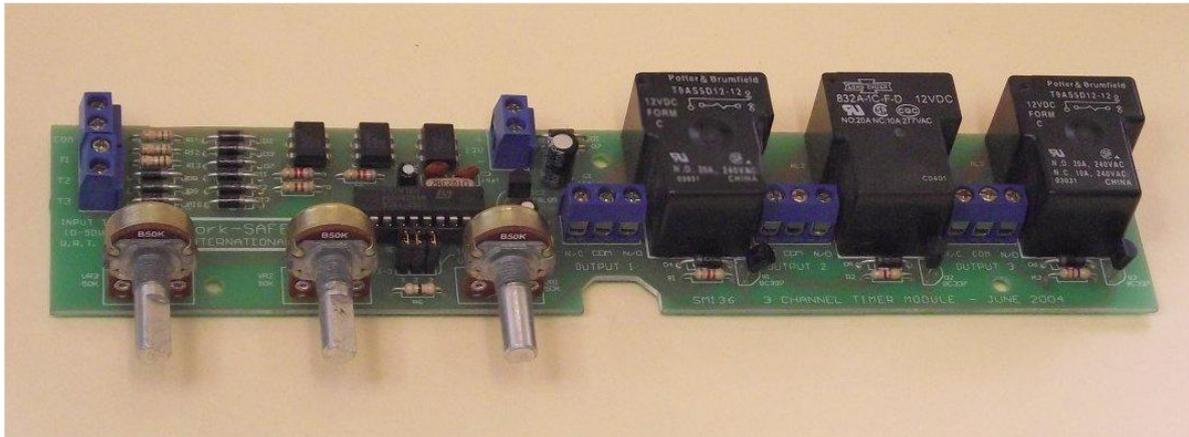




SM136 3- Channel Timer INFORMATION BRIEF

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GENERAL DESCRIPTION

The **SM136** is a software controlled Three Channel Timer module with three independently working timer circuits. Each timer circuit has an optically isolated **Input Trigger**, a **Timer Adjustment** control knob, a **Timer Scale** option strap and a **30 Amp output relay**. It requires a 12V D.C. power supply to operate.

INPUT TRIGGER

The input trigger has an opto-coupled input, which means that the triggering signal can be from any voltage source 10 to 50V dc, *whether or not* that source has a common ground with the 12 power supply rail that powers the module.

This input is **negative edge triggered** which means that a 10 to 50V input must be applied **all the time** between the **COM** terminal and the **T1,T2** or **T3** terminals on the input to the module. If the trigger signal voltage is interrupted for longer than **0.1** of a second on any of the three channels, then that input **will be triggered**. (this 0.1 delay is to prevent noise spikes from nuisance-triggering)

Once triggered, the corresponding output relay will operate for the preset time period for that channel and then release. Note that while the output relay is operated **as soon as the input trigger signal is removed**, the time delay to release the relay commences from **the time that the + signal has been restored to the trigger input**.

For example:

- The time delay has been pre-set for 10 seconds by the time delay adjustment knob.
- The trigger voltage applied to an input is REMOVED
(The corresponding relay operates 0.1 of a second later)
- FIVE seconds later the trigger voltage is RESTORED to the input by the user
- TEN seconds later the relay will release.

TIMER ADJUSTMENT KNOB & TIMER SCALE OPTION

Each timer channel has an adjustment knob to select a time delay between **0 to 25** seconds or **0 to 255** seconds (which is 4min and 15 seconds)

The delay is **increased** by turning the knob **clockwise**. The choice of the two delay periods is selected by the TIMER SCALE link strap on the SM136 module, next to the IC chip.

- If the link is **IN** then **0-25** seconds has been selected.
- If the link is **OUT** then **0-255** seconds has been selected.

Note that if the value of '0' has been selected by the adjustment delay knob, then the relay will fail to operate when the input is triggered.

OUTPUT RELAY

The Output Relay for each of the three channels has a single changeover contact rated at a nominal 20Amps at 240VAC. Both the Normally Open (N/O) and the Normally Closed (NC) contact is available at the screw terminal.

TEST CIRCUIT USING THREE PUSH-BUTTON SWITCHES

(Note that the switches used here are Normally Closed, and go Open when pressed.)

Briefly pressing any of the three buttons will trigger an output relay for a time delay as preset by the jumpers and the timer potentiometer.

