

# Time Delay Relays

## INTERVAL

TDI / TDIH / TDIL Series



### Description

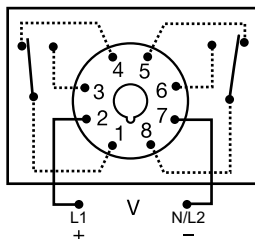
The TDI series is an interval timer that combines accurate digital circuitry with isolated, 8 A rated, DPDT relay contacts in an 8-pin plug-in package. The TDI series features DIP switch selectable time delays ranging from 0.1 to 10,230 seconds in three ranges. The TDI series is the product of choice for custom control panel and OEM designers.

### Operation (Interval)

Upon application of input voltage, the time delay begins. The output relay is energized during the time delay. At the end of the time delay, the output de-energizes and remains de-energized until input voltage is removed.

**Reset:** Removing input voltage resets the time delay and the output.

### Wiring Diagram



Relay contacts are isolated.

### Features & Benefits

| FEATURES                                       | BENEFITS                                                 |
|------------------------------------------------|----------------------------------------------------------|
| <b>Digital circuitry</b>                       | Repeat Accuracy + / - 0.1 %, Setting accuracy + / - 2 %  |
| <b>Isolated, 8 A, DPDT output contacts</b>     | Allows control of loads with independent voltage sources |
| <b>DIP switch adjustment</b>                   | Provides first time setting accuracy                     |
| <b>Industry standard octal plug connection</b> | Eliminates need for special connectors                   |
| <b>LED indication (select models)</b>          | Provides visual indication of timing and output status   |

### Ordering Information

| MODEL     | INPUT VOLTAGE   | TIME DELAY                      | LED |
|-----------|-----------------|---------------------------------|-----|
| TDI120AL  | 120 V ac        | 1–1023 s in 1 s increments      | Yes |
| TDI12D    | 12 V dc         | 1–1023 s in 1 s increments      | No  |
| TDIH24AL  | 24 V ac         | 10–10,230 s in 10 s increments  | Yes |
| TDIL120AL | 120 V ac        | 0.1–102.3 s in 0.1 s increments | Yes |
| TDIL24DL  | 24 V dc/28 V dc | 0.1–102.3 s in 0.1 s increments | Yes |

### Accessories



**OT08PC 8-pin Octal Socket for UL listing\***  
8-pin 35 mm DIN-rail or surface mount. Rated at 10 A @ 600 V ac. Surface mounted with two #6 screws or snaps onto a 35 mm DIN rail.



**C103PM (AL) DIN Rail**  
35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.

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### Specifications

#### Time Delay

##### Type

##### Range

Digital integrated circuitry  
0.1–102.3 s in 0.1 s increments  
1–1023 s in 1 s increments  
10–10,230 s in 10 s increments

##### Repeat Accuracy

±0.1 %

##### Setting Accuracy

±2 %

##### Reset Time

≤ 150 ms

##### Time Delay vs Temp.

±5 %

##### & Voltage

##### Indicator

LED glows during timing; relay is energized

##### Input

##### Voltage

12, 24 V dc; 24, 120 V ac

##### Tolerance

##### 12 V dc & 24 V dc/Ac

-15 %–+20 %

##### 120 V ac

-20 %–+10 %

##### AC Line Frequency

50/60 Hz

##### Power Consumption

≤ 3.25W

##### Output

##### Type

Electromechanical relay

##### Form

DPDT

##### Rating

8 A resistive @ 120/240 V ac;

1/3 hp @ 120/240 V ac

Mechanical - 1 x 10<sup>7</sup>; Electrical - 1 x 10<sup>6</sup>

##### Life

##### Protection

##### Polarity

Dc units are reverse polarity protected

##### Isolation Voltage

≥ 1500 V rms input to output

##### Mechanical

##### Mounting

Plug-in socket

##### Dimensions

**H** 44.45 mm (1.75"); **W** 60.33 mm (2.38");

**D** (with socket) 104.78 mm (4.13")

Octal 8-pin plug-in

##### Termination

##### Environmental

##### Operating/Storage

##### Temperature

-20 °C to 65 °C / -30 °C to 85 °C

##### Weight

≈ 4 oz (113 g)

##### Safety Marks

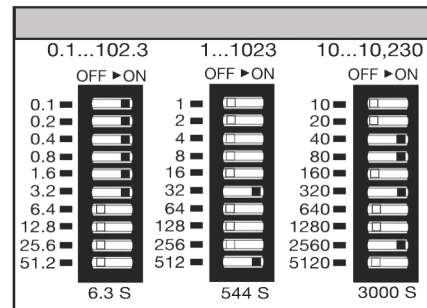
##### UL (socket required)\*

UL 508 (E57310)

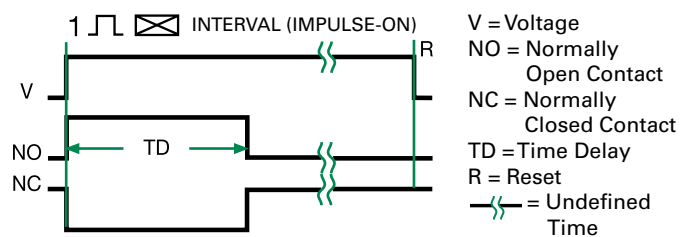
\*UL Listed when used with Part Number OT08-PC or RB08-PC manufactured by Custom Connector Corp.

**Note:** Manufacturer's recommended screw terminal torque for the OT Series sockets is 12 in-lbs.

### Digi-Set Binary Switch Operation



### Function Diagram



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