

Delay On Make - Normally Closed THD4 Digi-Power Timing Module



- Load Energized Prior To and During Timing
- High Load Current Capacity up to 20 A, 200 A Inrush
- Digital Integrated Circuitry
- +/-0.5% Repeat Accuracy
- Totally Solid State and Encapsulated
- Fixed or Adjustable Delays From 0.1 s ... 16 h

Description

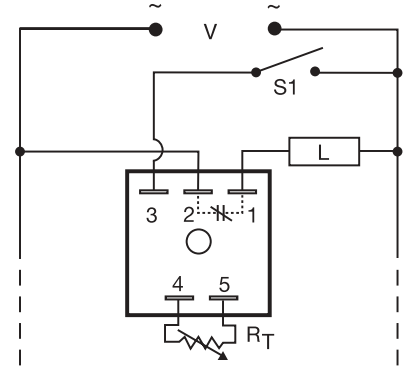
The THD4 utilizes proven C/MOS circuitry and a high power solid state output. The metallized mounting surface allows a metal panel to dissipate heat rather than adding an expensive heat sink. The THD4 offers substantial performance, reliability, and cost advantages.

Operation

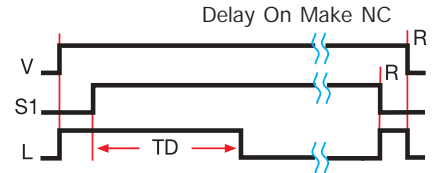
Upon application of input voltage, the load is energized immediately. When the initiate switch is closed, the time delay begins. At the end of the time delay, the load is de-energized.

Reset: When the initiate switch is reopened, the load is again energized and the time delay is reset. Removing input voltage resets the time delay.

Approvals:



R_T is used when external adjustment is ordered.



V = Voltage S1 = Initiate Switch L = Load
TD = Time Delay R = Reset
— = Undefined time

Ordering Table

THD4 Series	X Output Rating	X Input	X Adjustment	X Time Delay *
	A - 6 A	2 - 24 V AC	1 - Fixed	0 - 0.1 ... 10 s
	B - 10 A	4 - 120 V AC	2 - External Adjust	1 - 1.0 ... 100 s
	C - 20 A	6 - 230 V AC		2 - 10 ... 1000 s
				3 - 0.1 ... 10 m
				4 - 1 ... 100 m
				5 - 10 ... 1000 m

Example P/N: THD4A620 Fixed - THD4A4160M

*If Fixed Delay is selected, insert delay [0.1...1000] followed by (S) secs. or (M) mins.

Desired Time Delay*						R _T Megohm
Seconds			Minutes			
0	1	2	3	4	5	
0.1	1	10	0.1	1	10	0.0
1	10	100	1	10	100	0.5
2	20	200	2	20	200	1.0
3	30	300	3	30	300	1.5
4	40	400	4	40	400	2.0
5	50	500	5	50	500	2.5
6	60	600	6	60	600	3.0
7	70	700	7	70	700	3.5
8	80	800	8	80	800	4.0
9	90	900	9	90	900	4.5
10	100	1000	10	100	1000	5.0

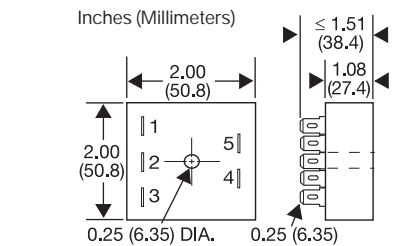
* When selecting an external R_T add at least 11% for tolerance of unit and the R_T.

Technical Data

Time Delay													
Type	Digital integrated circuitry												
Range	0.1 s ... 1000 m in 6 adjustable ranges or fixed												
Linearity	≤ +/-2% for 10% to 100% of range												
Repeat Accuracy	+/-0.5%												
Tolerance (Factory Calibration)	+/-1%												
Reset Time	≤150 ms												
Recycle Time	150 ms												
Time Delay vs. Temperature & Voltage	≤ +/-2%												
Input													
Voltage	24, 120, or 230 V AC												
Tolerance	+/-20%												
Line Frequency	50 ... 60 Hz												
Output													
Type	Solid state												
Form	Normally closed												
Rating	<table border="1"> <thead> <tr> <th>Output</th> <th>Steady State</th> <th>Inrush*</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>6 A</td> <td>60 A</td> </tr> <tr> <td>B</td> <td>10 A</td> <td>100 A</td> </tr> <tr> <td>C</td> <td>20 A</td> <td>200 A</td> </tr> </tbody> </table>	Output	Steady State	Inrush*	A	6 A	60 A	B	10 A	100 A	C	20 A	200 A
Output	Steady State	Inrush*											
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												
Leakage	8.6 mA at 230 V AC; 4.5 mA at 120 V AC; 0.9 mA at 24 V AC												
Protection													
Circuitry	Encapsulated												
Dielectric Breakdown	≥ 2000 V RMS terminals to mounting surface												
Insulation Resistance	≥ 100 MΩ												
Mechanical													
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	-40°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
0 - 0.1 ... 10 s	VTP5C
1 - 1 ... 100 s	VTP5G
2 - 10 ... 1000 s	VTP5K
3 - 0.1 ... 10 m	VTP5N
4 - 1 ... 100 m	VTP5P
5 - 10 ... 1000 m	VTP5R

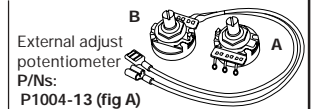


Accessories

Female quick connect



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



External adjust potentiometer
P/Ns: P1004-13 (fig A) P1004-13-X (fig B)

Quick connect to screw adaptor
P/N: P1015-18



Versa-knob
P/N: P0700-7



Plug-on adjustment module
P/N: VTP(X)(X)



See accessory pages at the end of this section.