

Delay On Break (Release) THDB Digi-Power Timing Module



Discontinued Design
For more information contact
Technical Service at
(888)385-1221

- High Load Current Capacity up to 20 A, 200 A Inrush
- Digital Integrated Circuitry
- +/-0.5% Repeat Accuracy
- +/-2% Stability Over Voltage and Temperature
- Totally Solid State & Encapsulated
- Fixed or Adjustable Delays From 0.1 s ... 1000 m

Description

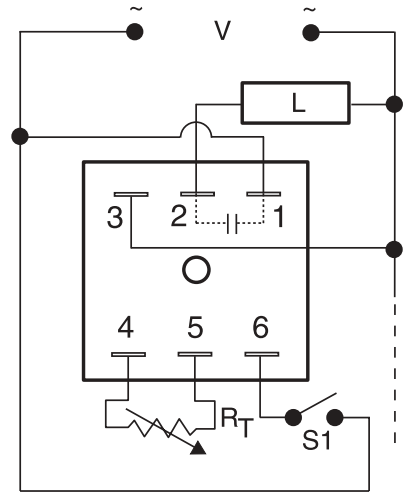
C/MOS digital circuitry and a high current solid state output are combined to provide high reliability and performance in a single package. Drive high current loads up to 20 A directly eliminating the need for an additional contactor or solid state relay.

Operation

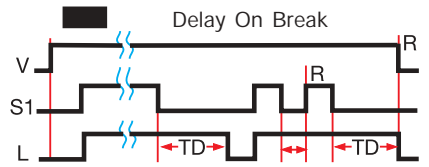
Input voltage must be applied to the input before and during timing. Upon closure of the initiate switch, the output is energized. The time delay begins when the initiate switch is opened. The output remains energized during timing. At the end of the time delay, the output is de-energized. The output will energize if the initiate switch is closed when input voltage is applied.

Reset: Reclosing the initiate switch during timing resets the time delay. Loss of input voltage resets the time delay and output.

■ Approvals:



R_T is used when external adjustment is ordered.



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

Ordering Table

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

Example P/N: **THDB420C**
Fixed - **THDB4120SA**

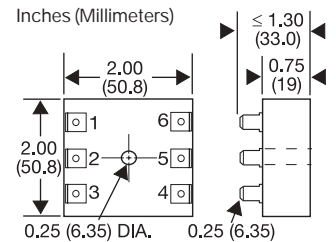
*If Fixed Delay is selected, insert delay [0.1...1000] followed by (S) secs. or (M) mins.

Technical Data

Time Delay													
Type	Digital integrated circuitry												
Range	0.1 s ... 1000 m in 6 adjustable ranges or fixed												
Repeat Accuracy	+/-0.5% under fixed conditions												
Tolerance (Factory Calibration)	+/-1%												
Reset Time	≤150 ms												
Recycle Time	≤150 ms												
Initiate Time	50 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 Open, closed before & during timing												
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											
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												
Minimum Load Current	100 mA												
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	≅ 2.9 oz (82 g)												

R _T Selection Chart						
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 .

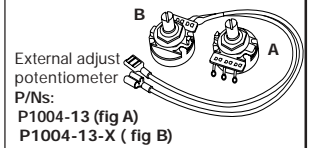


Accessories

Female quick connect



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

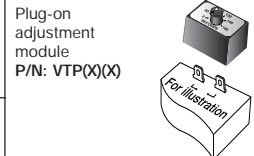


P/Ns: P1004-13 (fig A)
P1004-13-X (fig B)

Quick connect to screw adaptor



P/N: P1015-18



P/N: VTP(X)(X)

Versa-knob



See accessory pages at the end of this section.

**Must be bolted to a metal surface using the included heat sink compound. The maximum 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