

Delay On Make (Operate) TS1 Versa-Timer Timing Module



- Two Terminal Series Connection with Load
- 5 mA ... 1 A Load Currents
- Totally Solid State – Encapsulated
- +/-2% Repeat Accuracy
- Fixed or Adjustable Delays From 50 ms ... 10 m

Description

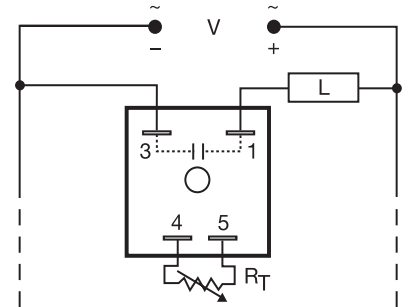
Versa-Timer offers proven reliability and performance with years of use in OEM equipment and commercial applications. This encapsulated general use timing module is capable of controlling load currents ranging from 5 mA to 1 A. May be connected in series with contactors, relays, valves, solenoids, small motors, and lamps.

Operation

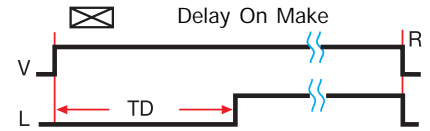
Upon application of input voltage, the time delay begins. The output is de-energized before and during the time delay. At the end of the time delay, the output is energized and remains energized until input voltage is removed.

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

- Approvals:



Load may be connected to terminal 3 or 1. R_T is used when external adjustment is ordered.



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

Ordering Table

TS1 Series	X Input	X Adjustment	X Time Delay*	All Other Voltages
	-1 - 12 V DC	-1 - Fixed	-1 - 0.05 ... 1 s	0.05 ... 3 s
	-2 - 24 V AC	-2 - External Adjust	-2 - 0.5 ... 20 s	0.5 ... 60 s
	-3 - 24 V DC		-3 - 2 ... 60 s	2 ... 180 s
	-4 - 120 V AC		-4 - 5 ... 120 s	5 ... 600 s
	-5 - 120 V DC			
	-6 - 230 V AC			

*If Fixed Delay is selected, insert delay [0.05 ... 120] (12V DC) or [0.05 ... 600] (other voltages) in secs.

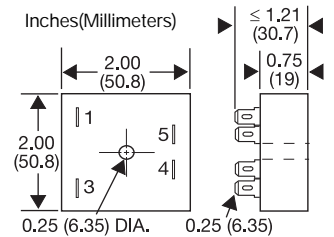
Example P/N: **TS1122** Fixed – **TS1411.5**

Desired Time Delay*				R_T Megohm
1	2	3	4	
0.05	0.5	2	5	0.0
0.5	10	30	60	0.5
1.0	20	60	120	1.0
▼ 24, 120 VDC or AC ONLY ▼				
1.5	30	90	180	1.5
2.0	40	120	240	2.0
2.5	50	150	300	2.5
3.0	60	180	360	3.0
			420	3.5
			480	4.0
			540	4.5
			600	5.0

* When selecting an external R_T add at least 20% for tolerance of unit and the R_T . 1 Megohm max for 12 VDC Units

Technical Data

Time Delay	
Type	Analog circuitry
Range	12 V DC: 0.05 ... 120 s in 4 adjustable ranges or fixed Other Voltages: 0.05 ... 600 s in 4 adjustable ranges or fixed (1 MΩ max. R_T for 12 V DC units)
Repeat Accuracy	+/-2% under fixed conditions
Tolerance (Factory Calibration)	≤ +/-10%
Recycle Time	After timing – ≤ 16 ms During timing – 0.1% of time delay or 75 ms, whichever is greater
Time Delay vs. Temperature & Voltage	≤ +/-10%
Input	
Voltage	12, 24, 120, or 230 V
Tolerance	+/-20%
Line Frequency	50 ... 60 Hz
Output	
Type	Solid state
Form	Normally Open, open during timing
Maximum Load Current	1 A steady state, 10 A inrush at 60°C
Minimum Holding Current	5 mA
Voltage Drop	≅ 2.5 V at 1 A
Protection	
Circuitry	Encapsulated
Dielectric Breakdown	≥ 2000 V RMS terminals to mounting surface
Insulation Resistance	≥ 100 MΩ
Polarity	DC units are reverse polarity protected
Mechanical	
Mounting	Surface mount with one #10 (M5 x 0.8) screw
Termination	0.25 in. (6.35 mm) male quick connect terminals
Operating/Storage Temperature	-40°C ... +80°C / -40°C ... +85°C
Humidity	95% relative, non-condensing
Weight	≅ 2.4 oz (68 g)



Accessories

<p>Mounting bracket P/N: P1023-6</p>	<p>External adjust potentiometer P/N: P1004-XX</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)

For illustration

DIN rail adaptor P/N: P1023-20

See accessory pages at the end of this section.

12 VDC			
Time Delay	VTP P/N	Fig. A P/N	Fig. B P/N
1 - 0.05 ... 1 s	VTP2A	P1004-16	P1004-16-X
2 - 0.5 ... 20 s	VTP2E	P1004-16	P1004-16-X
3 - 2 ... 60 s	VTP2F	P1004-16	P1004-16-X
4 - 5 ... 120 s	VTP2H	P1004-16	P1004-16-X

All Other Voltages			
Time Delay	VTP P/N	Fig. A P/N	Fig. B P/N
1 - 0.05 ... 3 s	VTP4B	P1004-12	P1004-12-X
2 - 0.5 ... 60 s	VTP4F	P1004-12	P1004-12-X
3 - 2 ... 180 s	VTP4J	P1004-12	P1004-12-X
4 - 5 ... 600 s	VTP5N	P1004-13	P1004-13-X