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# HTRS SERIES

# DIGITAL ENCAPSULATED REPEAT CYCLE TIME DELAY MODULE



## FEATURES

- C/MOS Digital Circuitry
- Fixed, Independent Local or External Timing Adjustments
- Time Delays From 0.05 Seconds To 1000 Minutes
- Fully Solid State And Encapsulated
- No First Cycle Effect
- 0.5% Repeat Accuracy
- Low Cost Mounting And Termination
- Output Current Ratings To 25 Amperes Steady State, 250 Amperes Inrush

## SPECIFICATIONS

### 1. Time Delay.

- 1.1 Type: C/MOS digital circuitry
- 1.2 Range: From 0.05 seconds to 1000 minutes.  
Fixed delays available
- 1.3 Repeat accuracy:  $\pm 0.5\%$  under fixed conditions
- 1.4 Setting accuracy:  $\pm 10\%$
- 1.5 Reset time: 100 milliseconds maximum
- 1.6 Recycle time: 150 milliseconds
- 1.7 Time delay vs. voltage and temperature:  $\pm 2\%$
- 1.8 External resistance (remote adjust only): Max. delays = 1 megohm for ranges 1 - 6H, 3 megohms for range 7

### 2. Input.

- 2.1 Operating voltage: 24, 120 & 230 VAC
- 2.2 Tolerance:  $\pm 20\%$  of nominal
- 2.3 Frequency: 50 - 60 Hertz

### 3. Output.

- 3.1 Type: Solid state
- 3.2 Form: SPST
- 3.3 Ratings:
  - A-6 amp steady state, (60 amp inrush, 200 mA. min.)\*
  - B-10 amp steady state, (100 amp inrush, 225 mA. min.)\*
  - C-15 amp steady state, (150 amp inrush, 250 mA. min.)\*
  - D-2.5 amp steady state, (50 amp inrush, 150 mA. min.)
  - H-25 amp steady state, (250 amp inrush, 500 mA. min.)■
  - \* Maximum plate temperature: 85°C
  - Maximum plate temperature: 60°C
- 3.4 Life: 100,000,000 operations minimum under full load

### 4. Protection.

- 4.1 Transient:  $\pm 1500$  volts for 150 microseconds
- 4.2 Dielectric breakdown: 1500 volts RMS minimum

### 5. Mechanical.

- 5.1 Mounting: One #8 or #10 screw
- 5.2 Termination: 1/4" quick connect terminals
- 5.3 Style: Surface mount / encapsulated with heat sink surface  
\*(see dimensional drawing)

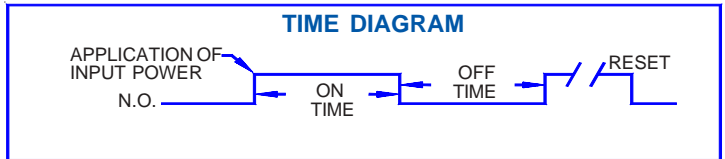
### 6. Environmental.

- 6.1 Operating temperature: -20°C to +80°C
- 6.2 Storage temperature: -30°C to +85°C
- 6.3 Humidity: 95% relative non-condensing

## MODE OF OPERATION

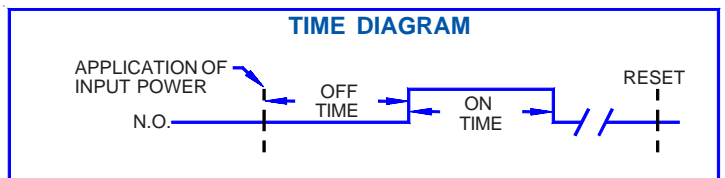
### On/Off Recycle

Upon application of power to the input terminals, the **ON** delay begins and the output contact transfers. Upon completion of the **ON** delay, the output contact reverts back to its original position and the **OFF** delay begins. Upon completion of the **OFF** delay, the output contact again transfer and the cycle repeats. Reset is accomplished by removal of input power.

