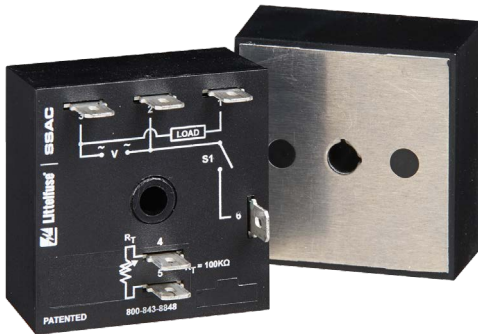


# THC / THS SERIES



## Description

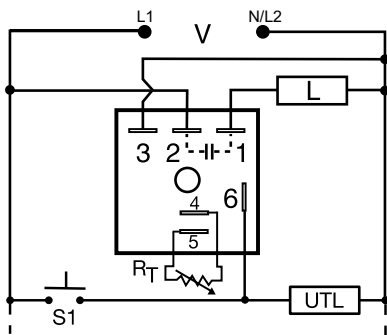
The THC/THS Series is a solid-state relay and timer combined into one compact, easy-to-use control. When mounted to a metal surface, the THC/THS Series may be used to directly control lamp or heater loads of up to 20A steady, 200A inrush. Its single shot function can perform dispensing and pulse shaping operations. The initiate switch can be a momentary or maintained type of switch. Time delays can be selected from 0.1 - 600 seconds in 4 ranges. The THC/THS Series is used for coin vending applications where fast initiate response is required.

### Operation (Single Shot)

Input voltage must be applied before and during timing. Upon momentary or maintained closure of the initiate switch (leading edge triggered), the output energizes 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 opens. Loss of input voltage resets the time delay and output.

## Wiring Diagram



V = Voltage  
S1 = Initiate Switch  
L = Timed Load  
UTL = Optional Untimed Load

RT is used when external adjustment is ordered.

## Features & Benefits

FEATURES	BENEFITS
<b>Analog circuitry</b>	Repeat accuracy +/- 2%, Factory calibration +/- 5%
<b>Compact, low cost design</b>	Allows flexibility for OEM applications and reduces labor and component costs
<b>High load currents up to 20A, 200A inrush</b>	Allows direct operation of motors, lamps, and heaters directly without a contactor
<b>Totally solid state and encapsulated</b>	No moving parts to arc and wear out over time and encapsulated to protect against shock, vibration, and humidity
<b>Metalized mounting surface</b>	Facilitates heat transfer in high current applications

## Ordering Information

MODEL	INPUT VOLTAGE	ADJUSTMENT	TIME DELAY	OUTPUT RATING
THC421C	120VAC	External	0.1 - 3s	20A
THS422B	120VAC	External	0.5 - 60s	10A
THS422C	120VAC	External	0.5 - 60s	20A

If you don't find the part you need, call us for a custom product 800-843-8848

## Accessories

- P1004-95, P1004-95-X Versa-Pot**  
Panel mountable, industrial potentiometer recommended for remote time delay adjustment.
- P0700-7 Versa-Knob**  
Designed for 0.25 in. (6.35 mm) shaft of Versa-Pot. Semi-gloss industrial black finish.
- P1015-13 (AWG 10/12), P1015-64 (AWG 14/16) Female Quick Connect**  
These 0.25 in. (6.35 mm) female terminals are constructed with an insulator barrel to provide strain relief.
- P1015-18 Quick Connect to Screw Adapter**  
Screw adapter terminal designed for use with all modules with 0.25 in. (6.35 mm) male quick connect terminals.

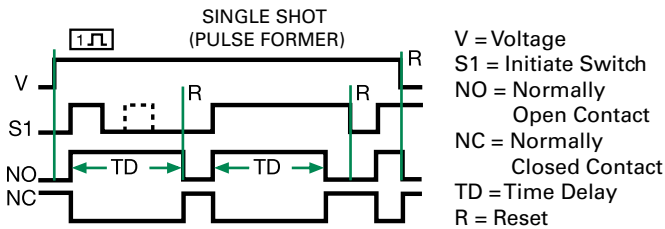
# THC / THS SERIES

## Selection Guide

R <sub>T</sub> Selection Chart				
Desired Time Delay*				R <sub>T</sub>
Seconds				
1	2	3	4	Kohms
0.1	0.5	2	5	0
0.3	6	20	60	10
0.6	12	38	120	20
0.9	18	55	180	30
1.2	24	73	240	40
1.5	30	90	300	50
1.8	36	108	360	60
2.1	42	126	420	70
2.4	48	144	480	80
2.7	54	162	540	90
3.0	60	180	600	100

\* When selecting an external R<sub>T</sub> add at least 20% for tolerance of unit and the R<sub>T</sub>.

## Function Diagram



## Specifications

<b>Time Delay Range</b>	0.1 - 600s in 4 adjustable ranges or fixed		
<b>Repeat Accuracy Tolerance (Factory Calibration)</b>	±2% or 20ms, whichever is greater		
<b>Reset Time</b>	≤ 150ms		
<b>Initiate Time</b>	≤ 20ms		
<b>Time Delay vs Temp. &amp; Voltage</b>	≤ ±10%		
<b>Input Voltage</b>	24, 120, or 230VAC		
<b>Tolerance</b>	±15%		
<b>AC Line Frequency</b>	50/60 Hz		
<b>Power Consumption</b>	≤ 2VA		
<b>Output Type</b>	Solid state		
<b>Form</b>	NO, closed during timing		
<b>Maximum Load Currents</b>	<b>Output</b>	<b>Steady State</b>	<b>Inrush**</b>
	A	6A	60A
	B	10A	100A
	C	20A	200A
<b>Minimum Load Current</b>	100mA		
<b>Voltage Drop</b>	≈ 2.5V at rated current		
<b>OFF State Leakage Current</b>	≈ 5mA @ 230VAC		
<b>Protection Circuitry</b>	Encapsulated		
<b>Dielectric Breakdown</b>	≥ 2000V RMS terminals to mounting surface		
<b>Insulation Resistance</b>	≥ 100 MΩ		
<b>Mechanical Mounting**</b>	Surface mount with one #10 (M5 x 0.8) screw		
<b>Dimensions</b>	<b>H</b> 50.8 mm (2.0"); <b>W</b> 50.8 mm (2.0"); <b>D</b> 38.4 mm (1.51")		
<b>Termination</b>	0.25 in. (6.35 mm) male quick connect terminals		
<b>Environmental Operating/Storage Temperature</b>	-20° to 60°C / -40° to 85°C		
<b>Humidity</b>	95% relative, non-condensing		
<b>Weight</b>	≈ 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 16ms.