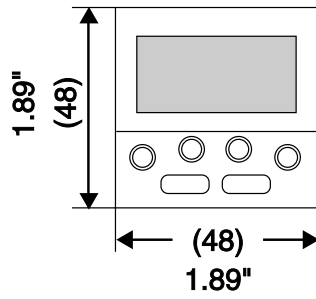
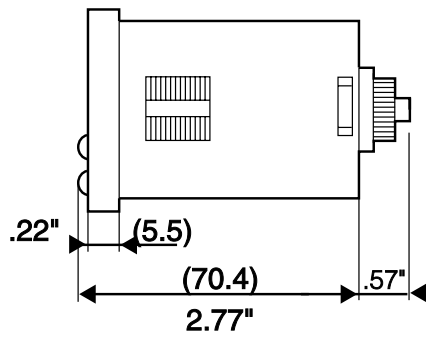
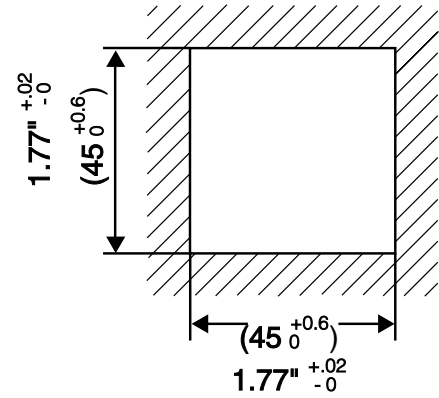


812, 814, 815, 816 Series

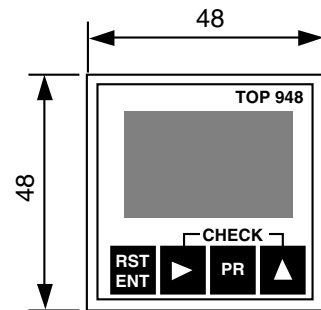
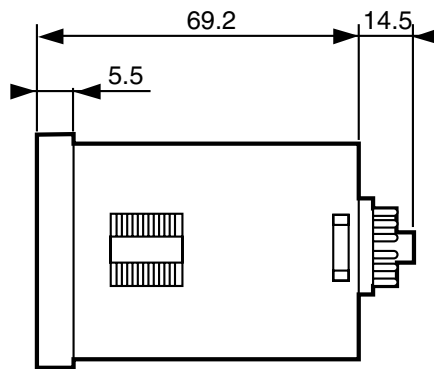
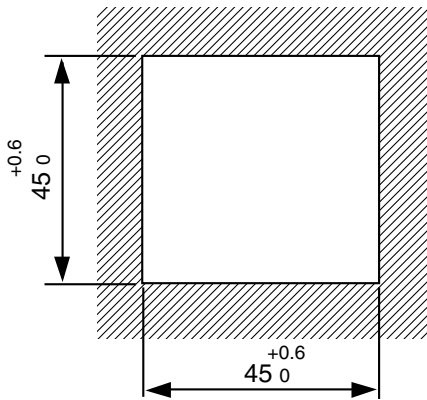


Panel cut-out



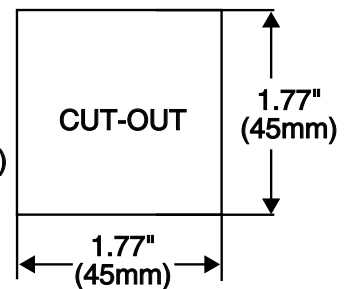
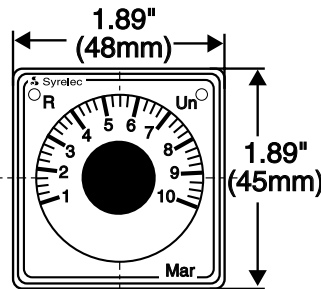
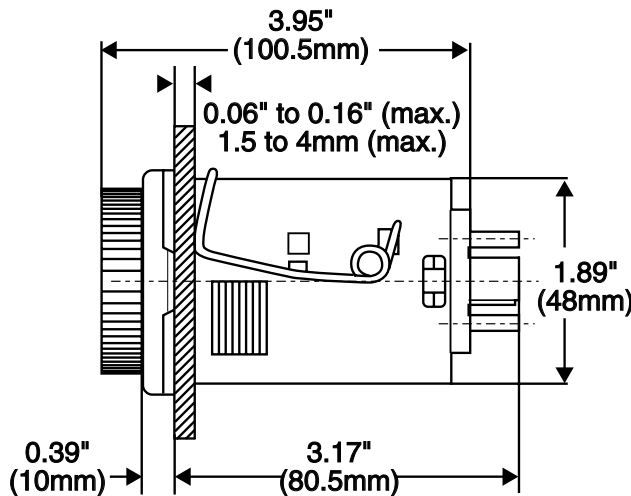
88857 Series

Cut-out



M/F/G Models

M and G Socket



Products and specifications subject to change without notice.  
Consult factory for application assistance.

