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# TRR & TDIR SERIES DIGITAL ENCAPSULATED TIME DELAY RELAY MODULE

## FEATURES

- C/MOS Microcontroller Circuitry
- Independent Local Timing Adjustments
- Time Delays to 1000 Minutes
- Encapsulated to Withstand Harshest Environments
- No First Cycle Effect
- 0.5% Repeat Accuracy
- Three Modes of Operation
- Low Cost Mounting and Termination
- SPDT Relay Output Rated 10 Amps, 1/4hp @ 125 VAC
- UL/cUL Recognized

## SPECIFICATIONS

### 1. Time Delay

- 1.1 Type: C/MOS Microcontroller 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:  $\pm 2\%$

### 2. Input

- 2.1 Operating Voltage: 24, 120, & 230 VAC, 12 & 24/28 VDC
- 2.2 Tolerance:  $\pm 20\%$  of Nominal
- 2.3 Frequency: 50 - 60 Hertz

### 3. Output

- 3.1 Type: Electromechanical Relay
- 3.2 Form: SPDT
- 3.3 Rating: 10 Amperes, 1/4hp N.O. @ 125/240 VAC  
5 Amperes, 1/4hp N.C. @ 125/240 VAC
- 3.4 Life: Electrical - Full Load - 100,000 Operations  
Mechanical - 10,000,000 Operations

### 4. Protection

- 4.1 Transient:  $\pm 1500$  Volts for 150 Microseconds
- 4.2 Polarity: DC Units are Reverse Polarity Protected
- 4.3 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

### 6. Environmental

- 6.1 Operating Temperature:  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
- 6.2 Storage Temperature:  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
- 6.3 Humidity: 95% Relative Non-Condensing

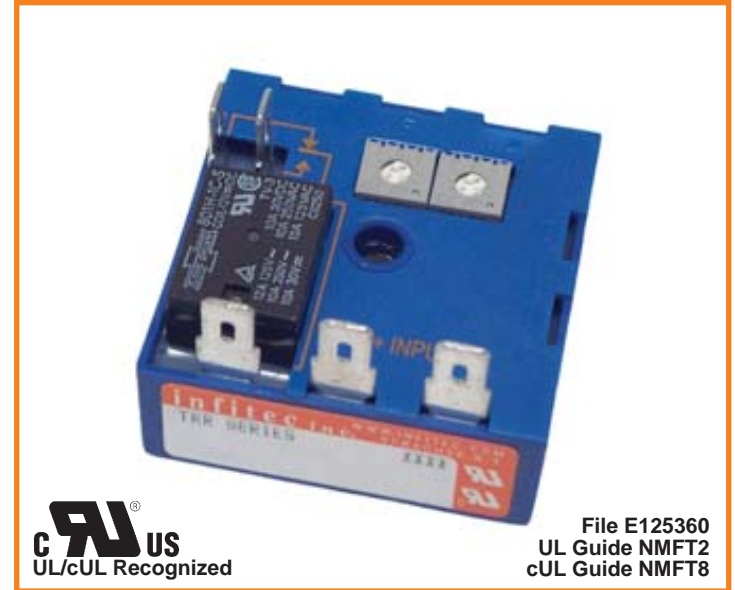
## MODE OF OPERATION

### 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

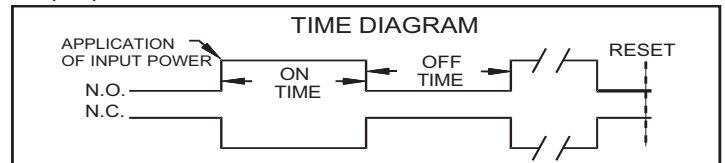
## SERIES

### TRR



### ON/OFF RECYCLE CONT'D

transfers and the cycle repeats. Reset is accomplished by removal of input power.



### OFF/OFF RECYCLE

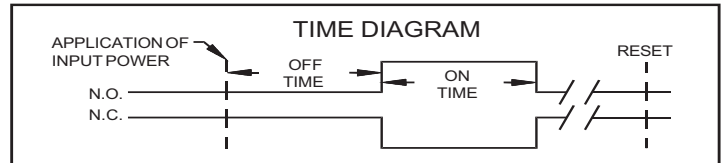
The inverse of ON/OFF Recycling.

### TRR

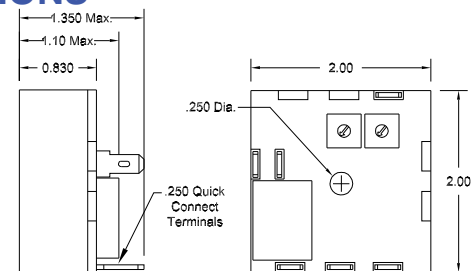
### DELAYED INTERVAL

### TDIR

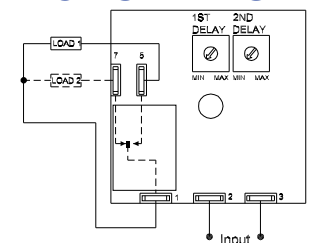
Upon application of power to the input terminals, the OFF delay begins. Upon completion of the OFF delay, the output contact transfers and the ON delay begins. Upon completion of the ON delay, the output contact reverts to its original position. Reset is accomplished by removal of input power.



## DIMENSIONS



## CONNECTION DIAGRAM



LOAD 2 = AUXILIARY LOAD (off when Load 1 is on)

## ORDERING INFORMATION

SERIES	INPUT VOLTAGE	ADJUSTMENT	CYCLE	1ST DELAY	2ND DELAY
TRR	1 - 12 VDC	0 - Both Delays Local Adj.	<b>TRR ONLY</b>		
TDIR	2 - 24/28 VDC	0A - 1st Delay Fixed	1 - On Time First	See Time Delay Range Chart	See Time Delay Range Chart
	4 - 24 VAC	2nd Delay Local	2 - Off Time First		
	5 - 120 VAC	0B - 1st Delay Local			
	6 - 230 VAC	2nd Delay Fixed			
		1 - Both Delays Factory Fixed			