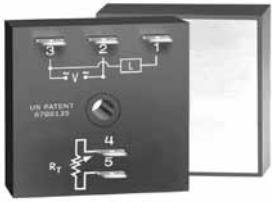


# Delay On Make TH1 Series Power Timing Module



- High Current Load Capacity up to 20 A with 200 A Inrush
- Solid State Switching -- No Contact Wear or Arcing
- Encapsulated
- Fixed or Adjustable Time Delays From 0.1 ... 600 s in
- +/- 2% Repeat Accuracy
- +/- 5% Factory Calibration
- Metallized Mounting Surface for Efficient Heat Transfer

Approvals:



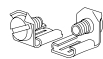
### Accessories



External adjust potentiometer  
P/Ns:  
P1004-95 (fig A)  
P1004-95-X (fig B)



Female quick connect P/Ns:  
P1015-64 (AWG 14/16)  
P1015-13 (AWG 10/12)



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



Versa-knob  
P/N: P0700-7

See accessory pages for specifications.

### Description

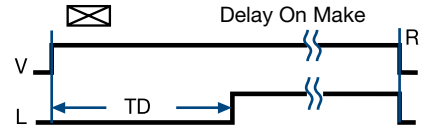
The TH1 Series is a solid state relay and timer combined into one compact, easy-to-use control. This highly reliable device eliminates the need for a separate solid state relay. When mounted to a metal surface, it can switch load currents up to 20 A steady state, and 200 A inrush.

### Operation

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.

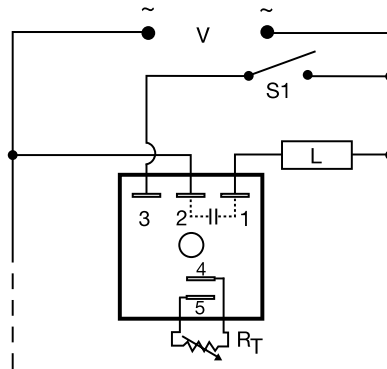
**Reset:** Removing input voltage resets the time delay and output.

### Function



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

### Connection



R<sub>T</sub> is used when external adjustment is ordered.  
Dashed lines are internal connections.  
S1 is an optional low current initiate switch.

### Available Models-

TH1A413	TH1A4160	TH1A424
TH1A621	TH1B633	TH1C415
TH1C621		

**Don't see what you need? Call us for a minimum quantity and price quote!**

### Ordering Table

<b>TH1 Series</b>	<b>X Output Rating</b>	<b>X Input</b>	<b>X Adjustment</b>	<b>X Time Delay *</b>
	-A - 6 A	-2 - 24 V AC	-1 - Fixed	-1 - 0.1 ... 3 s
	-B - 10 A	-4 - 120 V AC	-2 - External Adjust	-2 - 0.5 ... 60 s
	-C - 20 A	-6 - 230 V AC	-3 - Onboard Adjust	-3 - 2 ... 180 s
				-4 - 5 ... 600 s

**Example P/N:** TH1B223 Fixed – TH1C410.1

\*If fixed delay is selected, insert delay [0.1 ... 600] in seconds.

# Delay On Make

## TH1 Series

### Power Timing Module

Dedicated  
timers

#### Technical Data

<b>Time Delay</b> Range Repeat Accuracy Tolerance (Factory Calibration) Time Delay vs. Temperature and Voltage Recycle Time	0.1 ... 600 s in 4 adjustable ranges or fixed +/-2% or 20 ms, whichever is greater ≤ +/- 5% ≤ +/-10% ≤ 150 ms	
<b>Input</b> Voltage Tolerance Line Frequency Power Consumption	24, 120, or 230 V AC +/-15% 50 ... 60 Hz ≤ 2 VA	
<b>Output</b> Type Form Maximum Load Currents	Solid state Normally Open, open during timing <b>Output      Steady State      Inrush**</b> A                  6 A                  60 A B                  10 A                100 A C                  20 A                200 A	**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.
Minimum Load Current Voltage Drop OFF State Leakage Current	100 mA ≅ 2.5 V at rated current ≅ 5 mA at 230 V AC	
<b>Protection</b> Circuitry Dielectric Breakdown Insulation Resistance	Encapsulated ≥ 2000 V RMS terminals to mounting surface ≥ 100 MΩ	
<b>Mechanical</b> Mounting ** Package Termination	Surface mount with one #10 (M5 x 0.8) screw 2 x 2 x 1.51 in. (50.8 x 50.8 x 38.4 mm) 0.25 in. (6.35 mm) male quick connect terminals	
<b>Environmental</b> Operating Temperature Storage Temperature Humidity Weight	-20°C ... +60°C -40°C ... +85°C 95% relative, non-condensing ≅ 3.9 oz (111 g)	

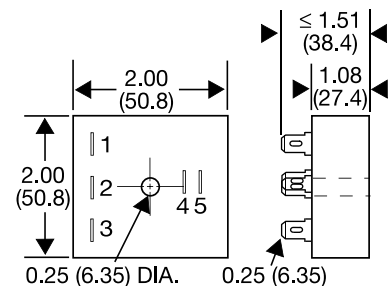
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R <sub>T</sub> Selection Chart				
Desired Time Delay*				R <sub>T</sub>
Seconds				
1	2	3	4	Kohms
0.1	0.5	2	5	0
0.3	6	20	60	10
0.6	12	38	120	20
0.9	18	55	180	30
1.2	24	73	240	40
1.5	30	90	300	50
1.8	36	108	360	60
2.1	42	126	420	70
2.4	48	144	480	80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

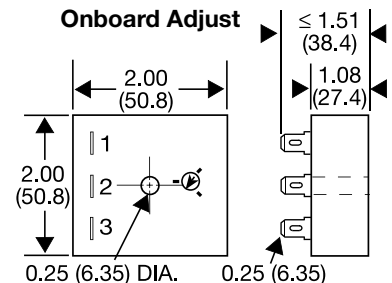
\* When selecting an external R<sub>T</sub> add at least 15% for tolerance of unit and the R<sub>T</sub>.

#### Mechanical View

##### Fixed & External Adjust



##### Onboard Adjust



Inches (Millimeters)

TH1Gen 09.10