



Multi-Range Delay On Break (Retriggerable) T3M Series

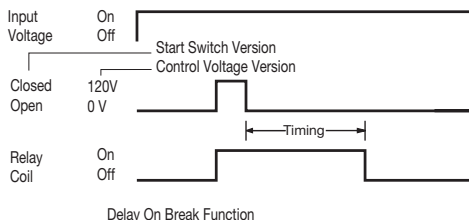
FEATURES

- 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 T3M Series is a Delay On Break 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: Voltage is continuously applied to the timer. Depending upon the model, either a switch closure or application of control voltage causes the relay coil to be energized and remain so as long as the switch is held closed or control voltage is applied. Opening the switch or removing the control voltage starts the timing cycle. At the end of the preset time delay, the relay coil de-energizes and the timer is ready for a new timing cycle. If the start switch is re-closed or control voltage is re-applied during timing, the timer will reset and will not start timing until the start switch is opened or control voltage is removed. Control leads should be shielded when close to other leads.

LOGIC FUNCTION DIAGRAM



SPECIFICATIONS

TIME DELAY

Adjustment: 3 digit push-button switch

Range: 50 ms to 999 minutes in 5 ranges

Repeatability: $\pm 0.1\%$, ± 0.02 seconds over specified timing range

Accuracy: $\pm 1\%$ of set time, plus fixed error of 75 ms max. (10 ms typical)

Power On Response Time: 50 ms max.

Power Off Reset Time: Requires power interruption of .15 seconds min.

Start Switch Closure Time: 20 ms to initiate timing cycle; 50 ms to reset delay during timing cycle

INPUT

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

Power Consumption: 2 VA max.

Frequency: 50/60 Hz

OUTPUT

Type: Relay contacts, 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

PROTECTION

Transient Voltage: 12 and 24 V timers are protected by an 8.8 joule metal oxide varistor; 120 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

Timing Light Logic: Flashing during timing; Full ON after time out

MECHANICAL

Termination: 11-pin plug

Mounting: Socket mount, part number MSO-0011P-012

ENVIRONMENTAL

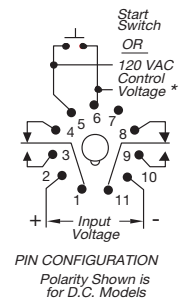
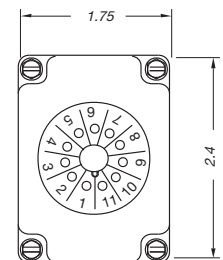
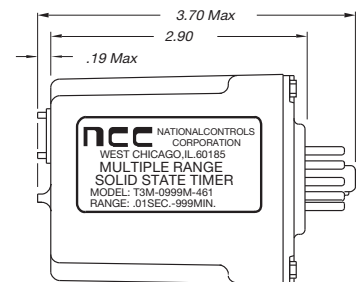
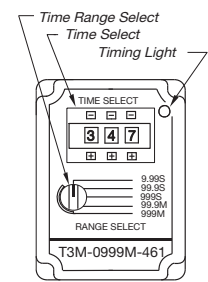
Storage Temperature: -23°C to 70°C

Operating Temperature: -23°C to 55°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)



ORDERING INFORMATION

| START OF TIMING METHOD | 12 VDC | 24 VDC | 24 VAC | 120 VAC |
|------------------------|---------------|---------------|---------------|----------------|
| Start Switch | T3M-0999M-466 | T3M-0999M-462 | T3M-0999M-467 | T3M-0999M-461 |
| Control Voltage | — | — | — | T3M-0999M-461V |