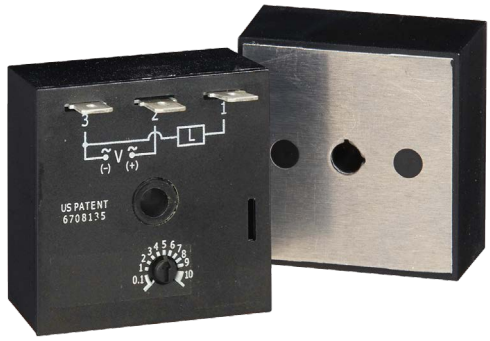
THD2 SERIES



Description

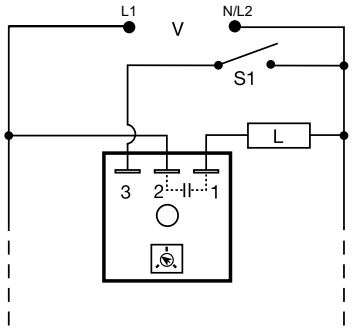
The THD2 Series combines accurate timing circuitry with high power solid-state switching. It can switch motors, lamps, and heaters directly without a contactor. You can reduce labor, component cost, and increase reliability with these small, easy-to-use, Digi-Power timers.

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.

Wiring Diagram



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

R_T is used when external adjustment is ordered.

Features & Benefits

FEATURES	BENEFITS
Microcontroller based	Repeat Accuracy + / - 0.5%, Factory calibration + / - 1%
High load currents up to 20A, 200A inrush	Allows direct control of motors, lamps and heaters 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 in high current applications
Compact, low cost design	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

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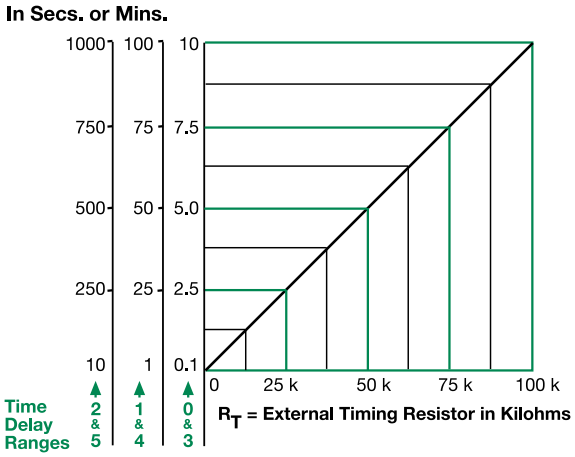
THD2 SERIES

External Resistance vs. Time Delay

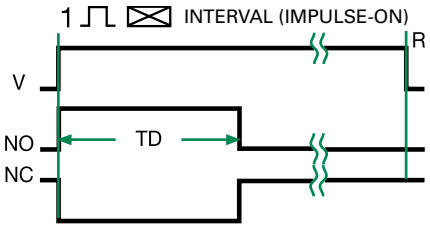


This chart applies to externally adjustable part numbers.
The time delay is adjustable over the time delay range selected by varying the resistance across the R_T terminals; as the resistance increases the tie delay increases.

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 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

Specifications

Time Delay

Range	0.1s - 1000m in 6 adjustable ranges or fixed
Repeat Accuracy	±0.5% or 20ms, whichever is greater
Tolerance (Factory Calibration)	≤ ±1%
Reset Time	≤ 150ms
Time Delay vs Temp. & Voltage	≤ ±2%

Input

Voltage	24, 120, or 230VAC
Tolerance	±20%
AC Line Frequency	50/60 Hz

Output

Type	Solid state
Form	NO, closed during timing

Maximum Load Current

Output	Steady State	Inrush**
A	6A	60A
B	10A	100A
C	20A	200A

Minimum Load Current	100mA
Voltage Drop	≅ 2.5V at rated current
OFF State Leakage Current	≅ 5mA @ 230VAC

Protection

Circuitry	Encapsulated
Dielectric Breakdown	≥ 2000V RMS terminals to mounting surface
Insulation Resistance	≥ 100 MΩ

Mechanical

**Mounting ** **	Surface mount with one #10 (M5 x 0.8) screw
Dimensions	**H** 50.8 mm (2"); **W** 50.8 mm (2"); **D** 38.4 mm (1.51")
Termination	0.25 in. (6.35 mm) male quick connect terminals

Environmental

Operating/Storage Temperature	-40° to 60°C / -40° to 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 16ms.