

# Single Shot, Interval (Pulse Former) TDSL, TDS, TDSH Digi-Set Time Delay Relay



- Switch Setable Time Delay
- Three Time Ranges from 100 ms ... 10,230 s
- +/-0.1% Repeat Accuracy
- +/-2% Setting Accuracy
- SPDT or DPDT, 10 A Output Contacts
- LED Indication

### Description

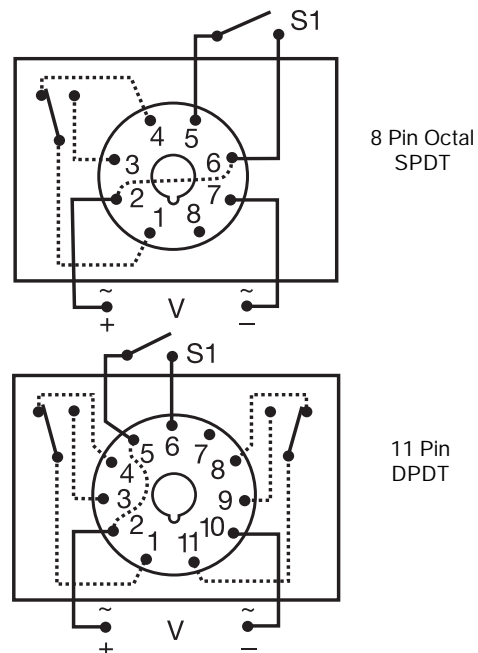
The TDS Series combines accurate digital circuitry with isolated 10 A rated DPDT or SPDT relay contacts in an 8 or 11 pin plug-in package. The TDS Series features DIP switch selectable time delays ranging from 100 ms to 10,230 s in three ranges. The TDS Series is the product of choice for custom control panel and OEM designers.

### Operation

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 is energized 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.

- Approvals:
- \*\*\*8 pin models used in combination with P1011-6 socket only



Relay contacts are isolated. Dashed lines are internal connections.

### Ordering Table

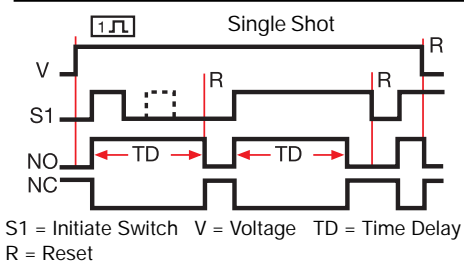
X Series/Time Range	X Input	X LED*	X Type Plug/Output Form
TDSL - 0.1 ... 102.3 s in 0.1 s increments	12D - 12 V DC	L	D - 11 Pin Plug, DPDT
TDS - 1 ... 1023 s in 1 s increments	24A - 24 V AC		Blank - Octal (8 Pin)
TDSH - 10 ... 10,230 s in 10 s increments	24D - 24 V DC/28 V DC		Plug, SPDT
	110D - 110 V DC		
	120A - 120 V AC		
	230A - 230 V AC		

Example P/N: **TDS120AL**

\* Note: LED not available in 12 V DC

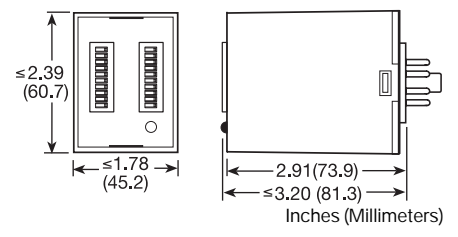
### Technical Data

Time Delay	
Type	Digital integrated circuitry
Range**	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% or 50 ms, whichever is greater
Reset Time	≤ 50 ms
Recycle Time	≤ 150 ms
Time Delay vs. Temperature & Voltage	+/-5%
Indicator	LED glows during timing
Initiate Time	≤ 60 ms
<b>Input</b>	
Voltage	12, 24, 120, or 230 V
Tolerance	12 V DC & 24 V DC/AC: -15% ... +20% 110 ... 230 V AC/DC: -20% ... +10%
Frequency	50 ... 60 Hz
Power Consumption	≤ 3.25 W
<b>Output</b>	
Type	Electromechanical relay
Form	SPDT & DPDT
Rating	10 A resistive at 240 V AC
Life	Mechanical -- 1 x 10 <sup>7</sup> Full Load -- 1 x 10 <sup>6</sup>
<b>Protection</b>	
Isolation Voltage	≥ 1500 V RMS input to output
Polarity	DC units are reverse polarity protected
<b>Mechanical</b>	
Mounting	Plug-in socket
Package	3.2 x 2.4 x 1.8 in. (81.3 x 60.7 x 45.2 mm)
Termination	Standard octal plug (8 Pin) or 11 Pin plug-in
<b>Environmental</b>	
Operating Temperature	-20°C ... +65°C
Storage Temperature	-30°C ... +85°C
Weight	≅ 6 oz (170 g)

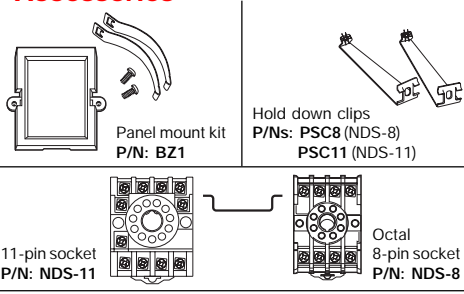


#### Digi-Set Binary Switch Operation

0.1...102.3		1...1023		10...10,230	
OFF	ON	OFF	ON	OFF	ON
0.1	1	1	10	10	100
0.2	2	2	20	20	200
0.4	4	4	40	40	400
0.8	8	8	80	80	800
1.6	16	16	160	160	1600
3.2	32	32	320	320	3200
6.4	64	64	640	640	6400
12.8	128	128	1280	1280	12800
25.6	256	256	2560	2560	25600
51.2	512	512	5120	5120	51200
6.3 S		544 S		3000 S	



### Accessories



See accessory pages at the end of this section.

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