

# TDS / TDSH / TDSL SERIES

## Relay Output, Single Shot Time Delay Relay



\*8-pin models UL listed when used in combination with P1011-6 socket only.



8-PIN



11-PIN

### Description

The TDS Series combines accurate digital circuitry with isolated, 10A rated, DPDT or SPDT relay contacts in an 8-pin or 11-pin plug-in package. The TDS Series features DIP switch selectable time delays ranging from 0.1s to 10,230s in three ranges. The TDS Series is the product of choice for custom control panel and OEM designers.

### Operation (Single Shot)

Input voltage must be applied to the input before and during timing. Upon momentary or maintained closure of the initiate switch (leading edge triggered), the output relay energizes for a measured interval of time. At the end of the delay, the output de-energizes. Opening or reclosing the initiate switch during timing has no effect on the time delay. The output will energize if the initiate switch is closed when input voltage is applied.

**Reset:** Reset occurs when the time delay is complete and the initiate switch is opened. Loss of input voltage resets the time delay and output.

### Wiring Diagram



### Features & Benefits

FEATURES	BENEFITS
<b>3 time ranges available (0.1s to 2.8h)</b>	Makes it versatile for use in many applications
<b>Microcontroller based</b>	Repeat Accuracy +/- 0.1% or 20ms, whichever is greater; Setting Accuracy +/- 2% or 50ms, whichever is greater
<b>LED indication (select models)</b>	Provides visual indication of relay status
<b>DIP switch adjustment</b>	Provides first time setting accuracy
<b>Isolated output contacts</b>	Allows control of loads for AC or DC voltages

### Ordering Information

MODEL	INPUT VOLTAGE	DELAY RANGE (SEC)	LED	PLUG TYPE/OUTPUT FORM
TDS120AL	120VAC	1-1023 in 1s increments	X	Octal (8-pin) plug, SPDT
TDS120ALD	120VAC	1-1023 in 1s increments	X	11-pin plug, DPDT
TDS12D	12VDC	1-1023 in 1s increments		Octal (8-pin) plug, SPDT
TDS230AL	230VAC	1-1023 in 1s increments	X	Octal (8-pin) plug, SPDT
TDS24AL	24VAC	1-1023 in 1s increments	X	Octal (8-pin) plug, SPDT
TDSH120AL	120VAC	10-10230 in 10s increments	X	Octal (8-pin) plug, SPDT
TDSL120AL	120VAC	0.1-102.3 in 0.1s increments	X	Octal (8-pin) plug, SPDT
TDSL12D	12VDC	0.1-102.3 in 0.1s increments		Octal (8-pin) plug, SPDT

If you don't find the part you need, call us for a custom product 800-843-8848

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## Accessories



**BZ1 Front Panel Mount Kit**  
Provides an easy method of through-the-panel mounting of 8- or 11-pin plug-in timers, flashers, and other controls.



**NDS-8 Octal 8-pin Socket**  
8-pin 35mm DIN rail or surface mount. Rated at 10A @ 300VAC. Surface mounted with two #6 (M 3.5 x 0.6) screws or snaps onto a 35 mm DIN rail. Uses PSC8 hold-down clips.



**NDS-11 11-pin Socket**  
11-pin 35mm DIN rail or surface mount. Rated at 10A @ 300VAC. Surface mounted with two #6 (M 3.5 x 0.6) screws or snaps onto a 35 mm DIN rail. Uses PSC11 hold-down clips.



**PSC8 or PSC11 Hold-down Clips**  
Securely mounts plug-in controls in any position. Provides protection against vibration. Use PSC8 with NDS-8 Octal Socket or PSC11 with NDS-11 Socket. Sold in pairs.



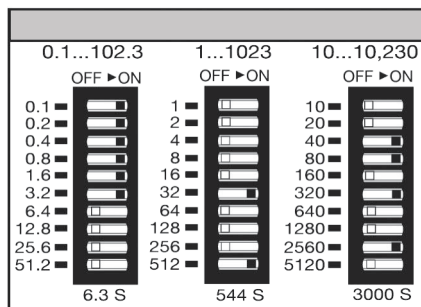
**PSCRB8 Hold-down Brackets**  
Designed for use with P1011-6 socket. Securely mounts 8-pin plug-in controls in any position, and provides protection against vibration. Sold in pairs.



**P1011-6 Octal Socket for UL listing\***  
8-pin surface mount socket with binder head screw terminals. Rated 10A @ 600VAC. Uses PSCRB8 Hold-down Brackets.

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## Digi-Set Binary Switch Operation



\*\*For CE approved applications, power must be removed from the unit when a switch position is changed.

## Specifications

### Time Delay

#### Type

#### Range\*\*

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

#### Repeat Accuracy

#### Setting Accuracy

#### Reset Time

#### Recycle Time

#### Time Delay vs Temp.

#### & Voltage

#### Indicator

#### Initiate Time

#### Input

#### Voltage

#### Tolerance

#### 12VDC & 24VDC/AC

#### 110 to 230VAC/DC

#### AC Line Frequency

#### Power Consumption

#### Output

#### Type

#### Form

#### Rating

#### Life

#### Protection

#### Isolation Voltage

#### Polarity

#### Mechanical

#### Mounting

#### Termination

#### Dimensions

#### Environmental

#### Operating/Storage

#### Temperature

#### Weight

±0.1% or 20ms, whichever is greater  
±2% or 50ms, whichever is greater  
≤ 50ms  
≤ 150ms  
±5%  
LED glows during timing; relay is energized  
≤ 60ms

12, 24/28, or 110VDC; 24, 120, or 230VAC

-15% - 20%

-20% - 10%

50/60 Hz

≤ 3.25W

Electromechanical relay

SPDT or DPDT

10A resistive @ 120/240VAC & 28VDC;

1/3 hp @ 120/240VAC

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

≥ 1500V RMS input to output

DC units are reverse polarity protected

Plug-in socket

Octal 8-pin plug-in or 11-pin plug-in

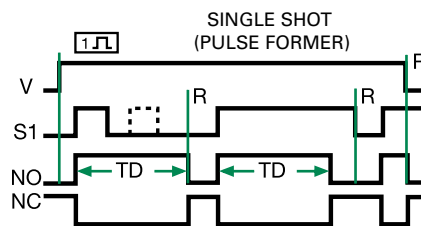
**H** 81.3 mm (3.2"); **W** 60.7 mm (2.39");

**D** 45.2 mm (1.78")

-20° to 65°C/-30° to 85°C

≈ 6 oz (170 g)

## Function Diagram



V = Voltage  
S1 = Initiate Switch  
NO = Normally Open Contact  
NC = Normally Closed Contact  
TD = Time Delay  
R = Reset