PROGRAMMABLE | MULTI-FUNCTION

DIP-Switch | Digital-Set | TD-8 Series

- Sixteen user-selectable modes in one unit
- DIP-Switches for accurate digital set of time delay & selection of function
- 100ms - 1,023 hours programmable time delay (Single Mode functions only)
- Uses industry-standard 11 pin octal socket

cULus UL LISTED with appropriate socket

CE

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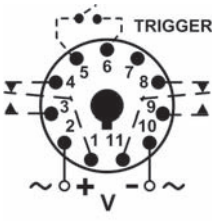
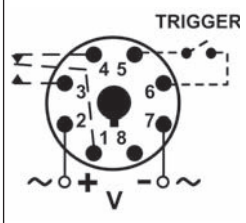
The TD-881 Series offers the digital-set accuracy of DIP-switch setting as well as the flexible programmability of a multi-function and multi-time range relay. These products provide an easy and accurate method to select any of 16 time delay functions and any time delay between 100ms and 1,023 hours (31 hours maximum for Dual Mode functions). 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.

MULTI-FUNCTION ■
(16 Functions in One Unit)

Single Mode	Dual Mode
◆ On Delay	◆ Repeat Cycle (OFF 1st)
◆ Interval On	◆ Repeat Cycle (ON 1st)
◆ Flasher (OFF 1st)	◆ Delayed Interval
◆ Flasher (ON 1st)	◆ Triggered Delayed Interval *
◆ Off Delay *	◆ On/Off Delay *
◆ Single Shot *	◆ Single Shot-Flasher *
◆ Watchdog *	◆ On Delay/Flasher
◆ Single Shot (Trailing Edge) *	
◆ Triggered On Delay *	

* These are the only functions requiring use of the Control Switch shown in Wiring Diagrams below.

OUTPUT	INPUT VOLTAGE	PRODUCT NUMBER	WIRING/ SOCKETS
11 Pin DPDT	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TD-88122 TD-88126 TD-88128 TD-88121	11 PIN OCTAL **70170-D**  **DIAGRAM 121**
8 Pin SPDT	120V AC/DC 12V AC/DC 24V AC/DC 240V AC	TD-88162 TD-88166 TD-88168 TD-88161	8 PIN OCTAL **70169-D**  **DIAGRAM 169**

■ See “Definitions of Timing Functions”.

Sockets & Accessories available

Build your Time Delay Relays with the *Online Product Builder*

TD-8 SERIES

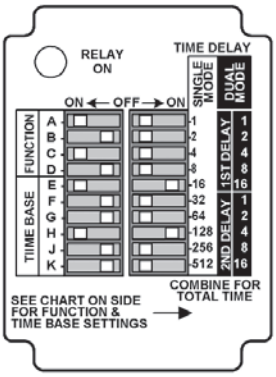
DIP-Switch | Digital-Set

Programming Function & Time Delay

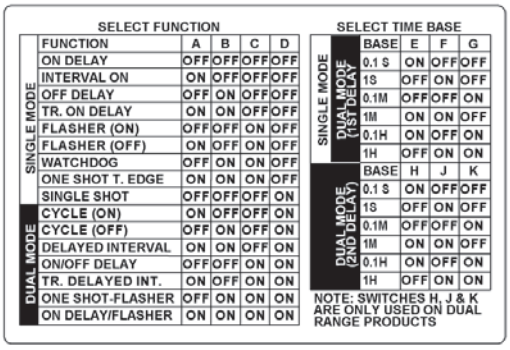
(TD-881 Series Multi-Function Only)

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 in "Definitions of Timing Functions' in this catalog). 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 and time base.

Top Image



Side Nameplate



SELECT FUNCTION

	FUNCTION	A	B	C	D
SINGLE MODE	ON DELAY	OFF	OFF	OFF	OFF
	INTERVAL ON	ON	OFF	OFF	OFF
	OFF DELAY	OFF	ON	OFF	OFF
	TR. ON DELAY	ON	ON	OFF	OFF
	FLASHER (ON)	OFF	OFF	ON	OFF
	FLASHER (OFF)	ON	OFF	ON	OFF
	WATCHDOG	OFF	ON	ON	OFF
	ONE SHOT T. EDGE	ON	ON	ON	OFF
DUAL MODE	SINGLE SHOT	OFF	OFF	OFF	ON
	CYCLE (ON)	ON	OFF	OFF	ON
	CYCLE (OFF)	OFF	ON	OFF	ON
	DELAYED INTERVAL	ON	ON	OFF	ON
	ON/OFF DELAY	OFF	OFF	ON	ON
	TR. DELAYED INT.	ON	OFF	ON	ON
	ONE SHOT-FLASHER	OFF	ON	ON	ON
	ON DELAY/FLASHER	ON	ON	ON	ON

SELECT TIME BASE

		BASE	E	F	G
SINGLE MODE	DUAL MODE (1ST DELAY)	0.1 S	ON	OFF	OFF
		1S	OFF	ON	OFF
		0.1M	OFF	OFF	ON
		1M	ON	ON	OFF
		0.1H	ON	OFF	ON
		1H	OFF	ON	ON
		BASE	H	J	K
DUAL MODE	DUAL MODE (2ND DELAY)	0.1 S	ON	OFF	OFF
		1S	OFF	ON	OFF
		0.1M	OFF	OFF	ON
		1M	ON	ON	OFF
		0.1H	ON	OFF	ON
		1H	OFF	ON	ON

NOTE: SWITCHES H, J & K ARE ONLY USED ON DUAL RANGE PRODUCTS

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 and adding their corresponding values (see diagram above). Note that dual mode products can either have the same or different ON and OFF times. For more information, see ***www.macromatic.com/onoff***.

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 operate after power is removed)
0.01 Seconds for all units

Insulation Voltage: 2,000 volts

Temperature: Operating: -28° to 65°C (-18° to 149°F)
Storage: -40° to 85°C (-40° to 185°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:

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.

Control Switch Triggered Units:

Minimum required trigger switch closure time is 0.02 seconds.

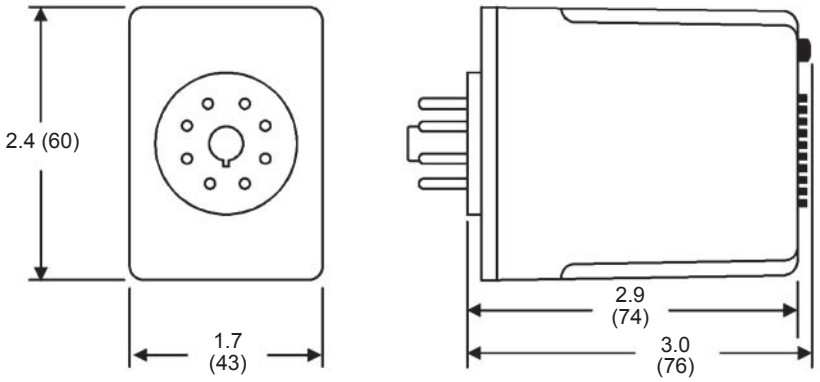
Approvals:

c UL us
File #E109466

UL LISTED IND. CONT. EQUIP. 50U7
with appropriate socket
File #E109466

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

Dimensions



All Dimensions in Inches (Millimeters)