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Installation & Wiring Instructions

TM-67 Timer Module

The TM-67 is a full-functioned microprocessor-controlled timer, combining the best features of more expensive models into a single unit suitable for AC or DC operation. AC capability allows elimination of separate power supply in many applications. A timing cycle (programmable between 1 to 60 seconds, 1 to 60 minutes, or 1 to 60 hours) begins when a trigger is applied to the trigger terminal (TRI). During the timing cycle, the TM-67's relay will change state until the end of the programmed time period. If the relay is normally de-energized (JP2 OFF), it will be energized for this period. Conversely, if the relay is normally energized (JP2 ON), it will be de-energized for this period.

A. JUMPER PROGRAMMING

There are 2 jumpers on the board, JP1 and JP2.

JP1: TRIGGER VOLTAGE SELECTION. Place on the left two pins if a negative (active low) trigger voltage is to be applied. Place on the right 2 pins for a positive trigger voltage. A positive trigger can be any DC voltage between 2 and 28 Volts.

JP2: RELAY IDLE STATE. This jumper is used to set the normal "idle" state of the relay. If set to OFF, the relay is activated for the programmed delay time when a trigger is applied to the trigger terminal (TRI). If set to ON, the relay stays activated and will de-energize for the programmed delay time when a trigger is applied to the trigger terminal.

B. DIP SWITCH PROGRAMMING

1. Seconds or Minutes

Set DIP switch #1 for the required operating time range. When OFF (seconds mode), delays of 1 seconds (potentiometer set fully counter-clockwise) to 60 seconds (potentiometer set fully clockwise) can be achieved. When ON (minutes mode), delays of 1 minute to 60 minutes can be achieved. *Set-up hint: For a 5 minute timer, set SW1 to OFF and adjust the potentiometer for 5 seconds, then turn SW-1 to ON. The unit is now programmed for 5 minutes.*

2. Hours Mode

For delays of 1 to 60 hours, set SW2 to ON (UP). *Set-up hint: For a 5 hour timer, set SW1 and SW2 to OFF and adjust the potentiometer for 5 seconds, then turn SW-2 to ON. The unit is now programmed for 5 hours. Note: If SW2 is ON, the SW1 setting has no effect.*

3. Single Shot / Repeat

Set DIP switch #3 to program the Repeat Mode.

ON (UP) = Delay cycle will repeat as long as the trigger is present. E.g. if the potentiometer is set for 5 seconds, the cycle will repeat 5 seconds on, 5 seconds off. This feature may be combined with SW4 Auto Trigger in order to endlessly repeat the cycles, regardless of the Trigger Input state.

OFF (DOWN) = One delay cycle per each NEW trigger event. No further cycles will occur even if trigger remains on.

4. Auto Trigger

Set DIP switch #4 to enable Auto Trigger.

SW4 provides a simple method for triggering the delay cycle without connecting a wire to the trigger inputs. This feature is useful for setup testing on the bench (Turn switch ON to simulate a trigger) or for providing a constant trigger for the Repeat mode (SW4=ON; SW3=ON)

C. TRIGGERING

The timing cycle is begun by application of a signal to the trigger (TRI) terminal. This can be a positive signal between 2 and 28 Volts. The timing cycle may also be triggered by setting DIP switch #4 to ON. **Note: Auto Trigger ignores any signal on the trigger (TRI) terminal.**

D. LED INDICATION

The red LED illuminates when the relay is energized and goes out when the relay is de-energized.

SPECIFICATIONS

Power input: 8 – 28V AC or DC.

Trigger input: 2 – 28V DC (+ Trig); 1.3 – 0V (- Trig)

Current Draw- Standby: 11mA; Energized: 90mA max.

Relay Output: Form C, rated 5A at 28 Volts DC or 120 Volts AC.

Board Dimensions: 2.5 x 3.0 x 0.8 inches.

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