

PROGRAMMABLE MULTI-FUNCTION | MULTI-RANGE

TE-881 SERIES



- ◆ 10 field-selectable functions in one unit
- ◆ Universal Input Voltage: 12-240V AC/DC
- ◆ 0.1 second - 10 days programmable time delay
- ◆ 15A SPDT output contacts
- ◆ LEDs indicate output relay status & timing mode
- ◆ Compact 17.5mm enclosure mounts on 35mm DIN track
- ◆ Pilot duty rating



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The TE-881 Series time delay relays offer 10 timing functions and a universal voltage input (12-240V AC/DC) with a programmable time range from 0.1 second – 10 days all in one compact unit. Choose between versions with 15A SPDT or DPDT output contacts. A green LED indicates input voltage applied; a red LED blinks during timing and is steady when the output relay is energized. These products have a compact 17.5mm enclosure which snaps on to 35mm DIN rail. This conserves space and reduces installation time, which saves money. With all this flexibility, the TE-881 Series replaces hundreds of separate time delay relays.

| CATALOG NUMBER | TE-8816U | TE-8812U |
|-----------------------------|---|---------------------------|
| Input | | |
| Voltage Range | 12-240V AC/DC, 50/60Hz | 12-240V AC/DC, 50/60Hz |
| Tolerance | -15% of 12V, +10% of 240V | -15% of 12V, +10% of 240V |
| Burden | 3VA (AC), 1.7W (DC) | 3VA (AC), 1.7W (DC) |
| Output | | |
| Configuration | SPDT | DPDT |
| Rating | 15A @ 240V AC 1/3HP @ 120V AC, 3/4HP @ 240V AC, B300 | |
| Minimum Switching | 100mA | |
| Contact Material | Silver Alloy | |
| Life | 10 million operations mechanical; 100,000 electrical | |
| Timing | | |
| Number of Functions | 10 (see descriptions on Page 44) | |
| Time Ranges | 8 different time ranges built-in: 100 ms - 1 Sec. 0.1 - 1 Hr. 1 - 10 Sec. 1 - 10 Hr. 0.1 - 1 Min. 0.1 - 1 Day 1 - 10 Min. 1 - 10 Days | |
| Repeat Accuracy | ±0.2% | |
| Setting Accuracy | 5% | |
| Reset Time | 150ms maximum | |
| Trigger Pulse Length | 50ms maximum | |
| Other | | |
| Mounting | 35mm DIN Rail only | |
| Agency Approval | (File #E109466) | |
| Temperature | Storage: -30° to 70° C (-22° to 158° F) Operating: -20° to 55° C (-4° to 131° F) | |
| LED Indication | Green-Input Voltage; Red-Timing or Relay ON | |
| Terminations | 12-22 AWG, 3.5 in-lbs | |

PROGRAMMABLE MULTI-FUNCTION | MULTI-RANGE

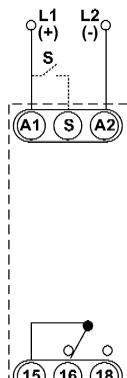
TE-881 SERIES

FUNCTIONS

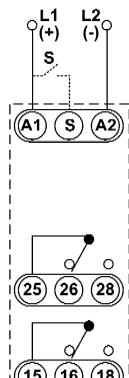
| FUNCTION | DIAL SETTING | GRAPH | FUNCTION | DIAL SETTING | GRAPH |
|-----------------------------------|-----------------|-------|---------------------------------|-----------------|-------|
| ON DELAY | A | | Flasher* (ON 1ST) | F | |
| Flasher* (OFF 1ST) | B | | PULSE GENERATOR (PULSE=0.5 SEC) | G | |
| INTERVAL | C | | ONE SHOT | H | |
| OFF DELAY | D | | ON/OFF DELAY * | I | |
| RETRIGGERABLE ONE SHOT (Watchdog) | E | | MEMORY LATCH (Latching Relay) | J | |

* Note: ON & OFF times are the same.

