# CNM5 series

## Multifunction Time Delay Relay For Plug-In or Panel Mounting

- Five timing functions selectable via rotary switch
- 0.1 sec. to 9,990 hr. timing range
- Fixed input type (120VAC ± 15%)
- 10A output relay with DPDT contacts
- 1/16 DIN style enclosure with 11-pin plug-in base
- Thumbwheel switches for programming delay time

File E22575

File LR15734

Users should thoroughly review the technical data before selecting a product part number. It is recommended that user also seek out the pertinent approvals files of the agencies/laboratories and review them to ensure the product meets the requirements for a given application.

### Timing Functions

**See the following page for a complete description of timing functions.**

### Timing Specifications

**Timing Ranges:** 0.1 to 99.9 / 1 to 999 sec.;
0.1 to 99.9 / 1 to 999 min.;
0.1 to 99.9 / 1 to 999 / 10 to 9,990 hr.
**Timing Adjustment:** Digital adjustment via thumbwheel switches.
**Tolerance:** ±0.05% ±0.04 sec.*
**Repeatability (Including first cycle of operation.):** < ±0.05% ±0.04 sec.*
**Reset Time (power interruption):** 45 ms, typ.; 60 ms, max.
**Minimum Pulse Width, Control:** 50 ms.

* Timing is synchronized with input voltage frequency. Accuracy is dependent on input voltage frequency. Tolerance shows maximum variation from utility companies.

### Contact Data @ 25°C

**Arrangement:** 2 Form C (DPDT).
**Material:** Silver-cadmium oxide alloy.
**Rating:** 10A @ 30VDC or 277VAC, resistive;
1/2 HP @ 250VAC; 1/3 HP @ 120VAC.
**Expected Mechanical Life:** 10 million operations.
**Expected Electrical Life:** 100,000 operations, min., at rated load.

### Initial Dielectric Strength

**Between Output Poles:** 1,500V rms, 60 Hz.
**Between Input and Output:** 1,500V rms, 60Hz.

### Input Data @ 25°C

**Voltage:** 120VAC ±15%, 60 Hz.
**Power Requirement:** 3VA @ 120VAC.
**Transient Protection:** 13 Joule MOV.

**Input Voltage & Limits**

| Nominal Voltage | Minimum Voltage | Maximum Voltage |
|---|---|---|
| 120VAC | 102VAC | 138VAC |

### Environmental Data

**Temperature Range:** **Storage:** -40°C to +85°C.
**Operating:** -10°C to +55°C.
**Humidity:** 85% relative humidity, non-condensing.

### Mechanical Data

**Termination:** 11-pin octal style plug.
**Enclosure:** Black plastic 1/16 DIN (48mm x 48mm) case.
**Sockets:** Fits either 27E123 or 27E892 (snap-on) screw terminal sockets.
**Weight:** 4.3 oz. (122g) approximate.

### Ordering Information – Authorized distributors are more likely to stock boldface items listed below.

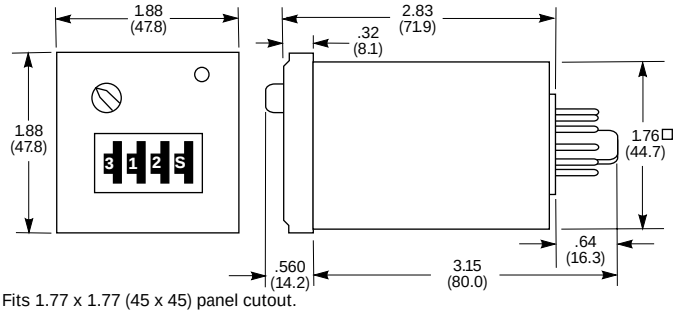
**Time Delay Relay**

| Input Voltage | Part Number |
|---|---|
| 120VAC | **CNM5** |

**Accessory**

| Part Number | Name | Description |
|---|---|---|
| **SSA-24C667** | Mounting Clip | Ratchet-fit clip slides onto CNM5 from behind to secure CNM5 in panel mount applications. |

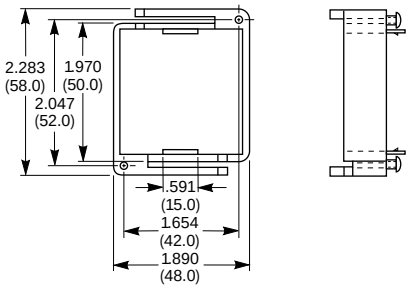
### Outline Dimensions




Fits 1.77 x 1.77 (45 x 45) panel cutout.

