

# TDS / TDSH / TDSL SERIES

## Relay Output, Single Shot Time Delay Relay

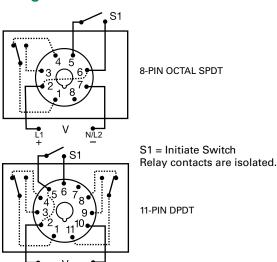






11-PIN

## **Wiring Diagram**



## **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 affect 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.

### **Features & Benefits**

FEATURES	BENEFITS	
3 time ranges available (0.1s to 2.8h)	Makes it versatile for use in many applications	
Microcontroller based	Repeat Accuracy + / - 0.1% or 20ms, whichever is greater; Setting Accuracy + / - 2% or 50ms, whichever is greater	
LED indication (select models)	Provides visual indication of relay status	
DIP switch adjustment	Provides first time setting accuracy	
Isolated output contacts	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  $3.5 \times 0.6$ ) 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**

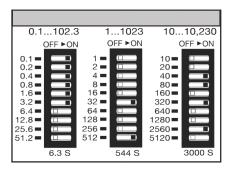
Designed for use with P1011-6 socket. Securely mounts 8-pin plug-in controls in any position. and provides protection against vibration. Sold



#### P1011-6 Octal Socket for UL listing\*

8-pin surface mount socket with binder head screw terminals. Rated 10A @ 600VAC. Uses PSCBR8 Hold-down Brackets.

## **Digi-Set Binary Switch Operation**



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

### **Specifications**

#### **Time Delay**

Type Range\*\*

Input

Digital integrated circuitry 0.1 - 102.3s in 0.1s increments 1 - 1023s in 1s increments 10 - 10,230s in 10s increments ±0.1% or 20ms, whichever is greater ±2% or 50ms, whichever is greater

Repeat Accuracy **Setting Accuracy Reset Time Recycle Time** ≤ 150ms

Time Delay vs Temp. & Voltage ±5%

Indicator LED glows during timing; relay is energized **Initiate Time** 

 $\leq 60 ms$ 

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

**Tolerance 12VDC & 24VDC/AC** -15% - 20% 110 to 230VAC/DC -20% - 10%

**AC Line Frequency** 50/60 Hz **Power Consumption** ≤ 3.25W Output

Type Electromechanical relay SPDT or DPDT

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

1/3 hp @ 120/240VAC

Mechanical - 1 x 107; Electrical - 1 x 106 Life

**Protection Isolation Voltage** ≥ 1500V RMS input to output

**Polarity** DC units are reverse polarity protected Mechanical

Mounting Plug-in socket

Termination Octal 8-pin plug-in or 11-pin plug-in Dimensions **H** 81.3 mm (3.2"); **W** 60.7 mm (2.39");

**D** 45.2 mm (1.78")

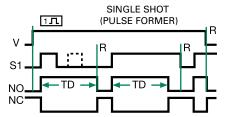
#### **Environmental**

Operating/Storage

**Temperature** -20° to 65°C/-30° to 85°C

Weight  $\approx$  6 oz (170 g)

## **Function Diagram**



V = Voltage

S1 = Initiate Switch

NO = Normally

**Open Contact** NC = Normally

**Closed Contact** 

TD = Time Delay

R = Reset

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