

## Delay On Make (Operate) TDML, TDM, TDMH Series Time Delay Relay



- Digital Integrated Circuitry
- Switch Setable Time Delay
- Three Time Ranges from 100 ms ... Over 2.8 h
- +/-0.1% Repeat Accuracy
- +/-2% Setting Accuracy
- DPDT, 10 A Output Contacts
- LED Indication

### Description

The TDM Series is a delay-on-make timer that combines accurate digital circuitry with isolated DPDT relay contacts in an industry standard 8 pin plug-in package. DIP switch adjustment allows precise selection of the time delay over the full time delay range. The TDM Series is the product of choice for custom control panel and OEM designers.

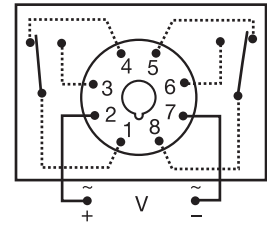
### Operation

Upon application of input voltage, the time delay begins. The output is de-energized before and during the time delay. At the end of the time delay, the output relay is energized and remains energized until input voltage is removed.

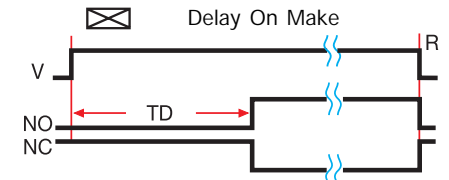
**Reset:** Removing input voltage resets the time delay and output.

- Approvals:

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



Relay contacts are isolated. Dashed lines are internal connections.



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

### Ordering Table

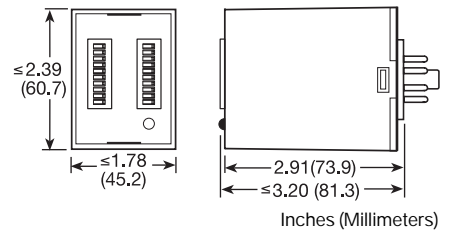
X	X	X
Series/Time Range	Input	LED Indication
<b>TDML</b> - 0.1 ... 102.3 s in 0.1 s increments	<b>12D</b> - 12 V DC	<b>L</b>
<b>TDM</b> - 1 ... 1023 s in 1 s increments	<b>24A</b> - 24 V AC	
<b>TDMH</b> - 10 ... 10,230 s in 10 s increments	<b>24D</b> - 24 V DC/28 V DC	
	<b>110D</b> - 110 V DC	
	<b>120A</b> - 120 V AC	
	<b>230A</b> - 230 V AC	

Example P/N: **TDM120AL**

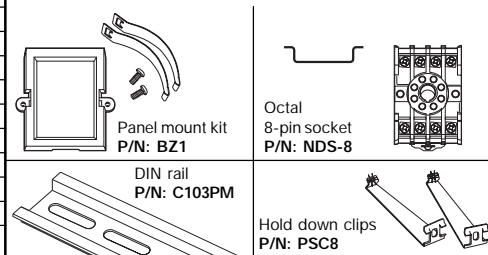
Digi-Set Binary Switch Operation		
0.1...102.3	1...1023	10...10,230
OFF ▶ ON	OFF ▶ ON	OFF ▶ ON
0.1	1	10
0.2	2	20
0.4	4	40
0.8	8	80
1.6	16	160
3.2	32	320
6.4	64	640
12.8	128	1280
25.6	256	2560
51.2	512	5120
6.3 S	544 S	3000 S

### Technical Data

<b>Time Delay</b>	Digital integrated circuitry
Type	0.1 ... 102.3 s adj. in 0.1 s increments
Range*	1 ... 1023 s adj. in 1 s increments
	10 ... 10,230 s adj. in 10 s increments
Repeat Accuracy	+/-0.1% or +/-8.3 ms, whichever is greater (no first shot effect)
Setting Accuracy	+/-2% or +/-50 ms, whichever is greater
Reset Time	≤ 50 ms
Recycle Time	During Timing -- TDMH -- ≤ 500 ms TDM, TDML -- ≤ 300 ms
Time Delay vs. Temperature & Voltage	+/-2%
Indicator	LED glows during timing
<b>Input</b>	
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	≤ 2.25 W
<b>Output</b>	
Type	Electromechanical relay
Form	Double pole double throw (DPDT)
Rating	10 A resistive at 240 V AC
Life	Mechanical -- 1 x 10 <sup>7</sup> Full Load -- 1 x 10 <sup>6</sup>
<b>Protection</b>	
Polarity	DC units are reverse polarity protected
Isolation Voltage	≥ 1500 V RMS input to output
<b>Mechanical</b>	
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)
<b>Environmental</b>	
Operating Temperature	-20°C ... +65°C
Storage Temperature	-30°C ... +85°C
Weight	≅ 6 oz (170 g)



### 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.