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# GRS SERIES OPEN BOARD, RECYCLING SOLID STATE TIMER

## FEATURES

- C/MOS Digital Circuitry
- Independent Timing Adjustments
- No First Cycle Effect
- 0.1% Repeat Accuracy
- Rocker Type Dip Switches For Positive Switch Settings
- Fully Solid State Construction
- UL/cUL Pending

## SPECIFICATIONS

### 1. Time Delay.

- 1.1 Type: C/MOS Digital Circuitry
- 1.2 Range: Five ranges available. Delay time is set via a 10 position, binary dip switch. (see ordering information)
- 1.3 Repeat accuracy:  $\pm 0.1\%$  under fixed conditions
- 1.4 Setting accuracy:  $\pm 1\%$
- 1.5 Reset time: 50 milliseconds maximum
- 1.6 Recycle time: 100 milliseconds during
- 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: Solid state
- 3.2 Form: SPST, N.O.
- 3.3 Rating: 1 ampere maximum at 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 Polarity: DC units are reverse polarity protected
- 4.3 Dielectric breakdown: 1500 volts RMS minimum

### 5. Mechanical.

- 5.1 Mounting: #6 screw clearance (6 places)
- 5.2 Termination: 1/4" quick connect terminals
- 5.3 Style: Open board/surface mount, conformal coated

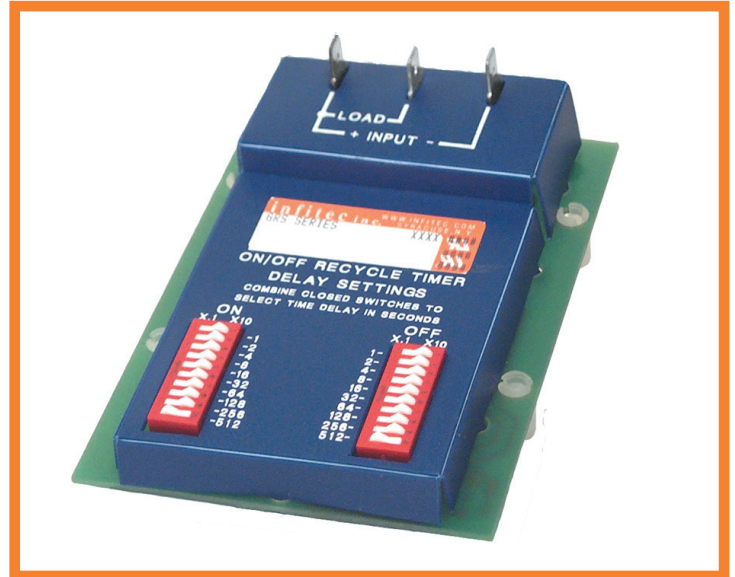
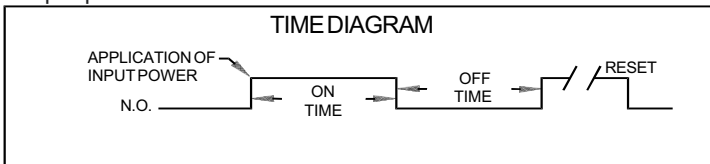
### 6. Environmental.

- 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

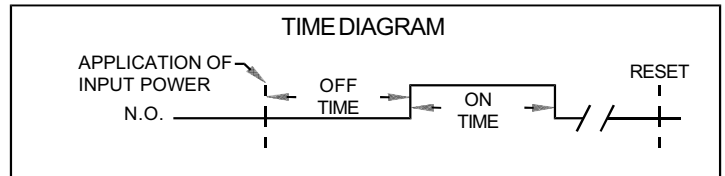
### ON / OFF RECYCLE

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

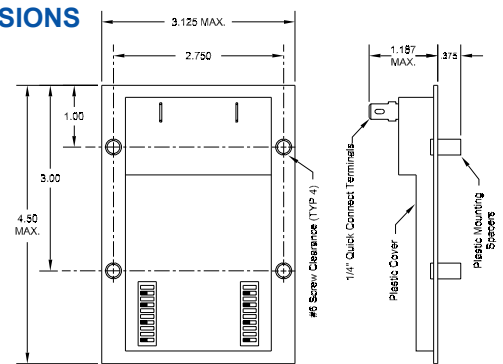


### OFF/ON RECYCLE

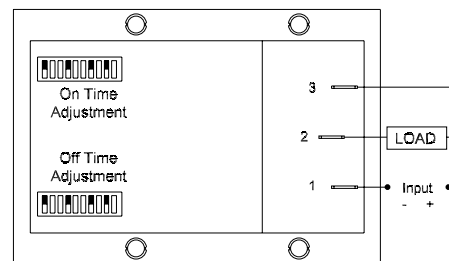
Upon application of power to the input terminals, the **OFF** delay begins. Upon completion of the **OFF** delay, the output contact transfers and the **ON** delay begins. Upon completion of the **ON** delay, the output contact reverts to its original position and the cycle repeats. Reset is accomplished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



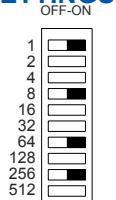
### DIMENSIONS



### CONNECTION DIAGRAM



### DELAY SETTINGS



STYLE 2  
 Ex. 329 Sec.  
 (example)

## ORDERING INFORMATION

| SERIES | INPUT VOLTAGE | CYCLE                 | 1ST TIME RANGE          | 2ND TIME RANGE          |
|--------|---------------|-----------------------|-------------------------|-------------------------|
| GRS    | 1 - 12 VDC    | 1 - On Time<br>First  | 1 - 0.1 - 102.3 Seconds | 1 - 0.1 - 102.3 Seconds |
|        | 2 - 24/28 VDC |                       | 2 - 1 - 1023 Seconds    | 2 - 1 - 1023 Seconds    |
|        | 4 - 24 VAC    |                       | 3 - 10 - 10230 Seconds  | 3 - 10 - 10230 Seconds  |
|        | 5 - 120 VAC   | 2 - Off Time<br>First | 4 - 1 - 1023 Minutes    | 4 - 1 - 1023 Minutes    |
|        | 6 - 230 VAC   |                       | 5 - 10 - 10230 Minutes  | 5 - 10 - 10230 Minutes  |