

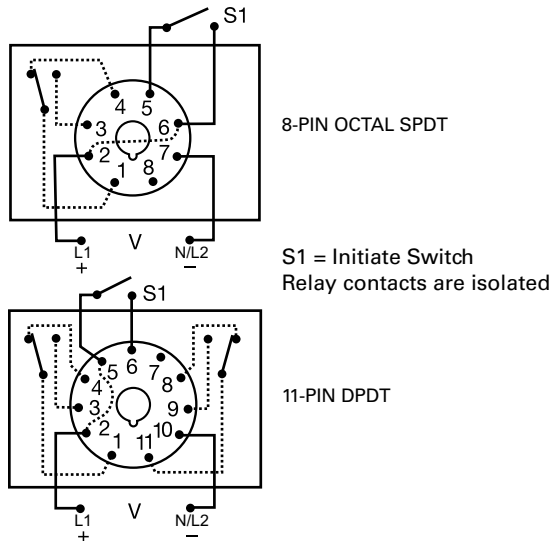
Time Delay Relays

DELAY-ON-BREAK

TDB / TDBH / TDBL Series



Wiring Diagram



Description

The TDB series combines accurate digital circuitry with isolated, 8 A, DPDT or SPDT contacts in an 8-pin 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.

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	TYPE PLUG/OUTPUT FORM
TDB120AL	120 V ac	1–1023 in 1 s increments	X	Octal (8-pin) plug, SPDT
TDB120ALD	120 V ac	1–1023 in 1 s increments	X	11-pin plug, DPDT
TDB12D	12 V dc	1–1023 in 1 s increments		Octal (8-pin) plug, SPDT
TDB230AL	230 V ac	1–1023 in 1 s increments	X	Octal (8-pin) plug, SPDT
TDB24AL	24 V ac	1–1023 in 1 s increments	X	Octal (8-pin) plug, SPDT
TDB24DL	24 V dc/ 28 V dc	1–1023 in 1s increments	X	Octal (8-pin) plug, SPDT
TDBH120AL	120 V ac	10–10230 in 10 s increments	X	Octal (8-pin) plug, SPDT
TDBH120ALD	120 V ac	10–10230 in 10 s increments	X	11-pin plug, DPDT
TDBL120AL	120 V ac	0.1–102.3 in 0.1 s increments	X	Octal (8-pin) plug, SPDT
TDBL120ALD	120 V ac	0.1–102.3 in 0.1 s increments	X	11-pin plug, DPDT
TDBL24DL	24 V dc/ 28 V dc	0.1–102.3 in 0.1 s increments	X	Octal (8-pin) plug, SPDT

Time Delay Relays

DELAY-ON-BREAK

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

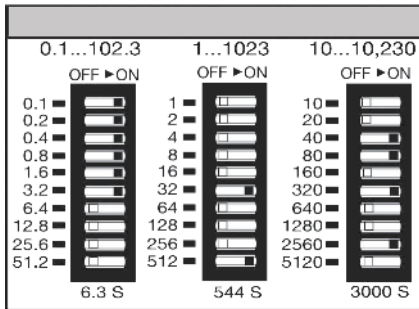


P1011-6 Octal Socket for UL listing*
8-pin surface mount socket with binder head screw terminals. Rated 10 A @ 600 V ac.

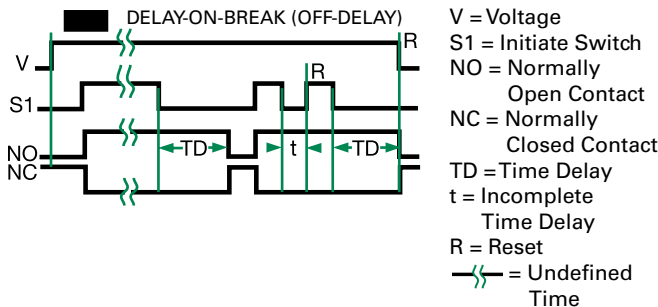


C103PM (AL) DIN Rail
35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.

Digi-Set Binary Switch Operation



Function Diagram



Specifications

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 %
Reset Time ≤ 150 ms

Time Delay vs Temp. & Voltage ±5 %

Indicator LED indicates relay is energized
Initiate Time ≤ 60 ms

Input Voltage 12, 24/28 V dc; 24, 120, or 230 V ac

Tolerance -15% – 20%
12 V dc & 24 V dc/ac -20% – 10%
120 & 230 V ac 50/60 Hz

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
Life Mechanical - 1 x 10⁷; Electrical - 1 x 10⁶

Protection ≥ 1500 V rms input to output
Isolation Voltage Dc units reverse polarity protected

Mechanical

Mounting Plug-in socket
Dimensions **H** 44.45 mm (1.75"); **W** 60.33 mm (2.38");
D (with socket) 104.78 mm (4.13")
 Octal 8-pin plug-in or 11-pin plug-in

Termination

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.

Disclaimer Notice – Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at www.littelfuse.com/product-disclaimer.