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## FEATURES

- C/MOS Digital Circuitry
- Time Delays To 1000 Minutes
- No First Cycle Effect
- 0.5% Repeat Accuracy
- 2% Stability Over Voltage And Temperature
- Wide Voltage Selection 24-230 VAC, 12-110 VDC
- 8 Pin, Plug-In Termination
- Four Modes Of Operation
- UL / cUL Recognized

## 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: 100 milliseconds during timing,  
50 milliseconds after timing
- 1.7 Time delay vs. voltage and temperature:  $\pm 2\%$

### 2. Input.

- 2.1 Operating voltage: 24, 120 & 230 VAC,  
12, 24/28 & 110 VDC
- 2.2 Tolerance:  $\pm 20\%$  of nominal
- 2.3 Frequency: 50 - 60 Hertz

### 3. Output.

- 3.1 Type: Electromechanical Relay
- 3.2 Form: DPDT or SPDT (see base style connections)
- 3.3 Rating: 10 amperes resistive @ 30 VDC, 120/240 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: Plug-in
- 5.2 Termination: Octal (8 pin), Magnal (11 pin) or 11 pin  
stab/square base plug-in

### 6. Environmental.

- 6.1 Operating temperature:  $-20^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$
- 6.2 Storage temperature:  $-30^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

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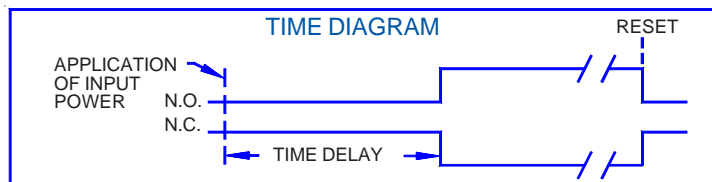
## M SERIES LOW COST DIGITAL PLUG-IN TIME DELAY RELAY



### MODE OF OPERATION - SERIES

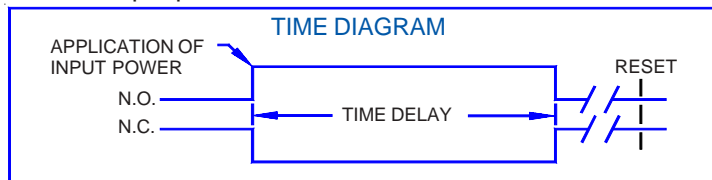
#### DELAY ON MAKE - MMR

Upon application of power to the input terminals, the time delay begins. At the completion of the pre-selected time delay, the output contacts transfer. Reset is accomplished by removal of input power. There is no false output when reset during timing.



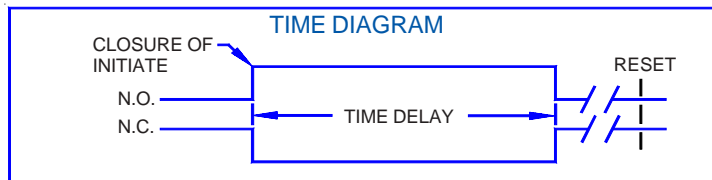
#### INTERVAL - MIR

Upon application of power to the input terminals, the output contacts immediately transfer and the time delay begins. At the completion of the pre-selected time delay, the output contacts revert to their original position. Reset is accomplished by removal of input power.



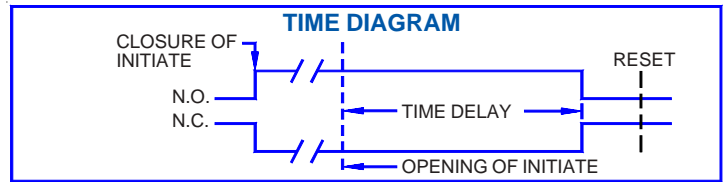
#### SINGLE-SHOT - MSR

Power must be applied to the input at all times prior to and during timing. Upon closure of the initiate switch (momentary or maintained) the output contacts transfer and the time delay begins. At the completion of the pre-selected delay period, the output contacts revert to their original position. Removal of input power will reset the control.

