

TIME DELAY RELAYS

TD-8 SERIES DIP-SWITCH DIGITAL-SET PLUG-IN MULTI-FUNCTION PROGRAMMABLE



- ◆ 16 functions in one unit
- ◆ DIP-Switches for accurate digital set of time delay & selection of function
- ◆ 100ms - 1,023 hours programmable time delay
- ◆ Uses industry-standard 11 pin octal socket



The TD-881 Series offers the digital-set accuracy of DIP-switch setting as well as the flexible programmability of a multi-function & multi-time range relay. These products provide an easy & accurate method to select any of 16 time delay functions and any time delay between 100ms and 1,023 hours. Programming is accomplished through the use of two 10-position DIP-switches. This product can literally replace hundreds of different catalog numbers, thereby reducing inventory requirements.

The following functions are available (see Page 73 for definitions & explanations):

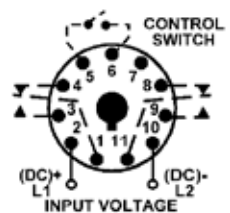
Single Mode

- ◆ On Delay
- ◆ Flasher (OFF 1st)
- ◆ Off Delay
- ◆ Watchdog
- ◆ Triggered On Delay
- ◆ Interval On
- ◆ Flasher (ON 1st)
- ◆ Single Shot
- ◆ Single Shot (Trailing Edge)

Dual Mode

- ◆ Repeat Cycle (OFF 1st)
- ◆ Delayed Interval
- ◆ On Delay/Off Delay
- ◆ On Delay/Flasher
- ◆ Repeat Cycle (ON 1st)
- ◆ Triggered Delayed Interval
- ◆ Single Shot-Flasher

See Page 72 for instructions on how to program functions & time delay.

FUNCTION ■	INPUT VOLTAGE	PRODUCT NUMBER	WIRING/ SOCKETS
MULTI-FUNCTION (16 Field-Selectable Functions in one unit)	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TD-88122 TD-88126 TD-88128 TD-88121	11 PIN OCTAL 70170-D 

■ See Page 73 for definitions & explanations of Timing Functions.



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TIME DELAY RELAYS

TD-8 SERIES DIP-SWITCH DIGITAL-SET PLUG-IN

SINGLE FUNCTION PROGRAMMABLE



The TD-8 Series time delay relays offer an easy & accurate method to select any time delay between 100ms & 1,023 minutes. Programming is accomplished through the use of a 10-position DIP-switch. Each position is marked with a binary time increment. The required delay is selected by moving the switch of each increment to the ON position & adding their corresponding values (see examples below). This method provides a greater setting accuracy than is found on other units with an analog potentiometer. An LED indicates relay status.

- ◆ DIP-Switches for accurate digital set of time delay
- ◆ 100ms - 1,023 minute programmable time delay
- ◆ Uses industry-standard 8 or 11 pin octal sockets
- ◆ 10A DPDT output contacts
- ◆ LED indicates relay status



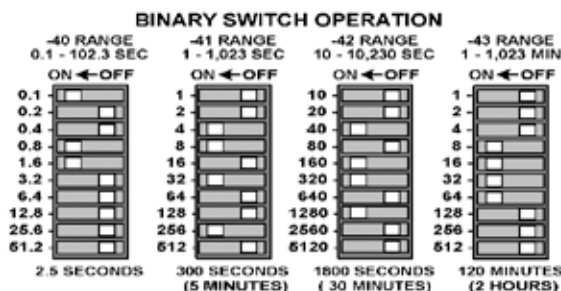
FUNCTION <small>SEE PAGE 73 FOR DEFINITIONS OF TIMING FUNCTIONS</small>	INPUT VOLTAGE 50/60Hz.	PRODUCT NUMBER ** <small>COMPLETE PRODUCT NUMBER USING 2 DIGIT CODE FROM TABLE BELOW</small>	WIRING/SOCKETS
ON DELAY	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TD-80222-** TD-80226-** TD-80228-** TD-80221-**	8 PIN OCTAL 70169-D
INTERVAL ON	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TD-80522-** TD-80526-** TD-80528-** TD-80521-**	
REPEAT CYCLE * (OFF Time First Followed By ON Time and Repeating)	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TD-83122-** TD-83126-** TD-83128-** TD-83121-**	
REPEAT CYCLE * (ON Time First Followed By OFF Time and Repeating)	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TD-85122-** TD-85126-** TD-85128-** TD-85121-**	
OFF DELAY Control Switch Trigger	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TD-81622-** TD-81626-** TD-81628-** TD-81621-**	11 PIN OCTAL 70170-D
SINGLE SHOT Control Switch Trigger	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TD-81522-** TD-81526-** TD-81528-** TD-81521-**	

* ON & OFF Time Ranges are the same. For different ON & OFF time ranges, contact Macromatic.