### Mounting Clip Dimensions

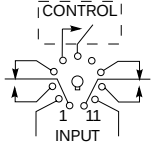
**SSA-24C667**
**Mounting Clip**



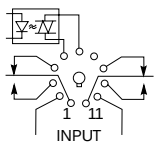

### Wiring Diagrams (Bottom Views)

**(pins numbered clockwise from keyway)**

EXTERNAL CONTROL SWITCH**

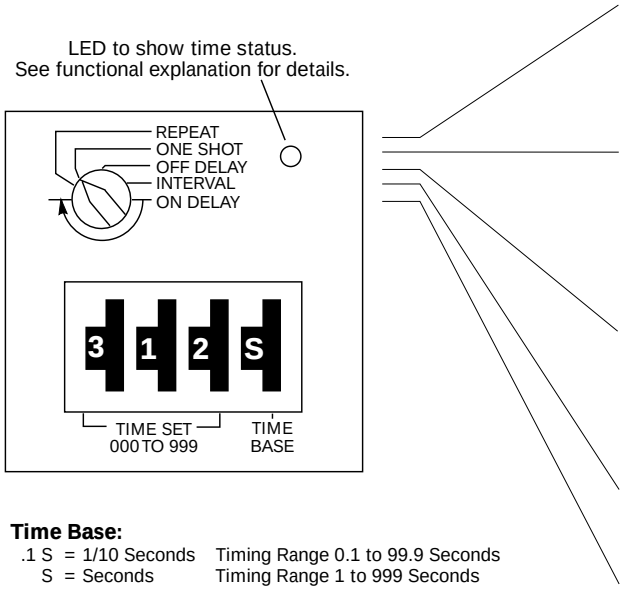



**Optional Solid State Input Interface**




****Important:** A dry circuit switch is recommended. A "dry circuit" switch is one rated to reliably switch currents of less than 50mA. Use of a switch rated for other than dry circuit may result in failure of the time delay relay to function properly.

## Timer Function Descriptions




**Time Base:**

| | | |
|---|---|---|
| .1 S | = 1/10 Seconds | Timing Range 0.1 to 99.9 Seconds |
| S | = Seconds | Timing Range 1 to 999 Seconds |
| .1 M | = 1/10 Minutes | Timing Range 0.1 to 99.9 Minutes |
| M | = Minutes | Timing Range 1 to 999 Minutes |
| .1 H | = 1/10 Hours | Timing Range 0.1 to 99.9 Hours |
| H | = Hours | Timing Range 1 to 999 Hours |
| 10 H | = 10 Hours | Timing Range 10 to 9990 Hours |

**Repeat:** Output relay is turned on at end of programmed time interval which is started by application of input power. Relay stays on for equal time interval, then turns off and cycle is repeated on a free-running basis with equal on and off times until terminated by removal of input power. LED is flashing when output relay is off and on continuously when the relay is on. Applying CONTROL input during timing will have no effect on timing or the state of the relay.

**One Shot:** Output relay is turned on by applying CONTROL input with input voltage present or application of input voltage with the CONTROL input on. Immediately upon either, timing is initiated with the output relay turning off at the completion of the selected time interval. Applying CONTROL input after time out will reset the timer, turn on the output relay and initiate another time interval. LED is on continuously when output relay is off and flashes when the relay is on. Applying CONTROL input during timing will have no effect on timing or the state of the relay.

**Off Delay:** Output relay is turned on by applying CONTROL input with input voltage present or application of input voltage with the CONTROL input on. The time interval will be started by removing the CONTROL input with the output relay turning off at completion of the time interval. Reapplying the CONTROL during timing will reset the time to zero and inhibit timing until removed. LED is off when CONTROL input is on, flashing during timing and on continuously when the output relay is off.

**Interval:** Output relay is turned on for a programmed time interval by applying input voltage. LED flashes when output relay is on and is on continuously when the output relay is off. Applying CONTROL input will have no effect on timing or the state of the relay.

**On Delay:** Output relay is off for a programmed time interval which is started by applying input voltage. LED flashes when output relay is off and is on continuously when the output relay is on. Applying CONTROL input will have no effect on timing or the state of the relay.

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