

# Delay On Break (Release) TDBL, TDB, TDBH Digi-Set Time Delay Relay

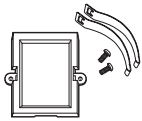


- Switch Settable Time Delay
- Three Time Ranges from 100 ms ... 10,230 s
- +/-0.1% Repeat Accuracy
- +/-2% Setting Accuracy
- SPDT or DPDT, 10 A Output Contacts
- LED Indication

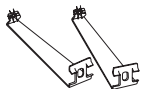
Approvals:

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

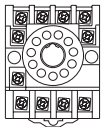
## Accessories



Panel mount kit  
P/N: **BZ1**



Hold down clips  
P/Ns:  
**PSC8** (NDS-8)  
**PSC11** (NDS-11)



11 pin socket  
P/N: **NDS-11**



Octal  
8 pin socket  
P/N: **NDS-8**



Octal socket  
for UL Listing  
P/N: **P1011-6**

See accessory pages for specifications.

## Description

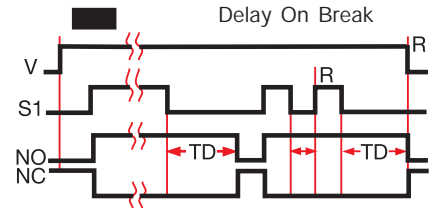
The TDB Series combines accurate digital circuitry with isolated 10 A rated DPDT or SPDT relay contacts in an 8 or 11 pin plug-in package. The TDB Series features DIP switch selectable time delays ranging from 100 milliseconds to 10,230 seconds in three ranges. The TDB Series is the product of choice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

## Operation

Input voltage must be applied to the input before and during timing. Upon closure of the initiate switch, the output relay is energized. The time delay begins when the initiate switch is opened (trailing edge triggered). The output remains energized during timing. At the end of the time delay, the output de-energizes. The output will energize if the initiate switch is closed when input voltage is applied.

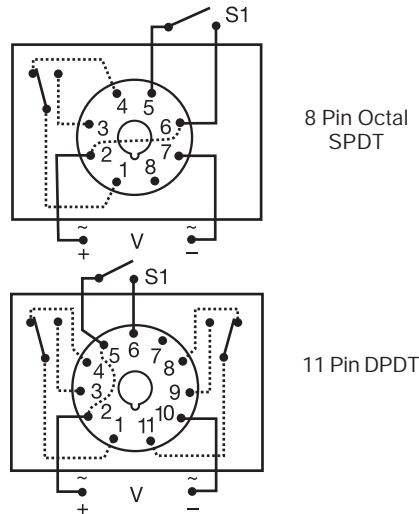
**Reset:** Reclosing the initiate switch during timing resets the time delay. Loss of input voltage resets the time delay and output.

## Function



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

## Connection



S1 = Initiate Switch

Relay contacts are isolated. Dashed lines are internal connections.

## Ordering Table

X	Series/Time Range
	<b>TDBL</b> - 0.1 ... 102.3 s in 0.1 s increments
	<b>TDB</b> - 1 ... 1023 s in 1 s increments
	<b>TDBH</b> - 10 ... 10,230 s in 10 s increments

X	Input
	<b>12D</b> - 12 V DC
	<b>24A</b> - 24 V AC
	<b>24D</b> - 24 V DC/28 V DC
	<b>110D</b> - 110 V DC
	<b>120A</b> - 120 V AC
	<b>230A</b> - 230 V AC

X	LED*	X	Type Plug/Output Form
	<b>L</b>		<b>D</b> - 11 Pin Plug, DPDT
			Blank - Octal (8 Pin) Plug, SPDT

Example P/N: **TDB120AL**

\* Note: LED not available on 12 V DC units

# Delay On Break (Release)

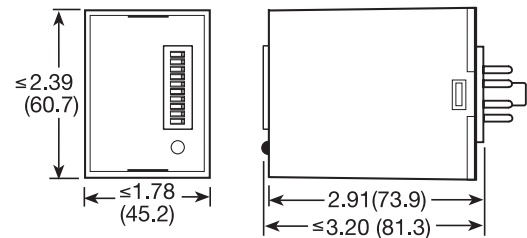
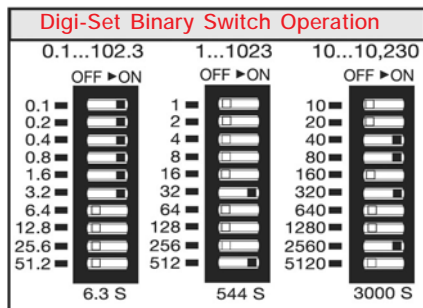
## TDBL, TDB, TDBH Digi-Set

### Time Delay Relay

#### Technical Data

<p><b>Time Delay</b></p> <p>Type</p> <p>Range**</p> <p>Repeat Accuracy</p> <p>Setting Accuracy</p> <p>Reset Time</p> <p>Recycle Time</p> <p>Time Delay vs. Temperature &amp; Voltage</p> <p>Indicator</p> <p>Initiate Time</p>	<p>Digital integrated circuitry</p> <p>0.1 ... 102.3 s in 0.1 s increments</p> <p>1 ... 1023 s in 1 s increments</p> <p>10 ... 10,230 s in 10 s increments</p> <p>+/-0.1% or 20 ms, whichever is greater</p> <p>+/-2% or 50 ms, whichever is greater</p> <p>≤ 50 ms</p> <p>≤ 150 ms</p> <p>+/-5%</p> <p>LED indicates relay is energized</p> <p>≤ 60 ms</p>	<p>** For CE approved applications, power must be removed from the unit when a switch position is changed.</p>
<p><b>Input</b></p> <p>Voltage</p> <p>Tolerance</p> <p>Frequency</p> <p>Power Consumption</p>	<p>12, 24, or 110 V DC; 24, 120, or 230 V AC</p> <p>-15% ... + 20%</p> <p>-20% ... +10%</p> <p>50 ... 60 Hz</p> <p>≤ 3.25 W</p>	
<p><b>Output</b></p> <p>Type</p> <p>Form</p> <p>Rating</p> <p>Life</p>	<p>Electromechanical relay</p> <p>SPDT or DPDT</p> <p>10 A resistive at 120/240 V AC &amp; 28 V DC; 1/3 hp at 120/240 V AC</p> <p>Mechanical -- 1 x 10<sup>7</sup></p> <p>Electrical-- 1 x 10<sup>6</sup></p>	
<p><b>Protection</b></p> <p>Isolation Voltage</p> <p>Polarity</p>	<p>≥ 1500 V RMS input to output</p> <p>DC units reverse polarity protected</p>	
<p><b>Mechanical</b></p> <p>Mounting</p> <p>Package</p> <p>Termination</p>	<p>Plug-in socket</p> <p>3.2 x 2.4 x 1.8 in. (81.3 x 60.7 x 45.2 mm)</p> <p>Standard octal plug (8 Pin) or 11 Pin plug-in</p>	
<p><b>Environmental</b></p> <p>Operating Temperature</p> <p>Storage Temperature</p> <p>Weight</p>	<p>-20°C ... +65°C</p> <p>-30°C ... +85°C</p> <p>≅ 6 oz (170 g)</p>	

#### Mechanical View



Inches (Millimeters)