

# Multi-Time Range Delay On Make A1M Series

## FEATURES

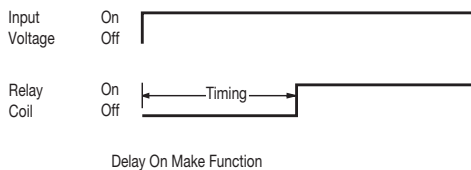
- 100% functionally tested
- Microprocessor controlled timing circuit
- Five time ranges, user selectable
- Easy 3-digit time cycle setting
- $\pm 0.1\%$  repeatability
- Time cycles from 50 ms to over 16 hours
- Timing light
- Superior transient protection
- Reinforced base locator pin
- Flame-retardant polycarbonate housing
- File #E59090

The A1M Series is a Delay On Make time delay relay featuring easy to program multiple time ranges and digital time selection with extremely high accuracy and repeatability.

Programming is accomplished using a 5 position rotary switch to select one of five time ranges. A 3-digit push-button switch selects the amount of time delay required.

**Operating Logic:** Upon application of voltage to the input terminals, the time delay is initiated. At the end of the preset time delay, the relay coil is energized and the contacts transfer. Reset is accomplished by the removal of input voltage.

## LOGIC FUNCTION DIAGRAM



## SPECIFICATIONS

### TIME DELAY

- Adjustment:** 3 digit push-button switch  
**Range:** 50 ms to 999 minutes in 5 ranges  
**Repeatability:**  $\pm 0.1\%$ ,  $\pm 0.02$  seconds over specified timing range

## ORDERING INFORMATION

TIME RANGE	12 VDC	24 VDC	24 VAC	120 VAC	240 VAC
.05 sec. to 999 min.	A1M-0999M-466	A1M-0999M-462	A1M-0999M-467	A1M-0999M-461	A1M-0999M-465

**Accuracy:**  $\pm 1\%$  of set time, plus fixed error of 80 ms max. (40 ms typical including power on response time)

### INPUT

**Operating Voltage:** 24, 120, 240 VAC; 12, 24, VDC  $\pm 10\%$  (DC models have reverse polarity protection. Unfiltered input voltage to them must be full-wave rectified)

**Power On Response:** .05 sec. max.

**Power Off Reset Time:** .15 sec. min.

**Power Consumption:** 2 VA max.

**Frequency:** 50/60 Hz

### OUTPUT

**Type:** Relay DPDT (2 form C)

**Rating:** 10 A max. resistive at 240 VAC; 100 mA at 5 VDC min. load current

### Life:

Mechanical: 10,000,000 operations

Full Load: 500,000 operations

### TIMING LIGHT LOGIC

**Repeat Cycle:** Flashing during timing; continuously ON after time out

### PROTECTION

**Transient Voltage:** 12V, 24V timers are protected by an 8.8 joule metal oxide varistor; 120, 240 V timers are protected by a 30 joule metal oxide varistor

**Dielectric Breakdown:** 1500 VAC, RMS min. at 60 Hz between input and outputs and between outputs

### MECHANICAL

**Termination:** 8-pin plug

**Mounting:** Socket mount, part number MSO-0008P-012

### ENVIRONMENTAL

**Storage Temperature:**  $-23^{\circ}\text{C}$  to  $70^{\circ}\text{C}$

**Operating Temperature:**  $-23^{\circ}\text{C}$  to  $55^{\circ}\text{C}$

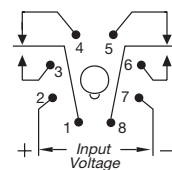
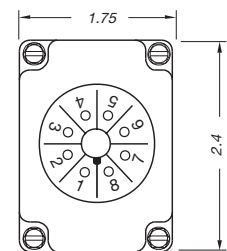
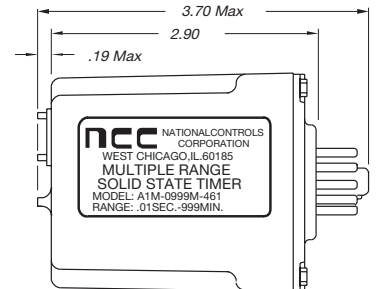
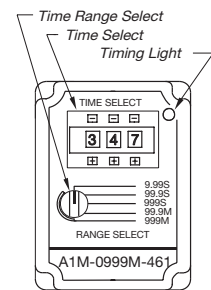
**Humidity:** 95% relative

### TIMING

**Selectable Time Ranges:** .05 to 9.99 seconds; .1 to 99.9 seconds; 1 to 999 seconds; .1 to 99.9 minutes; 1 to 999 minutes (times less than 50 ms are not recommended due to the response time of the mechanical relay)

### PROGRAMMING

To program the timer, remove power from the unit and select the time range; use the digital switches to select the required time (0 to 999)



PIN CONFIGURATION  
Polarity Shown is for D.C. Models