



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

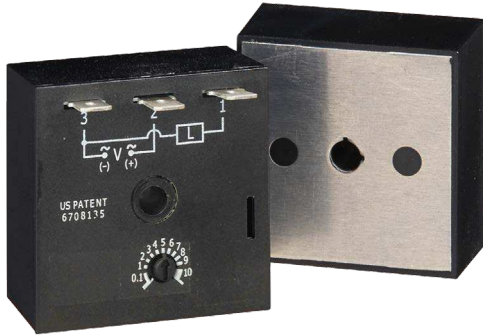
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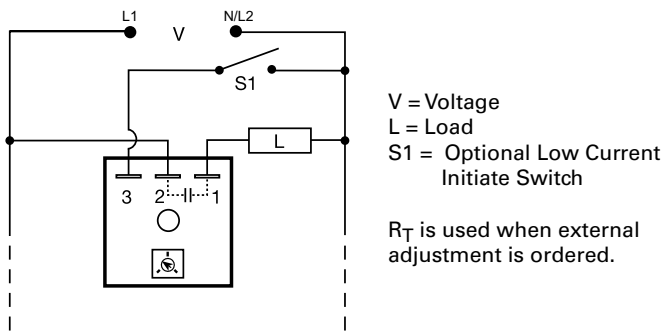
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# THD2 SERIES



## Wiring Diagram



## Description

The THD2 Series combines accurate timing circuitry with high power solid-state switching. It can switch motors, lamps, and heaters directly without a contactor. You can reduce labor, component cost, and increase reliability with these small, easy-to-use, Digi-Power timers.

### Operation (Interval)

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

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

## Features & Benefits

FEATURES	BENEFITS
<b>Microcontroller based</b>	Repeat Accuracy + / - 0.5%, Factory calibration + / - 1%
<b>High load currents up to 20A, 200A inrush</b>	Allows direct control of motors, lamps and heaters 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
<b>Compact, low cost design</b>	Allows flexibility for OEM applications and reduces labor and components costs

## 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.

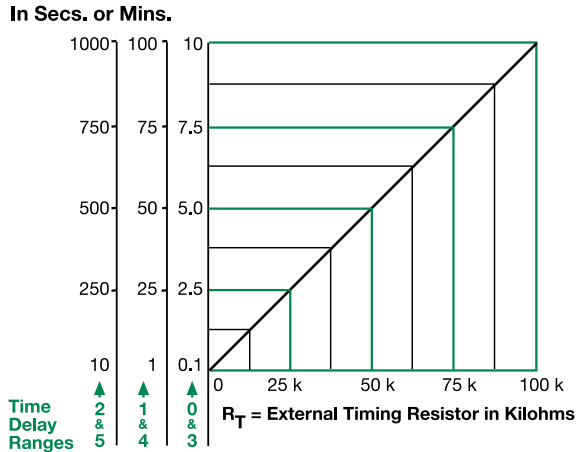
## Ordering Information

MODEL	OUTPUT RATING	INPUT VOLTAGE	ADJUSTMENT	TIME DELAY
THD2C420	20A	120VAC	External	0.1 - 10s
THD2C423	20A	120VAC	External	0.1 - 10m
THD2C433	20A	120VAC	Onboard	0.1 - 10m
THD2C620	20A	230VAC	External	0.1 - 10s
THD2C633	20A	230VAC	Onboard	0.1 - 10m

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

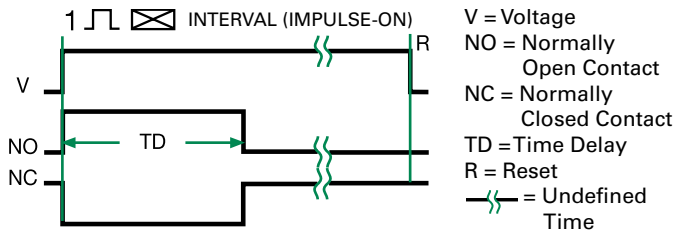
# THD2 SERIES

## External Resistance vs. Time Delay



**This chart applies to externally adjustable part numbers.**  
The time delay is adjustable over the time delay range selected by varying the resistance across the  $R_T$  terminals; as the resistance increases the tie delay increases.  
When selecting an external  $R_T$ , add the tolerances of the timer and the  $R_T$  for the full time range adjustment.  
**Examples:** 1 to 50 S adjustable time delay, select time delay range 1 and a 50 K ohm  $R_T$ . For 1 to 100 S use a 100 K ohm  $R_T$ .

## Function Diagram



## Specifications

<b>Time Delay Range</b>	0.1s - 1000m in 6 adjustable ranges or fixed		
<b>Repeat Accuracy Tolerance (Factory Calibration)</b>	±0.5% or 20ms, whichever is greater		
<b>Reset Time</b>	≤ ±1%		
<b>Time Delay vs Temp. &amp; Voltage</b>	≤ 150ms		
<b>Input Voltage</b>	≤ ±2%		
<b>Tolerance</b>	24, 120, or 230VAC		
<b>AC Line Frequency</b>	±20%		
<b>Output Type</b>	50/60 Hz		
<b>Form</b>	Solid state		
<b>Maximum Load Current</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</b>	Encapsulated		
<b>Circuitry</b>	≥ 2000V RMS terminals to mounting surface		
<b>Dielectric Breakdown</b>	≥ 100 MΩ		
<b>Insulation Resistance</b>	Surface mount with one #10 (M5 x 0.8) screw		
<b>Mechanical Mounting**</b>	<b>H</b> 50.8 mm (2"); <b>W</b> 50.8 mm (2");		
<b>Dimensions</b>	<b>D</b> 38.4 mm (1.51")		
<b>Termination</b>	0.25 in. (6.35 mm) male quick connect terminals		
<b>Environmental</b>			
<b>Operating/Storage Temperature</b>	-40° 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.