHOT D	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TD-71522 TD-71526 TD-71528 TD-71521	DIAGRAM 2

■ See "Definitions of Timing Functions".

Sockets & Accessories available

Build your Time Delay Relays with the _Online Product Builder_

TD-7 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):
3 VA

Setting Accuracy:
±1% of set time or ±50ms, whichever is greater.

Repeat Accuracy (constant voltage and temperature)**:**
±0.1% of set time or ±0.02 seconds, whichever is greater.

Reset Time:
On Delay/Interval/Flasher: 0.1 Seconds
Functions with Control Switches: 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: -28º to 65ºC (-18º to 149ºF)
240V Input Voltage: -28º to 50ºC (-18º to 122ºF)

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:
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.

Initiating Units with Control Switch Triggers:
Timing sequence must be initiated only after input voltage is applied to unit. Minimum required trigger switch closure time is 0.1 seconds.

LED:
Red LED. Refer to instruction sheet provided with product to determine code for relay & timing status.
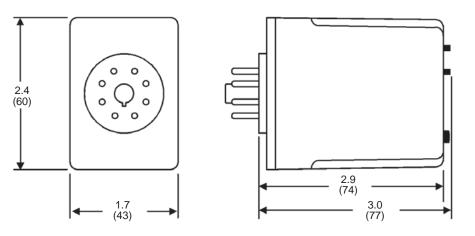
Approvals:

UL File #E109466   CSA File #LR45565   CE Low Voltage & EMC Directives EN60947-1, EN60947-5-1   UL LISTED IND. CONT. EQUIP. 50U7 with appropriate socket File #E109466

Dimensions

2.4 (60)

1.7 (43)

2.9 (74)

3.0 (77)

All Dimensions in Inches (Millimeters)