

Time Delay Relays

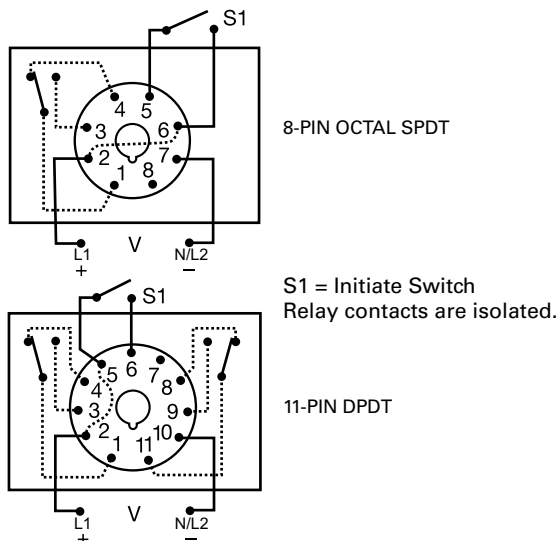
SINGLE SHOT

TDS / TDSH / TDSL Series

Relay Output, Single Shot Time Delay Relay



Wiring Diagram



Description

The TDS series combines accurate digital circuitry with isolated, 8 A 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 10,230 s 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.

Features & Benefits

FEATURES	BENEFITS
3 time ranges available (0.1 s to 2.8 h)	Makes it versatile for use in many applications
Microcontroller based	Repeat Accuracy + / - 0.1 %; Setting Accuracy + / - 2 %
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 with independent voltage sources

Ordering Information

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

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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.

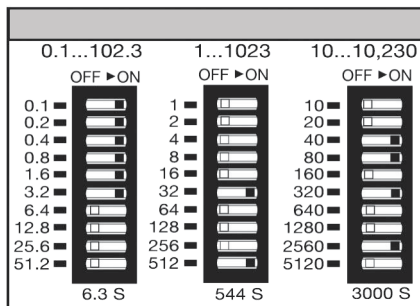


OT11PC 11-pin Octal Socket for UL listing*
11-pin surface & DIN rail mountable. Rated for 10 A @ 300 V ac

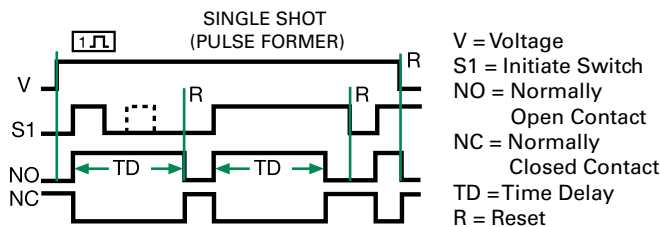


P1011-6 Octal Socket for UL listing*
8-pin surface mount socket with binder head screw terminals. Rated 10 A @ 600 V ac.

Digi-Set Binary Switch Operation



Function Diagram



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

Initiate Time

≤ 60 ms

Input

Voltage

12 V dc; 24, 120, or 230 V ac

Tolerance

12 V dc & 24 V

-15 %–20 %

120 & 230 V ac

-20 %–10 %

AC Line Frequency

50/60 Hz

Power Consumption

≤ 3.25W

Output

Type

Electromechanical relay

Form

SPDT or DPDT

Rating

8 A resistive @ 120/240 V ac

1/3 hp @ 120/240 V ac

Mechanical - 1 x 10⁷; Electrical - 1 x 10⁶

Life

Protection

Isolation Voltage

≥ 1500 V 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 44.45 mm (1.75"); W 60.33 mm (2.38");

D (with socket) 104.78 mm (4.13")

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, RB08-PC, OT11-PC, or RB11-PC manufactured by Custom Connector Corp.

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

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