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

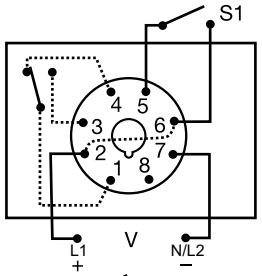
The TDS Series combines accurate digital circuitry with isolated, 10A rated, DPDT or SPDT relay contacts in an 8-pin or 11-pin plug-in package. The TDS Series features DIP switch selectable time delays ranging from 0.1s to 10,230s in three ranges. The TDS Series is the product of choice for custom control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

Operation (Single Shot)

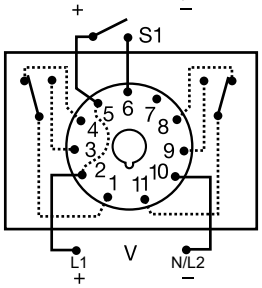
Input voltage must be applied to the input before and during timing. Upon momentary or maintained closure of the initiate switch (leading edge triggered), the output relay energizes for a measured interval of time. At the end of the delay, the output de-energizes. Opening or reclosing the initiate switch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

Wiring Diagram



8-PIN OCTAL SPDT



S1 = Initiate Switch
Relay contacts are isolated.

11-PIN DPDT

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 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.

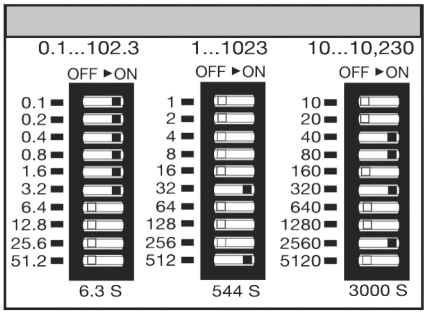
PSC8 or PSC11 Hold-down Clips
Securely mounts plug-in controls in any position. Provides protection against vibration. Use PSC8 with NDS-8 Octal Socket or PSC11 with NDS-11 Socket. Sold in pairs.

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 PSCBR8 Hold-down Brackets.

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

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	Digital integrated circuitry
Range**	0.1 - 102.3s in 0.1s increments 1 - 1023s in 1s increments 10 - 10,230s in 10s increments
Repeat Accuracy	±0.1% or 20ms, whichever is greater
Setting Accuracy	±2% or 50ms, whichever is greater
Reset Time	≤ 50ms
Recycle Time	≤ 150ms
Time Delay vs Temp. & Voltage	±5%
Indicator	LED glows during timing; relay is energized
Initiate Time	≤ 60ms

Input

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
Form	SPDT or DPDT
Rating	10A resistive @ 120/240VAC & 28VDC; 1/3 hp @ 120/240VAC
Life	Mechanical - 1 x 10^7; Electrical - 1 x 10^6

Protection

Isolation Voltage	≥ 1500V RMS input to output
Polarity	DC units are reverse polarity protected

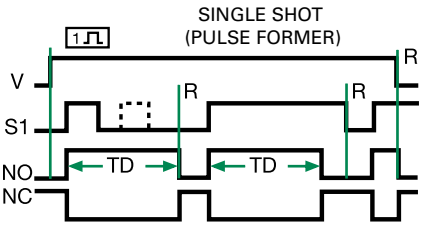
Mechanical

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	≅ 6 oz (170 g)

Function Diagram



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

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