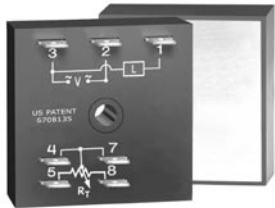


Percentage Timing PTHF Series Power Timing Module



5

- ON/OFF Recycling Percentage Control
- Controls Loads up to 20 A, 200 A Inrush
- Fixed Cycle Period 10 s... 1000 m
- +/-0.5% Repeat Accuracy
- +/-5% Factory Calibration
- Totally Solid State & Encapsulated
- Onboard or External Adjustment 1 to 99% ON

Approvals:

Accessories



External adjust potentiometer
P/N: **P1004-95**



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

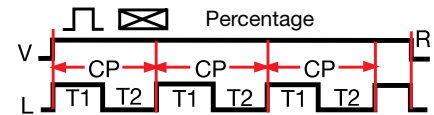
The PTHF Series can be used for a variety of applications from chemical metering, to temperature regulating, to energy management. The infinite adjustability from 1 to 99% provides accurate percentage ON control over a wide factory fixed cycle period. When mounted on a metal surface, it can be used to drive solenoids, contactors, relays, or lamps, up to 20 Amps steady, 200 Amps inrush. PTHF is the suggested replacement for the PT Series.

Operation

Upon application of input voltage, the output energizes and the T1 ON time begins. At the end of the ON time, the output de-energizes and the T2 OFF time begins. At the end of the OFF time, the output energizes and the cycle repeats as long as input voltage is applied. Increasing the ON time decreases the OFF time. The total cycle period is equal to the ON time plus the OFF time. The total cycle period is factory fixed. ON time range is 1 to 99 percent of cycle period.

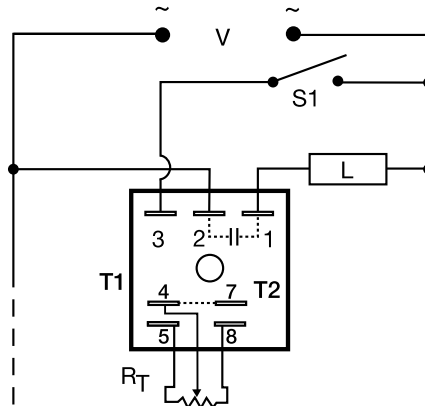
Reset: Removing input voltage resets the output and time delays, and returns the sequence to the T1 ON time.

Function



V = Voltage L = Load CP = Cycle Period
R = Reset T1 = ON Time T2 = OFF Time

Connection



Dashed lines are internal connections.

$R_T = 100\text{ K}\Omega$ S1 = Optional Low Current Initiate Switch

R_T is used when external adjustment is ordered

T1 = ON Time T2 = OFF Time

Ordering Table

PTHF Series	X Input	X Fixed Cycle Period	X Output Rating	X Adjustment
	-2 - 24 V AC	Specify 10 ... 1000 as the total fixed cycle period in seconds.	-A - 6	-K- Onboard Adjustment
	-4 - 120 V AC		-B - 10	-Blank - External Adjustment
	-6 - 230 V AC		-C - 20	
			-D - 1	

Note: Part number for fixed cycle period in minutes insert (M) suffix.

Example P/N:

- PTHF210A** = 24 V AC; Cycle Period 10 Seconds; 6 Amps; External Adjustment
- PTHF410MA** = 120 V AC; Cycle Period 10 Minutes; 6 Amps; External Adjustment
- PTHF615MDK** = 230 V AC; Cycle Period 15 Minutes; 1 Amp; Onboard Adjustment

Percentage Timing

PTHF Series

Power Timing Module



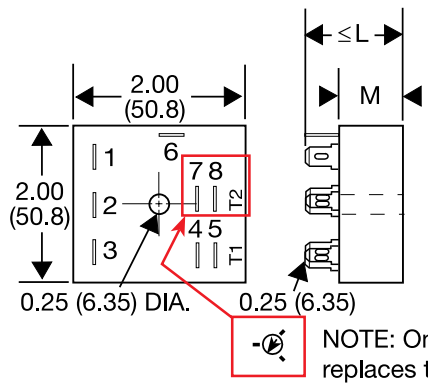
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Technical Data

Time Delay																					
Type	External or Onboard Knob																				
Range / External Adjustment Resistance	Adjustable from 1 ... 99%; / $R_T = 100\text{ K}\Omega$																				
Cycle Period	Fixed from 10 s ... 1000 m																				
Repeat Accuracy	+/-0.5% or 20 ms, whichever is greater																				
Cycle Period Tolerance (Factory Calibration)	$\leq \pm 5\%$																				
Reset Time	$\leq 150\text{ ms}$																				
Time Delay vs. Temperature & Voltage	$\leq \pm 10\%$																				
Input																					
Voltage	24, 120, or 230 V AC																				
Tolerance	+/-20%																				
Line Frequency	50 ... 60 Hz																				
Power Consumption	$\leq 2\text{ VA}$																				
Output																					
Type	Solid state																				
Maximum Load Currents	<table border="1"> <thead> <tr> <th>Output</th> <th>Steady State</th> <th>Inrush*</th> <th>Minimum</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>6 A</td> <td>60 A</td> <td>100 mA</td> </tr> <tr> <td>B</td> <td>10 A</td> <td>100 A</td> <td>100 mA</td> </tr> <tr> <td>C</td> <td>20 A</td> <td>200 A</td> <td>100 mA</td> </tr> <tr> <td>D</td> <td>1 A</td> <td>10 A</td> <td>--</td> </tr> </tbody> </table>	Output	Steady State	Inrush*	Minimum	A	6 A	60 A	100 mA	B	10 A	100 A	100 mA	C	20 A	200 A	100 mA	D	1 A	10 A	--
Output	Steady State	Inrush*	Minimum																		
A	6 A	60 A	100 mA																		
B	10 A	100 A	100 mA																		
C	20 A	200 A	100 mA																		
D	1 A	10 A	--																		
Voltage Drop	$\cong 2.5\text{ V}$ at rated current																				
OFF State Leakage Current	$\cong 5\text{ mA}$ at 230 V AC																				
Protection																					
Circuitry	Encapsulated																				
Dielectric Breakdown	$\geq 2000\text{ V RMS}$ terminals to mounting surface																				
Insulation Resistance	$\geq 100\text{ M}\Omega$																				
Mechanical																					
Mounting *	Surface mount with one #10 (M5 x 0.8) screw																				
Termination	0.25 in. (6.35 mm) male quick connect terminals																				
Environmental																					
Operating Temperature	-40°C ... +60°C																				
Storage Temperature	-40°C ... +85°C																				
Humidity	95% relative, non-condensing																				
Weight	1 A unit: $\cong 2.4\text{ oz}$ (68 g); 6, 10, 20 A units: $\cong 3.9\text{ oz}$ (111 g)																				

*Units rated $\geq 6\text{ A}$ 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.

Mechanical View



	1A	6A+
L	1.21 (30.7)	1.51 (38.4)
M	0.75 (19.1)	1.08 (27.4)

Inches (Millimeters)