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TIMING RANGES

** TIMING RANGE TABLE COMPLETE PRODUCT NUMBER USING TWO DIGIT CODE BELOW: i.e., TD-80222-40	
Time Delay Range	Code
0.1 - 102.3 Sec.	40
1 - 1,023 Sec.	41
10 - 10,230 Sec.	42
1 - 1,023 Min.	43



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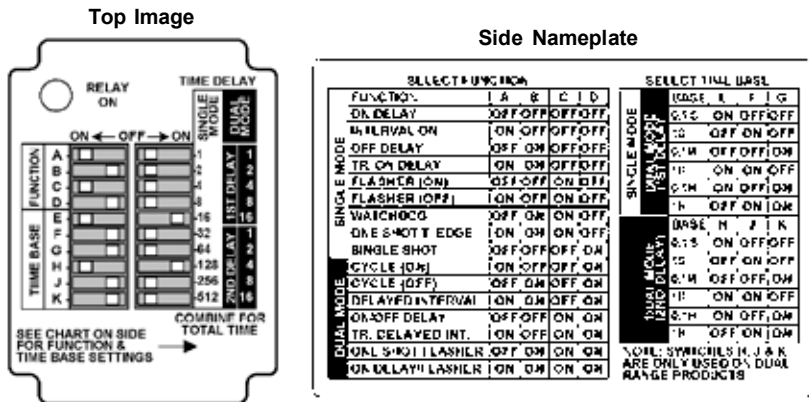
TD-8 SERIES DIP-SWITCH DIGITAL-SET PLUG-IN

APPLICATION DATA & DIMENSIONS FOR MULTI- & SINGLE-FUNCTION PRODUCTS

PROGRAMMING FUNCTION & TIME DELAY (TD-881 Series Multi-Function Only)

Programming is accomplished through the use of two 10-position DIP-switches (see drawings at right). Switches A-D of the left-mounted DIP-switch are used to select a function (see the descriptions of how each function operates on Page 73 as a guide). Switches E-K of the same DIP-switch are used to select the time base. A convenient chart is on the side of the relay to clearly illustrate how to set both the function & time base.

The right-mounted 10-position DIP-switch is used to select the time delay within the time base selected with switches E-K from the first DIP-switch. Each position on the second DIP-switch is marked with a binary time increment. The required delay is selected by moving the switch of each increment to the ON position & adding their corresponding values (see diagram at right). Note that dual mode products can either have the same or different ON & OFF times.



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:

±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:

All Functions Triggered by a Control Switch: 0.04 Seconds
All Other Functions: 0.1 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

Insulation Voltage: 2,000 volts

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

Output Contacts:

DPDT 10A @ 240V AC/30V DC,
1/2HP @ 120/240V AC (N.O.), 1/3HP @ 120V AC (N.C.)
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 Macromatic Controls for additional information.

Control Switch Triggered Units:

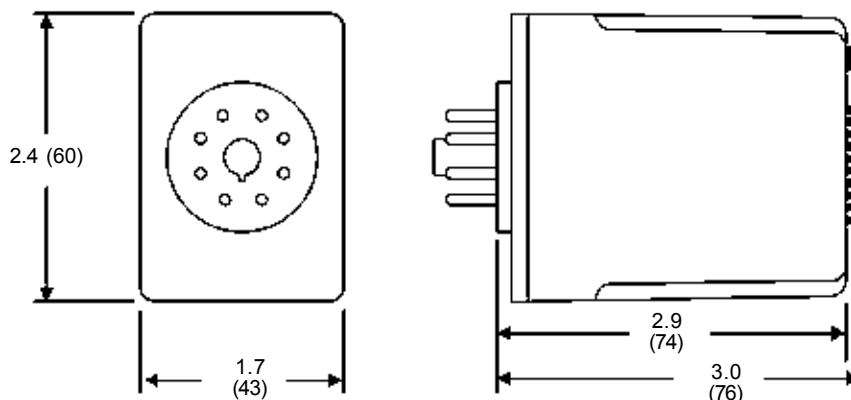
Minimum required trigger switch closure time is 0.02 seconds.

Approvals:



with appropriate socket
File #E109466

DIMENSIONS



All Dimensions in Inches (Millimeters)

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DEFINITION OF TIMING FUNCTIONS