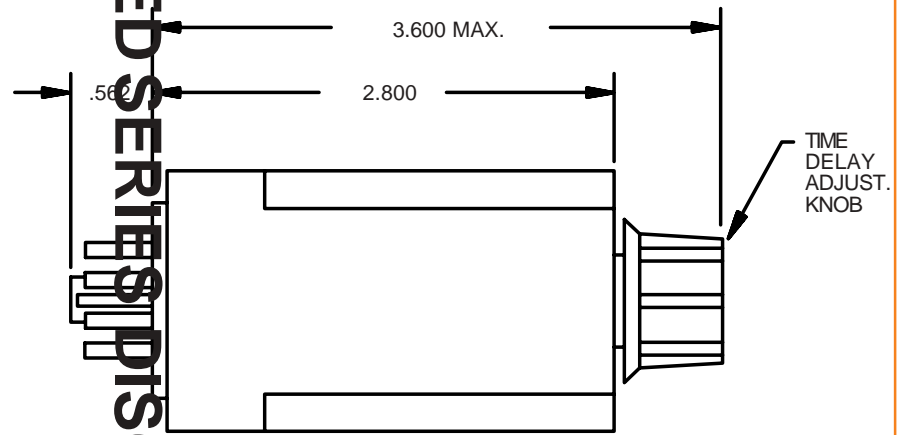
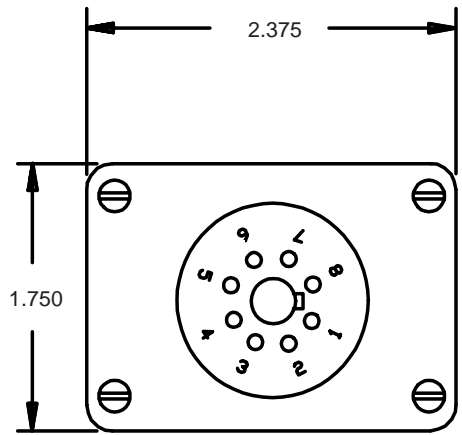


## DELAY ON BREAK - MBR

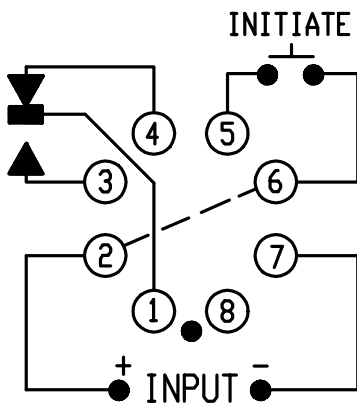
Power must be applied to the input at all times prior to and during timing. Upon closure of the initiate switch, the output contacts transfer and remain transferred if no further action is taken. When the initiate switch is opened, the time delay begins. At the end of the pre-selected delay period, the output contacts revert to their original position. Removal of input power will reset the control.



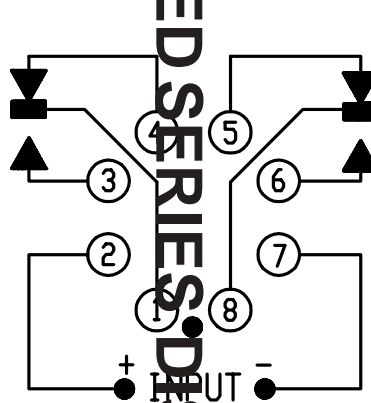
## DIMENSIONS



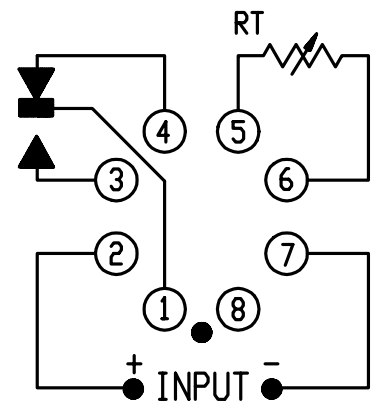
## CONNECTION DIAGRAMS



**MBR-MSR 8-PIN**



**MIR-MMR 8-PIN**



**MIR-MMR 8-PIN  
REMOTE ADJUST**

## ORDERING INFORMATION

SERIES	BASE STYLE	INPUT VOLTAGE	ADJUSTMENT	TIME DELAY RANGE
MBR MIR MMR MSR	1 - Octal Plug-In (8 Pin)	1 - 12 VDC 2 - 24/28 VDC 3 - 110 VDC 4 - 24 VAC 5 - 120 VAC 6 - 230 VAC	0 - Knob 1 - Fixed 2 - Remote Adjustment 3 - Lockshaft	See Time Delay Range Chart

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