# 816 SERIES MULTIFUNCTION TIMER

UL listed CSA recognized

- Red LCD Backlit Actual Timing Display
- High Contrast LCD Setpoint Display
- 6 Modes of Operation
- 11 Selectable Time Ranges

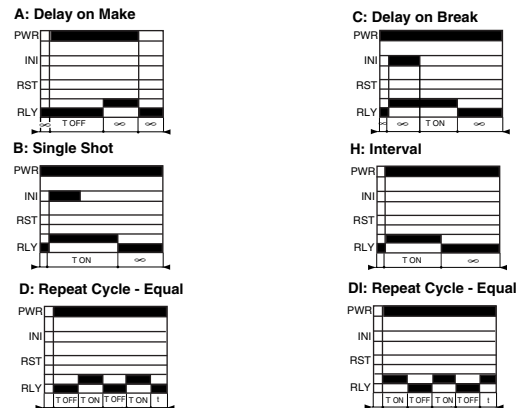


The 816 Series Timer is a multifunction timer with a red backlit LCD display showing actual process time and a high contrast LCD display showing set-point time. The 816 Timer has eleven selectable time ranges (.01 sec to 9999 hours) and is housed in a 1/16 DIN (48 x 48mm) style enclosure. Easy programming from the front panel push buttons allows selection of up or down timing. 6 different timing functions (Delay on Make, Delay on Break, Interval, Single Shot, Repeat Cycle ON Time First and Repeat Cycle OFF Time First) and 11 different timing ranges. The LCD display also shows relay output, power input and initiate switch status. Slide switch on side of unit provide lock-out of front panel access to operating mode programming.

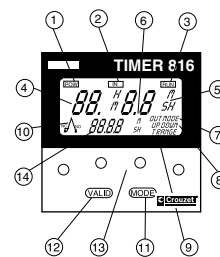
### SPECIFICATIONS:

<b>Input Power</b> .....	220 VAC, 110 VAC, 24 VAC/DC, +10%, -15%
<b>Input Power Consumption</b> ..	1 VA at 24 VAC, 4 VA at 110 VAC, 12 VA at 230 VAC, .5 W at 24 VDC
<b>Display</b> .....	7 mm High, 4 Digit Backlit LCD
<b>Initiate Switch Input</b> .....	Dry Contact (50 ms min.)
<b>Output</b>	
<b>Output</b> .....	SPDT
<b>Max Switching Current/Voltage</b>	8 Amp 250 VAC
<b>Max Power Rating</b> .....	200 VA/190 W
<b>Min Switch Current</b> .....	100 mA
<b>Electrical Life of Relay</b> .....	10 <sup>6</sup> Operations at full load
<b>Time Ranges</b> .....	99.99 s 999.9 s 9999 s 99 min 59 s 99.99 min 999.9 min 9999 min 99h 59 min 99.99 hrs 999.9 hrs 9999 hrs
	Note: The 99.99 s time range is not available in the Repeat Cycle Mode
<b>Front Panel Rating</b> .....	NEMA 12
<b>Repeat Accuracy</b> .....	±0.03%, ±20 ms
<b>Reset Time</b> .....	50 ms during timing 50 ms after timing
<b>Insulation Resistance</b> .....	100 mΩ min @ 500 VAC to IEC 255.5
<b>Dielectric Strength</b> .....	2000 VAC @ 50 Hz for 1 min to VDE 0435
<b>Noise Immunity/Interference</b> ..	IEC 1000.4.4 Level IV (Direct 4 KV) IEC 1000.4.3 Level III (10 V/m)
<b>Operating Temperature</b> .....	+14°F to +140°F (-10°C to +60°C)
<b>Weight</b> .....	3.5 oz. (100g)
<b>Panel Cutout</b> .....	45 x 45mm (+0.6)

### MODE OF OPERATIONS:

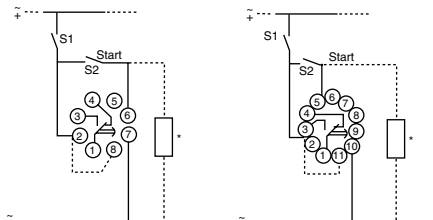


### PROGRAMMING:



- 1: Power On Indicator
- 2: Initiate Switch Indicator
- 3: Timing Indicator
- 4: Timing Display
- 5: Timing Range Unit
- 6: Decimal Point
- 7: Mode of Operation
- 8: Up or Down Timing
- 9: Timing Range
- 10: Relay Output Status
- 11: Program Mode
- 12: Validation
- 13: Preset Keyboard
- 14: Preset Value Display

### WIRING:



For 24 VAC/VDC service voltage for 8 pin versions jumper terminals 2 and 8. For 24 VAC/VDC service voltage for 11 pin versions jumper terminals 2 and 11.

