

# Single Shot (Pulse Former) THC Series Timing Module



- Fast Initiate for Coin Vending Equipment
- High Load Current Capacity up to 20 A, 200 A Inrush
- Totally Solid State, No Moving Contacts to Arc, Wear, and Eventually Fail
- Momentary Initiate Only
- Fixed or Adjustable Delays From 0.1 s ... 600 s
- +/-2% Repeat Accuracy

## Description

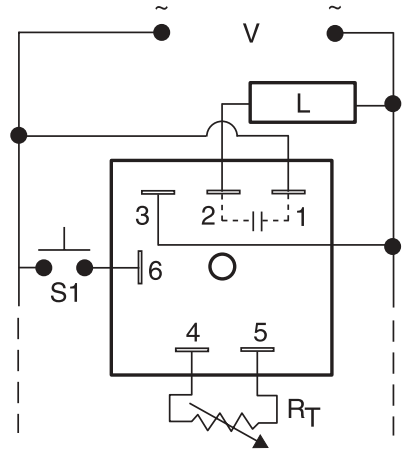
The THC Series was designed to work with fast acting coin vending switches. Its high power output allows the direct operation of motors, heaters, lamps, etc. without the use of additional relays or contactors.

## Operation

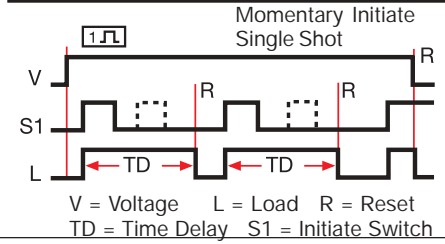
Input voltage must be applied to the input before and during timing. Upon momentary closure of the initiate switch, the output is energized for a measured interval of time. At the end of the delay, the output de-energizes. Opening or reclosing the initiate switch during timing has no effect on the time delay. The output will energize if the initiate switch is closed when input voltage is applied.

**Reset:** Reset occurs when the time delay is complete and the initiate switch is opened. Loss of input voltage resets the time delay and output.

■ Approvals:



R<sub>T</sub> is used when external adjustment is ordered.



## Ordering Table

THC Series	X Input	X Adjustment	X Time Delay *	X Output Rating
	-2 - 24 V AC	-1 - Fixed	-1 - 0.1 ... 3 s	-A - 6 A
	-4 - 120 V AC	-2 - External Adjust	-2 - 0.5 ... 60 s	-B - 10 A
	-6 - 230 V AC		-3 - 2 ... 180 s	-C - 20 A
			-4 - 5 ... 600 s	

Example P/N: **THC422A** Fixed - **THC410.1B**

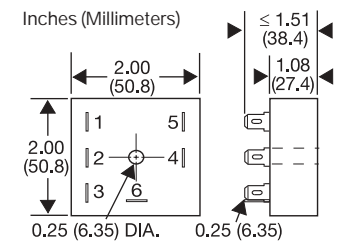
\*If Fixed Delay is selected, insert delay [0.1...600] in seconds.

Desired Time Delay*				R <sub>T</sub>
Seconds				
1	2	3	4	Megohm
0.1	0.5	2	5	0.0
0.5	10	30	60	0.5
1.0	20	60	120	1.0
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<sub>T</sub> add at least 20% for tolerance of unit and the R<sub>T</sub>.

## Technical Data

<b>Time Delay</b>	
Type	Analog circuitry
Range	0.1 s ... 3 s (1 MΩ = 1 s) 0.5 s ... 60 s (1 MΩ = 20 s) 2 s ... 180 s (1 MΩ = 60 s) 5 s ... 600 s (1 MΩ = 120 s)
Repeat Accuracy	+/-2% under fixed conditions
Tolerance (Factory Calibration)	≤ +/-10%
Time Delay vs. Temperature & Voltage	≤ +/-10%
Recycle Time	100 ms
Initiate Time	≤30 ms
<b>Input</b>	
Voltage	24, 120, or 230 V AC
Tolerance	+/-15%
Line Frequency	50 ... 60 Hz
<b>Output</b>	
Type	Solid state
Form	Normally Open, closed during timing
Maximum Load Current	<b>Output Steady State Inrush**</b> A 6 A 60 A B 10 A 100 A C 20 A 200 A
Minimum Load Current	100 mA
Voltage Drop	≅ 2.5 V at rated current
<b>Protection</b>	
Circuitry	Encapsulated
Dielectric Breakdown	≥ 2000 V RMS terminals to mounting surface
Insulation Resistance	≥ 100 MΩ
<b>Mechanical</b>	
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	-20°C ... +60°C / -40°C ... +85°C
Humidity	95% relative, non-condensing
Weight	≅ 3.9 oz (111 g)



\*\*Must be bolted to a metal surface using the included heat sink compound. The maximum mounting surface temperature is 90°C. Inrush: Non-repetitive for 16 ms.

Time Delay	VTP P/N	Fig. A P/N	Fig. B P/N
1 - 0.1 ... 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

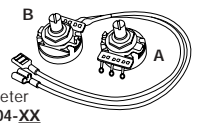
## Accessories

Female quick connect



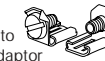
P/N: P1015-64 (AWG14/16)

External adjust potentiometer



P/N: P1004-XX

Quick connect to screw adaptor



P/N: P1015-18

Plug-on adjustment module



P/N: VTP(X)(X)

Versa-knob



P/N: P0700-7

See accessory pages at the end of this section.