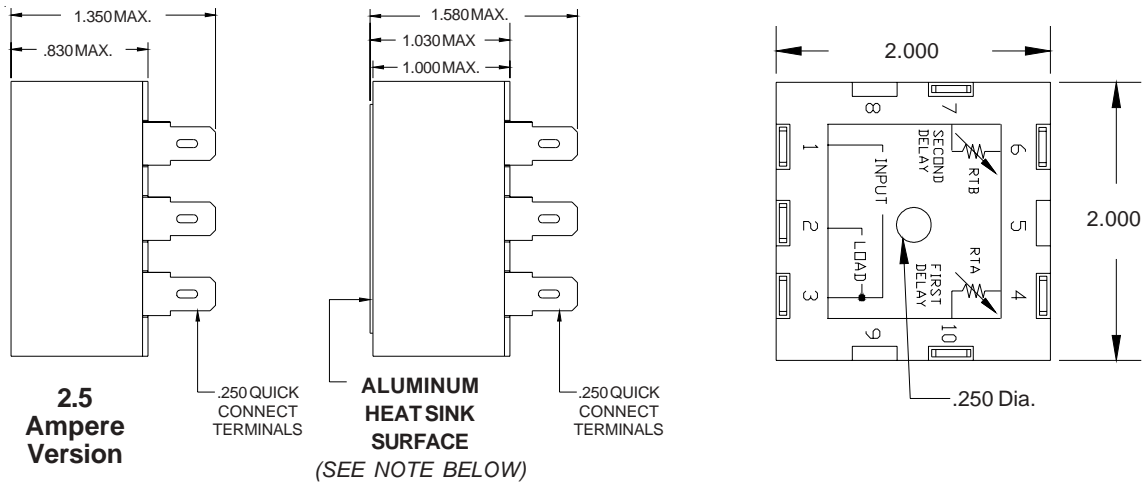


### Off/On Recycle

Upon application of power to the input terminals, the **OFF** delay begins. Upon completion of the **OFF** delay, the output contact transfers and the **ON** delay begins. Upon completion of the **ON** delay, the output contact reverts back to its original position and the cycle repeats. Reset is accomplished by removal of input power.



# DIMENSIONS

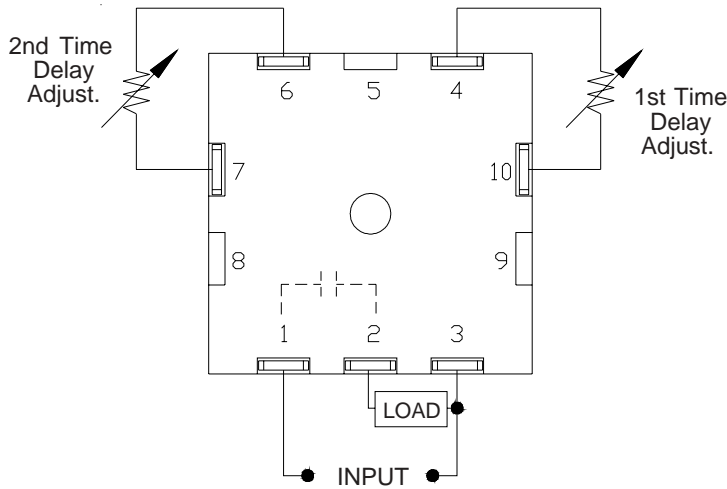


**6, 10, 15 & 25 Ampere Versions**

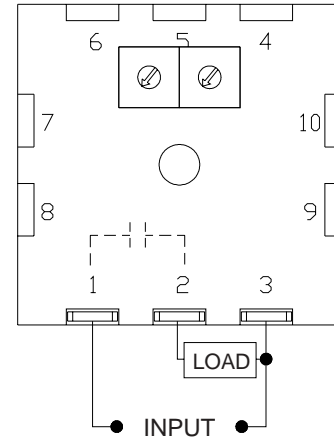
**NOTE:**

For maximum current rating the unit's metal backing must be installed against an aluminum surface of at least 1/16" thickness. A suitable thermal compound should be applied to the unit's metal surface prior to mounting. Refer to Application Note #AN1001 HEATSINKING HIGH CURRENT SOLID STATE CONTROLS

# CONNECTION DIAGRAMS



External Adjustments Shown



Local Adjustments Shown

# ORDERING INFORMATION

SERIES	INPUT VOLTAGE	OUTPUT RATING	ADJUSTMENT	CYCLE	1ST TIME RANGE	2ND TIME RANGE
<b>HTRS</b>	4 - 24 VAC 5 - 120 VAC 6 - 230 VAC	A - 6 Amp B - 10 Amp C - 15 Amp D - 2.5 Amp H - 25 Amp	<b>0</b> - Both Delays Local Adj. <b>0A</b> - 1st Delay Fixed 2nd Delay Local Adj. <b>0B</b> - 1st Delay Local Adj. 2nd Delay Fixed <b>0C</b> - 1st Delay Ext. Adj. 2nd Delay Local Adj. <b>0D</b> - 1st Delay Local Adj. 2nd Delay Ext. Adj. <b>1</b> - Both Delays Factory Fixed <b>1A</b> - 1st Delay Fixed 2nd Delay Ext. Adj. <b>1B</b> - 1st Delay Ext. Adj. 2nd Delay Fixed <b>2</b> - Both Delays Ext. Adj.	1 - On Time First 2 - Off Time First	<b>See Time Delay Range Chart</b>	