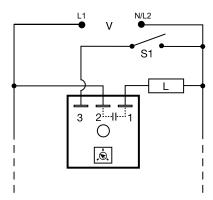
THD1B410.5S





Wiring Diagram



V = Voltage S1 = Optional Low Current Initiate Switch L = Load

R_T is used when external adjustment is ordered.

Description

The THD1B410.5S 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, timers.

Operation (Delay-on-Make)

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 energizes and remains energized until input voltage is removed.

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

Features & Benefits

| FEATURES | BENEFITS | | |
|---|--|--|--|
| Microcontroller based | Repeat Accuracy + / - 0.5%, Factory calibration + / - 1% | | |
| Compact, low cost design | Allows flexiblility for OEM applications and reduces labor and component costs | | |
| High load currents up to 20A, 200A inrush | Allows direct operation of motors, lamps, and heaters directly without a contactor | | |
| Totally solid state and encapsulated | No moving parts to arc and wear out over time and encapsulated to protect against shock, vibration, and humidity | | |
| Metalized mounting surface | Facilitates heat transfer for high current applications | | |

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 guick connect terminals.



THD1 SERIES

Specifications

Time Delay

Range 0.1s - 1000m in 6 adjustable ranges or fixed Repeat Accuracy ±0.5% or 20ms, whichever is greater

≤ ±2%

Tolerance (Factory Calibration) ≤ ±1% **Recycle Time** ≤ 150ms

Time Delay vs Temp.

& Voltage

Input

Voltage 24, 120, or 230VAC **Tolerance** ±20% Line Frequency 50/60 Hz **Power Consumption** ≤ 2VA

Output

Max

Type Solid state

Form NO, open during timing

| rimum Load Current | Output | Steady State | Inrush** |
|--------------------|--------|--------------|----------|
| | Α | 6A | 60A |
| | В | 10A | 100A |
| | С | 20A | 200A |

≈ 2.5V @ rated current

≥ 2000V RMS terminals to mounting surface

≅ 5mA @ 230VAC

Encapsulated

≥ 100 MΩ

100mA

Minimum Load Current Voltage Drop

OFF State Leakage Current

Protection

Circuitry Dielectric Breakdown

Insulation Resistance

Mechanical

Mounting ** Surface mount with one #10 (M5 x 0.8) screw

Dimensions H 50.8 mm (2.0"); **W** 50.8 mm (2.0");

D 38.4 mm (1.51") 0.25 in. (6.35 mm) male quick connect terminals

Termination Environmental

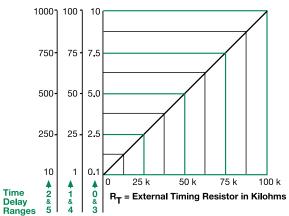
Operating/Storage

Temperature -40° to 60°C / -40° to 85°C Humidity 95% relative, non-condensing

Weight ≈ 3.9 oz (111 g)

External Resistance vs. Time Delay



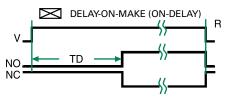


This chart applies to externally adjustable part numbers. The time delay is adjustable over the time delay range selected by varying the resistance across the R_T terminals; as the resistance increases the tie delay increases.

When selecting an external $\ensuremath{R_{T}}\xspace$, add the tolerances of the timer and the $\ensuremath{R_{T}}\xspace$ for the full time range adjustment.

Examples: 1 to 50 S adjustable time delay, select time delay range 1 and a 50 K ohn R_T . For 1 to 100 S use a 100 K ohm R_T .

Function Diagram



V = Voltage NO = Normally **Open Contact** NC = Normally**Closed Contact** TD = Time Delay

R = Reset <--- undefined ---Time

^{**}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.