CONNECTION DIAGRAMS

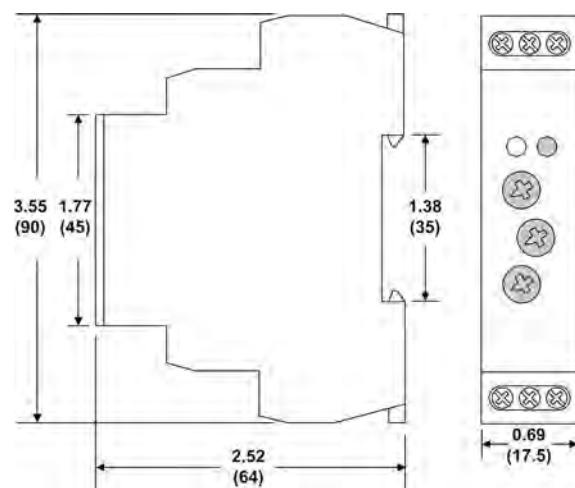


TE-8816U
SPDT



TE-8812U
DPDT

DIMENSIONS



All Dimensions in
Inches (Millimeters)

PROGRAMMABLE | SINGLE FUNCTION

DIP-SWITCH | DIGITAL-SET | TD-8 SERIES



Single Mode

Dual Mode

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



with appropriate socket

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The TD-8 Series time delay relays offer an easy and accurate method to select any time delay between 100ms and 1,023 hours. 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 and 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.

| FUNCTION ■ | INPUT VOLTAGE 50/60Hz. | CATALOG NUMBER ** | WIRING/ SOCKETS |
|--|------------------------|-------------------|---------------------------------|
| ON DELAY A | 120V AC/DC | TD-80222-** | 8 PIN OCTAL 70169-D |
| | 12V DC | TD-80226-** | |
| | 24V AC/DC | TD-80228-** | |
| | 240V AC | TD-80221-** | |
| INTERVAL ON B | 120V AC/DC | TD-80522-** | 8 PIN OCTAL DIAGRAM 1 |
| | 12V DC | TD-80526-** | |
| | 24V AC/DC | TD-80528-** | |
| | 240V AC | TD-80521-** | |
| REPEAT CYCLE * (OFF Time First Followed By ON Time and Repeating) L | 120V AC/DC | TD-83122-** | 8 PIN OCTAL DIAGRAM 1 |
| | 12V DC | TD-83126-** | |
| | 24V AC/DC | TD-83128-** | |
| | 240V AC | TD-83121-** | |
| REPEAT CYCLE * (ON Time First Followed By OFF Time and Repeating) M | 120V AC/DC | TD-85122-** | 11 PIN OCTAL 70170-D |
| | 12V DC | TD-85126-** | |
| | 24V AC/DC | TD-85128-** | |
| | 240V AC | TD-85121-** | |
| OFF DELAY Control Switch Trigger C | 120V AC/DC | TD-81622-** | 11 PIN OCTAL 70170-D |
| | 12V DC | TD-81626-** | |
| | 24V AC/DC | TD-81628-** | |
| | 240V AC | TD-81621-** | |
| SINGLE SHOT Control Switch Trigger D | 120V AC/DC | TD-81522-** | 11 PIN OCTAL 70170-D |
| | 12V DC | TD-81526-** | |
| | 24V AC/DC | TD-81528-** | |
| | 240V AC | TD-81521-** | |

DIAGRAM 2

■ See "Definitions of Timing Functions".

* ON & OFF Time Ranges for these functions are the same. See www.macromatic.com/onoff for information on how to order a unit with different ON & OFF time ranges.

TIME DELAYS

| **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 |
| 10 - 10,230 Min. | 44 |
| 1 - 1,023 Hr. | 45 |

| BINARY SWITCH OPERATION | |
|------------------------------|------------------------------|
| -40 RANGE 0.1 - 102.3 SEC | -41 RANGE 1 - 1,023 SEC |
| ON ← OFF | ON ← OFF |
| 0.1 | 1 |
| 0.2 | 2 |
| 0.4 | 4 |
| 0.8 | 8 |
| 1.6 | 16 |
| 3.2 | 32 |
| 6.4 | 64 |
| 12.8 | 128 |
| 25.6 | 256 |
| 51.2 | 512 |
| 2.5 SECONDS | 300 SECONDS (5 MINUTES) |
| 10 - 10,230 SEC | 1800 SECONDS (30 MINUTES) |
| ON ← OFF | 120 MINUTES (2 HOURS) |
| 10 - 10,230 MIN | 6000 MINUTES (100 HOURS) |
| ON ← OFF | 200 HOURS |
| -44 RANGE 10 - 10,230 MIN | -45 RANGE 1 - 1,023 HR |
| ON ← OFF | ON ← OFF |
| 10 | 1 |
| 20 | 2 |
| 40 | 4 |
| 80 | 8 |
| 160 | 16 |
| 320 | 32 |
| 640 | 64 |
| 1280 | 128 |
| 2560 | 256 |
| 5120 | 512 |

Sockets & Accessories available

Build your Time Delay Relays with the [Online Product Builder](#)