

Delay On Break (Release) TDBL, TDB, TDBH 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

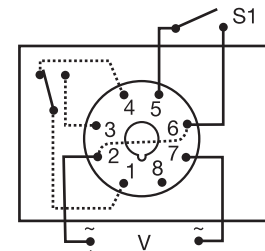
The TDB Series combines accurate digital circuitry with isolated 10 A rated DPDT or SPDT relay contacts in an 8 or 11 pin plug-in package. The TDB Series features DIP switch selectable time delays ranging from 100 ms to 10,230 s in three ranges. The TDB Series is the product of choice for custom control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

Operation

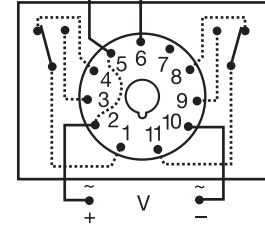
Input voltage must be applied to the input before and during timing. Upon closure of the initiate switch, the output relay is energized. The time delay begins when the initiate switch is opened (trailing edge triggered). The output remains energized during timing. At the end of the time delay, the output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

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



8 Pin Octal SPDT



11 Pin DPDT

Relay contacts are isolated. Dashed lines are internal connections.

Ordering Table

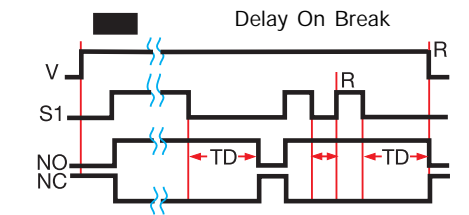
X Series/Time Range	X Input	X LED*	X Type Plug/Output Form
- TDBL - 0.1 ... 102.3 s in 0.1 s increments	- 12D - 12 V DC	- L	- D - 11 Pin Plug, DPDT
- TDB - 1 ... 1023 s in 1 s increments	- 24A - 24 V AC		- Blank - Octal (8 Pin) Plug, SPDT
- TDBH - 10 ... 10,230 s in 10 s increments	- 24D - 24 V DC/28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

Example P/N: **TDB120AL**

* Note: LED not available in 12 V DC

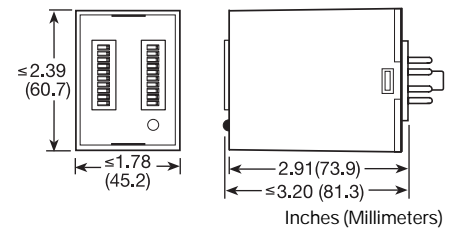
Technical Data

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 indicates relay contact position
Initiate Time	≤ 60 ms
Input	
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
Output	
Type	Electromechanical relay
Form	SPDT or DPDT
Rating	10 A resistive at 240 V AC
Life	Mechanical -- 1 x 10 ⁷ Full Load -- 1 x 10 ⁶
Protection	
Isolation Voltage	≥ 1500 V RMS input to output
Polarity	DC units reverse polarity protected
Mechanical	
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
Environmental	
Operating Temperature	-20°C ... +65°C
Storage Temperature	-30°C ... +85°C
Weight	≈ 6 oz (170 g)

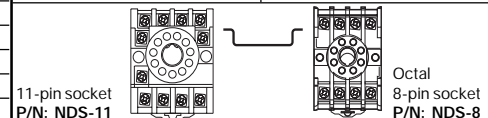
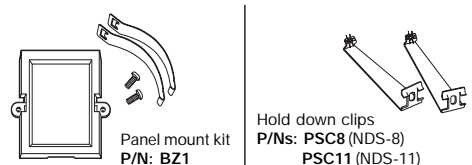


S1 = Initiate Switch V = Voltage R = Reset
NO = Normally Open NC = Normally Closed
TD = Time Delay — = Undefined time

Digi-Set Binary Switch Operation		
0.1...102.3	1...1023	10...10,230
OFF ▶ ON	OFF ▶ ON	OFF ▶ ON
0.1	1	10
0.2	2	20
0.4	4	40
0.8	8	80
1.6	16	160
3.2	32	320
6.4	64	640
12.8	128	1280
25.6	256	2560
51.2	512	5120
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.