

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

Operation (Delay-on-Break):

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.

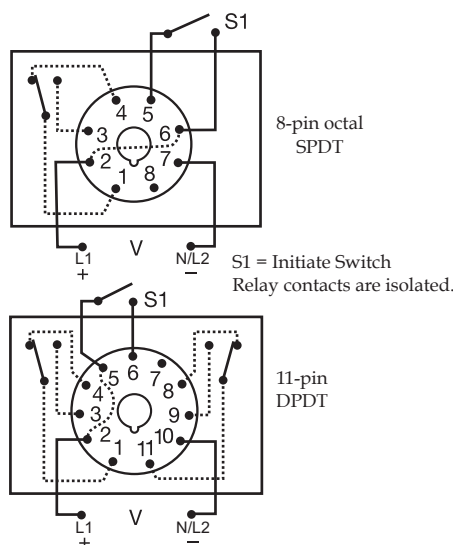
Reset: Reclosing the initiate switch during timing resets the time delay. Loss of input voltage resets the time delay and output.

For more information see:

Appendix A, pages 156-164 for function descriptions and diagrams.

Appendix B, page 165, Figure 8 for dimensional drawing.

Connection:



Features:

- Switch settable time delay
- Three time ranges from 0.1s - 10,230s
- $\pm 0.1\%$ repeat accuracy
- $\pm 2\%$ setting accuracy
- 10A, SPDT or DPDT output contacts
- LED indication

Approvals:

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

Auxiliary Products:

- **Panel mount kit:** P/N: BZ1
- **Hold-down clips (sold in pairs):**
P/N: PSC8 (NDS-8)
P/N: 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

Available Models:

TDB120AL	TDBH120AL
TDB120ALD	TDBH120ALD
TDB12D	TDBH124AL
TDB230AL	TDBL120AL
TDB24AL	TDBL120ALD
TDB24DL	TDBL24DL

If desired part number is not listed, please call us to see if it is technically possible to build.

Digi-Set Binary Switch Operation:

0.1...102.3	1...1023	10...10,230
OFF \blacktriangleright ON	OFF \blacktriangleright ON	OFF \blacktriangleright ON
0.1 <input type="checkbox"/>	1 <input type="checkbox"/>	10 <input type="checkbox"/>
0.2 <input type="checkbox"/>	2 <input type="checkbox"/>	20 <input type="checkbox"/>
0.4 <input type="checkbox"/>	4 <input type="checkbox"/>	40 <input type="checkbox"/>
0.8 <input type="checkbox"/>	8 <input type="checkbox"/>	80 <input type="checkbox"/>
1.6 <input type="checkbox"/>	16 <input type="checkbox"/>	160 <input type="checkbox"/>
3.2 <input type="checkbox"/>	32 <input type="checkbox"/>	320 <input type="checkbox"/>
6.4 <input type="checkbox"/>	64 <input type="checkbox"/>	640 <input type="checkbox"/>
12.8 <input type="checkbox"/>	128 <input type="checkbox"/>	1280 <input type="checkbox"/>
25.6 <input type="checkbox"/>	256 <input type="checkbox"/>	2560 <input type="checkbox"/>
51.2 <input type="checkbox"/>	512 <input type="checkbox"/>	5120 <input type="checkbox"/>
6.3 S	544 S	3000 S

Order Table:

TDB - 1 - 1023s in 1s increments

TDBH - 10 - 10,230s in 10s increments

TDBL - 0.1 - 102.3s in 0.1s increments

X **Input Voltage**
12D - 12VDC
24A - 24VAC
24D - 24VDC/28VDC
110D - 110VDC
120A - 120VAC
230A - 230VAC

X **LED***
L

X **Type Plug/ Output Form**
D - 11-pin plug, DPDT
Blank - Octal (8-pin) plug, SPDT

*Note: LED not available on 12VDC units.

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	$\pm 0.1\%$ or 20ms, whichever is greater
Setting Accuracy	$\pm 2\%$ or 50ms, whichever is greater
Reset Time	≤ 50 ms
Recycle Time	≤ 150 ms
Time Delay vs Temp. & Voltage	$\pm 5\%$
Indicator	LED indicates relay is energized
Initiate Time	≤ 60 ms
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	≤ 3.25 W

Output

Type	Electromechanical relay
Form	SPDT or DPDT
Rating	10A resistive @ 120/240VAC & 28VDC; 1/3 hp @ 120/240VAC
Life	Mechanical - 1×10^7 ; Electrical - 1×10^6
Protection	
Isolation Voltage	≥ 1500 V RMS input to output
Polarity	DC units reverse polarity protected
Mechanical	
Mounting	Plug-in socket
Dimensions	3.2 x 2.4 x 1.8 in. (81.3 x 60.7 x 45.2 mm)
Termination	Octal 8-pin plug-in or 11-pin plug-in
Environmental	
Operating / Storage Temperature	-20° to 65° C / -30° to 85° C
Weight	≈ 6 oz (170 g)

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