

Interval (Single Pulse On Operate) TSD2 Digi-Timer Timing Module



Description

Digi-Time utilizes a stable oscillator and C/MOS digital counting circuitry to provide excellent repeat accuracy, stability over temperature, and voltage variations. Its solid state output provides long reliable life even in the most rigorous applications.

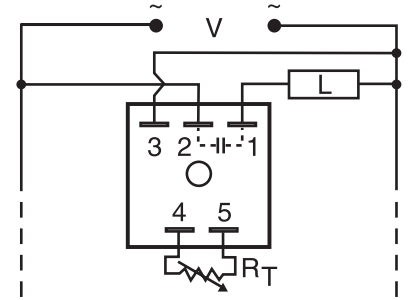
Operation

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

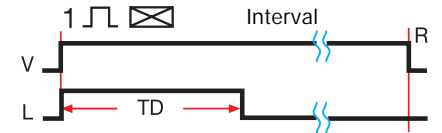
Reset: Removing input voltage resets the time delay and the output.

Approvals:

- +/-0.1% Repeat Accuracy
- +/-1% Stability Over Voltage & Temperature
- Fixed or Adjustable Delays From 0.2 s ... 10,000 m
- 24, 120, or 230 V AC
- Totally Solid State & Encapsulated



R_T is used when external adjustment is ordered.



V = Voltage L = Load R = Reset
TD = Time Delay — = Undefined time

Ordering Table

Series	Input	Adjustment	Time Delay*
2	24 V AC	1 - Fixed	0 - 0.2 ... 10 s
4	120 V AC	2 - External Adjust	1 - 1 ... 100 s
6	230 V AC		2 - 10 ... 1000 s
			3 - 0.1 ... 10 m
			4 - 1 ... 100 m
			5 - 10 ... 1000 m
			6 - 100 ... 10,000 m

*If Fixed Delay is selected, insert delay [0.2 ... 1000] followed by (S) secs. or [0.1 ... 10000] (M) mins.

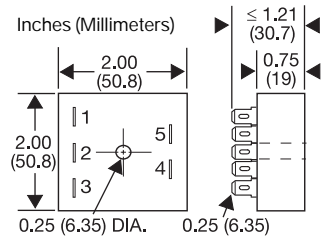
Example P/N: **TSD2421**
Fixed - **TSD24160M**

Technical Data

Time Delay	
Type	Digital integrated circuitry
Range	0.2 s ... 10,000 m in 7 adjustable ranges or fixed
Repeat Accuracy	+/-0.1% or 16 ms, whichever is greater
Tolerance (Factory Calibration)	≤ +/-1%
Recycle Time	≤ 150 ms
Time Delay vs. Temperature & Voltage	≤ +/-1%
Input	
Voltage	24, 120, or 230 V AC
Tolerance	+/-20%
Line Frequency	50 ... 60 Hz
Output	
Type	Solid state
Form	Normally Open, closed during timing
Maximum Load Current	1 A steady state, 10 A inrush at 55°C
Minimum Holding Current	≤ 40 mA (Normally Open)
Voltage Drop	≅ 2.5 V at 1 A
Protection	
Circuitry	Encapsulated
Dielectric Breakdown	≥ 2000 V RMS terminals to mounting surface
Insulation Resistance	≥ 100 MΩ
Mechanical	
Mounting	Surface mount with one #10 (M5 x 0.8) screw
Package	2 x 2 x 1.21 in. (50.8 x 50.8 x 30.7 mm)
Termination	0.25 in. (6.35 mm) male quick connect terminals
Environmental	
Operating Temperature	-40°C ... +75°C
Storage Temperature	-40°C ... +85°C
Humidity	95% relative, non-condensing
Weight	≅ 2.4 oz (68 g)

Desired Time Delay*		Seconds						Minutes						R _T Megohm
0	1	2	3	4	5	6	0	1	2	3	4	5	6	
0.2	1	10	0.1	1	10	100	0.0	0.1	1	10	100	1000	10000	0.0
1	10	100	1	10	100	1000	0.1	1	10	100	1000	10000	100000	0.1
2	20	200	2	20	200	2000	0.2	2	20	200	2000	20000	200000	0.2
3	30	300	3	30	300	3000	0.3	3	30	300	3000	30000	300000	0.3
4	40	400	4	40	400	4000	0.4	4	40	400	4000	40000	400000	0.4
5	50	500	5	50	500	5000	0.5	5	50	500	5000	50000	500000	0.5
6	60	600	6	60	600	6000	0.6	6	60	600	6000	60000	600000	0.6
7	70	700	7	70	700	7000	0.7	7	70	700	7000	70000	700000	0.7
8	80	800	8	80	800	8000	0.8	8	80	800	8000	80000	800000	0.8
9	90	900	9	90	900	9000	0.9	9	90	900	9000	90000	900000	0.9
10	100	1000	10	100	1000	10000	1.0	10	100	1000	10000	100000	1000000	1.0

* When selecting an external R_T add at least 11% for tolerance of unit and the R_T.



Accessories

<p>Mounting bracket P/N: P1023-6</p>	<p>External adjust potentiometer P/Ns: P1004-16 (fig A) P1004-16-X (fig B)</p>
<p>Female quick connect P/N: P1015-64 (AWG 14/16)</p>	<p>Plug-on adjustment module P/N: VTP(X)(X)</p>
<p>Quick connect to screw adaptor P/N: P1015-18</p>	<p>Versa-knob P/N: P0700-7</p>

DIN rail P/Ns: C103PM (Al) 17322005 (Steel)

See accessory pages at the end of this section.

Time Delay	VTP P/N
0 - 0.2 ... 10 s	VTP2C
1 - 1 ... 100 s	VTP2G
2 - 10 ... 1000 s	VTP2K
3 - 0.1 ... 10 m	VTP2N
4 - 1 ... 100 m	VTP2P
5 - 10 ... 1000 m	VTP2R
6 - 100 ... 10,000 m	VTP2R