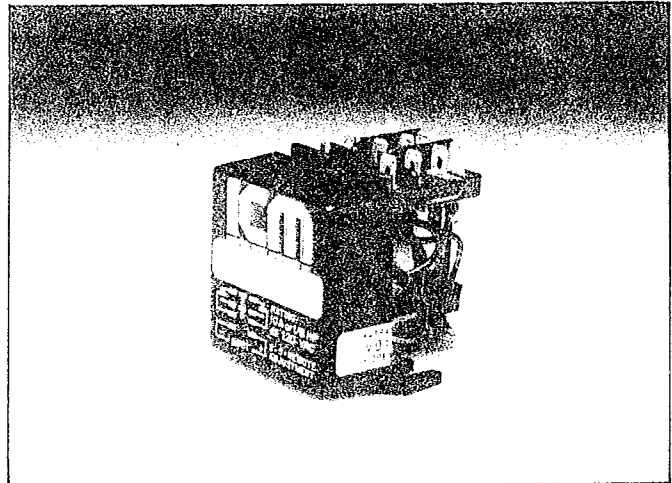
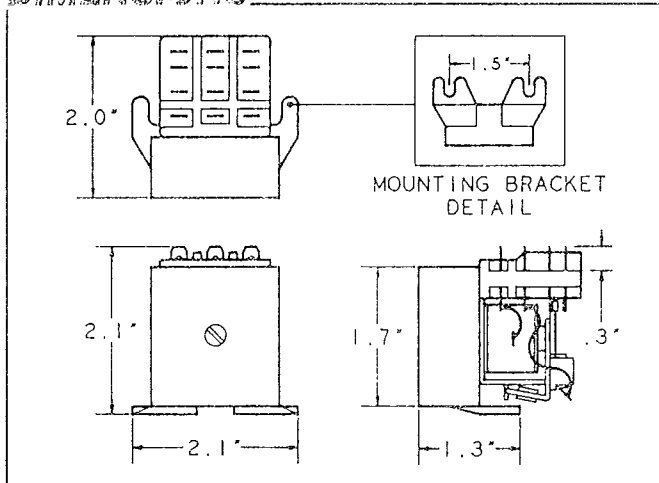


# M SERIES TIMERS

## MAR: DELAY ON MAKE

### DIMENSIONS



### FEATURES

- Fixed or remote adjustable delays 0.1 to 600 seconds
- Reset during timing without false output
- Quick-connect solder terminals
- UL recognized: File #E-48278
- CSA recognized: File #30320
- Completely isolated case
- Repeat accuracy  $\pm 2\%$
- No false turn-on
- Economical

The compact construction of the MAR timer delivers a 10 amp DPDT switching capability and is economically priced. The exposed terminal base allows direct wiring to the relay providing an economic alternative to expensive sockets.

### SPECIFICATIONS

#### ELECTRICAL SPECIFICATIONS

##### TIME DELAY

- Type: Factory fixed or remote adjustment. This is accomplished by providing two terminals in the relay panel for remote potentiometer
- Range: 0.1 to 600 seconds
- Repeat Accuracy:  $\pm 2\%$  under fixed conditions
- Fixed Delay Accuracy:  $\pm 5\%$ ,  $\pm 10\%$ , or  $\pm 20\%$
- Time Delay vs Temperature and Voltage:  $\pm 10\%$  maximum over the specified range of input voltage and temperature

##### RESET TIME

- During and After Timing: 75 milliseconds
- May be reset during timing period without false transfer of output terminals

##### INPUT

- Nominal Voltage: 24 to 230 volts
- Tolerance:  $\pm 15\%$  of nominal
- Frequency: 50 or 60 Hertz
- Maximum Allowable DC Ripple Voltage: 20% peak-to-peak
- Power Consumption: During timing 0.5 watt maximum, after timing 4.0 watts maximum

##### OUTPUT

- Type: Relay

##### Form: DPDT

- Rating: 10 A resistive at 115 VAC; 1/6 H.P. at 115 VAC; 1/3 H.P. at 230 VAC
- Life: Mechanical 10,000,000 operations; full load 1,000,000 operations

##### PROTECTION

- Transient:  $\pm 1,400$  volts for 100 microseconds
- Polarity: DC units are inverse voltage protected
- Dielectric Breakdown: 1,500 V RMS minimum at 60 Hz
- Insulation Resistance: 100 megohms minimum

##### MECHANICAL SPECIFICATIONS

- Mounting: Surface mount using two #6, #8, or #10 screws
- Termination: 3/16" male quick-connect solder terminals
- Weight: 4 ounces (115 grams)

##### ENVIRONMENTAL SPECIFICATIONS

- Operating Temperature:  $-20^{\circ}\text{C}$  to  $+55^{\circ}\text{C}$
- Storage Temperature:  $-40^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$



