

TIME DELAY RELAYS

Time Ranger™ Digital -Set
 Programmable Multi-Range
 Plug-in



- ◆ Available in either Single-Function or Multi-Function versions (with five user-selectable modes)
- ◆ Pushbutton Thumbwheels for digital set of time delay & function (TD-781 series only)
- ◆ 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



The TD-7 series of time delay relays offer an easy and accurate way to select any time delay between 50ms & 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.

The TD-7 series comes in two versions: a single function product or a multi-function product. The TD-781 multi-function unit has a fifth pushbutton thumbwheel to select one of five built-in functions.

Single Function Products

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

Multi-Function Product

FUNCTION	INPUT VOLTAGE	PRODUCT NUMBER	WIRING/ SOCKETS
MULTI-FUNCTION (5 Field-Selectable Functions in one unit) ◆ On Delay ◆ Off Delay ◆ Interval On ◆ Single Shot ◆ Flasher	120V AC/DC	TD-78122	11 PIN OCTAL 70170-D INPUT VOLTAGE DIAGRAM 121
	12V AC/DC	TD-78126	
	24V AC/DC	TD-78128	
	240V AC	TD-78121	



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Time Ranger™ Digital -Set 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):

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

Off Delay/Single Shot: 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

Electromagnetic Compatibility (EMC) Ratings:

Test	IEC Standard	Level
Electrostatic discharge immunity	IEC 1000-4-2 Contact Air Discharge	Level 2, 6kV Level 3, 8kV
Radiated radio frequency	IEC 1000-4-3	Level 3, 10V/m
Electrical fast transient/burst	IEC 1000-4-4	Level 3, 2kV, 1kV
Surge immunity	IEC 1000-4-5	Level 3, 2kV, 1kV
Conducted disturbances induced by radio frequency fields	IEC 1000-4-6	Level 3, 10V/m
Radiated emissions	CISPR22	
Conducted emissions	CISPR22	

Output Contacts:

DPDT 10A @240VAC/28VDC,

1/2HP @240VAC, 1/3HP @120VAC

B300 & R300; AC15 & DC13

Life:

Mechanical: 10,000,000 operations

Full Load: 100,000 operations

Compatibility:

Do not use a solid state switch to initiate the timing sequence- problems with leakage current could occur. Contact Macro-matic Controls for additional information.

Triggering Off Delay or Single Shot Units:

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

LED:

Flasher Mode: Flashes during "ON" time; continuous on during "OFF" time

All Other Modes: Flashes during timing; continuous on after time out.

Approvals:



File #E109466



File #LR45565

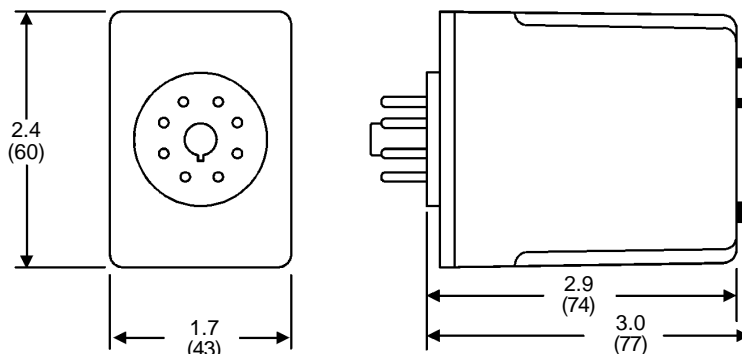


Low Voltage &
EMC Directives
EN60947-1, EN60947-5-1



IND. CONT. EQUIP.
S017
with
appropriate
socket
File #E109466

Dimensions



All Dimensions in
Inches (Millimeters)