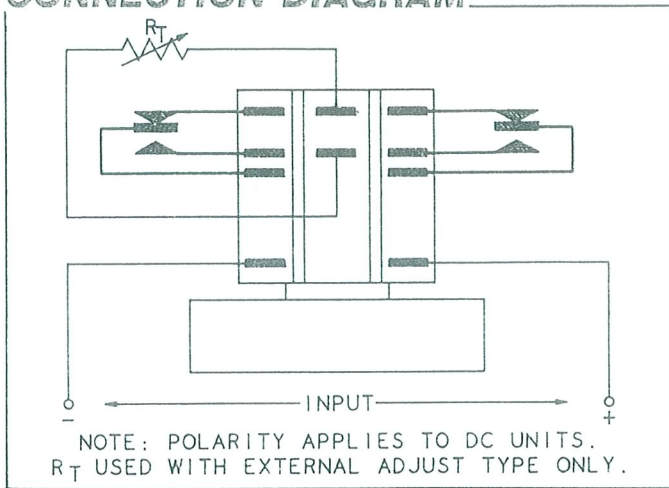
INTERNATIONAL CONTROLS AND MEASUREMENTS CORPORATION

PO BOX 2819, SYRACUSE, NY 13220; (TEL) 315-699-5266, (TWX) 710-545-0235

# M SERIES TYPE: MAR

## DELAY ON MAKE

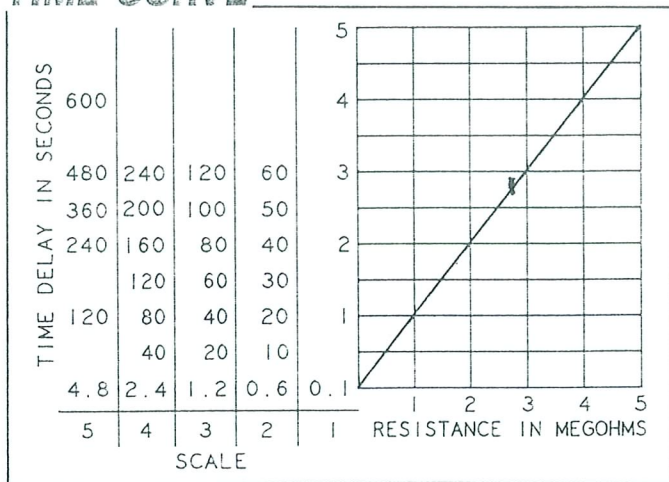
### CONNECTION DIAGRAM



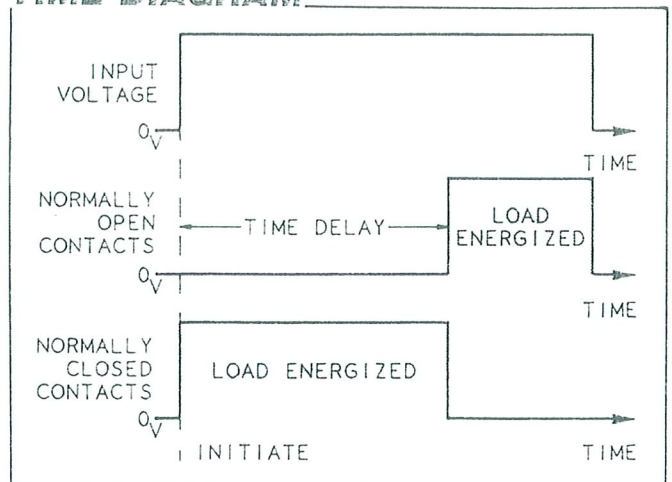
### MODE OF OPERATION

The MAR time delay period initiates when power is applied to the input terminals. At the end of the delay period, the output contacts transfer. Reset is accomplished by removing the input power. MAR may be reset anytime during the time delay period without false output operation.

### TIME CURVE



### TIME DIAGRAM



### ORDERING INFORMATION:

CONSULT THE FACTORY FOR VARIATIONS NOT LISTED

TYPE = MAR

Sample Part Number

MAR

115A

1

X

120

TYPE

INPUT VOLTAGE:

24D = 24 VDC      24A = 24 VAC  
 28D = 28 VDC      115A = 115 VAC  
 110D = 110 VDC    230A = 230 VAC

CONTROL METHOD:

1 = Fixed  
 5 = Remote without potentiometer

TIME DELAY:

5 = 0.1 to 5  
 60 = 0.6 to 60  
 120 = 1.2 to 120  
 240 = 2.4 to 240  
 600 = 4.8 to 600

For fixed delays, specify in seconds

FIXED TIME TOLERANCE:

X = ±20%  
 Y = ±10%  
 Z = ±5%

R = -0% +40%

Note: Specifications are subject to change without notice.