"Load, such as light bulb or contractor, can be connected in parallel with the start switch"

**DIMENSIONS** See page 4-2

### ORDERING INFORMATION:

<b>VOLTAGE</b>	<b>VOLTAGE</b>	<b>PART NUMBER</b>	<b>PART NUMBER</b>
		<b>8 PIN</b>	<b>11 PIN</b>
<b>VOLTAGE</b>		<b>8 PIN VERSION</b>	<b>11 PIN VERSION</b>
110 VAC/24 VAC/DC		88 857 607	88 857 707
220 VAC/24 VAC/VDC		88 857 601	88 857 701

Products and specifications subject to change without notice.  
Consult factory for application assistance.

# 814 SERIES MULTIFUNCTION TIMER

UL listed CSA recognized

- **DIN-Sized (48 x 48mm) Housing**
- **6 Modes of Operation**
- **Large LCD Display**
- **Up or Down Timing**
- **SPDT 10 Amp Relay Output**
- **NEMA 12 Front Panel**

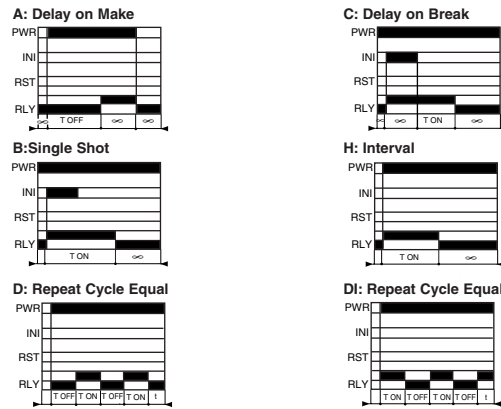


The 814 Series Timer is a multifunction timer with multi-time ranges (0.01 sec to 9999 hours) housed in a 1/16 DIN (48 x 48mm) style enclosure. Easy programming from the front panel push buttons allows selection of up or down timing, 6 different timing functions (Delay on Make, Delay on Break, Interval, Single Shot, Repeat Cycle ON Time First and Repeat OFF Time First) and 11 different timing ranges. A large 4-digit LCD display indicates current and preset values as well as relay output, power input, and initiate switch status. Load such, as light bulb or contactor can be connected to the start switch. Slide switch on side of unit provides lockout of front panel access to operating mode programming.

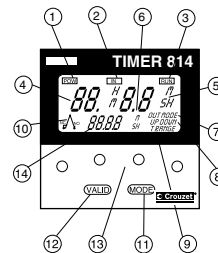
**SPECIFICATIONS:**

Input Power	220 VAC, 115 VAC, 48 VAC/DC, 24 VAC/DC 12 VDC, 50/60 Hz, ±15%
Input Power Consumption	11 VA at 220 VAC    0.5 W at 24 VDC 4 VA at 110 VAC    0.5 W at 12 VDC 1 VA at 24 VAC
Display	Timing Display .3" (7.5mm) High 4 Digit LCD Preset Display .18" (4.5mm) High 4 Digit LCD
Initiate Switch Input	Dry Contact (50 ms min.)
Output	SPDT Relay
Max. Switching Current/Voltage	8 pin Version: 10 Amp 250 VAC 11 pin Version: 8 Amp 250 VAC
Max. Power Rating	2000 VA/50 W
Min. Switch Current	100 mA
Electrical Life of Relay	2 x 10 <sup>5</sup> Operations
Time Ranges	99.99 s, 999.9 s 9999 s, 99 min, 59 s 99.99 min    999.9 min 9999 min    99h 59 min 99.99 hrs    999.9 hrs 9999 h
Front Panel Rating	NEMA 12
Repeat Accuracy	±0.03%
Reset Time	50 ms during timing 50 ms after timing
Insulation Resistance	100 MΩ min @ 500 VAC to IEC 255.5
Dielectric Strength	2000 VAC @ 50 Hz for 1 min to VDE 0435
Operating Temperature	+14°F to +140°F (-10°C to +60°C)
Weight	3.5 oz. (100g)
Panel Cutout	45 x 45mm ( <sup>+0.6</sup> )

**MODE OF OPERATIONS:**

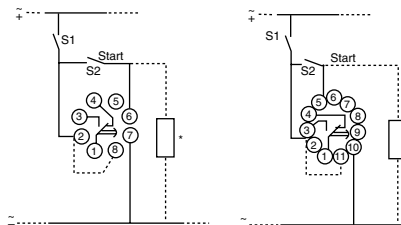


**PROGRAMMING:**



- 1: Power On Indicator
- 2: Initiate Switch Indicator
- 3: Timing Indicator
- 4: Timing Display
- 5: Timing Range Unit
- 6: Decimal Point
- 7: Mode of Operation
- 8: Up or Down Timing
- 9: Timing Range
- 10: Relay Output Status
- 11: Program Mode
- 12: Validation
- 13: Preset Keyboard
- 14: Preset Value Display

**WIRING:**



For 24 VAC/VDC service voltage for 8 pin versions jumper terminals 2 and 8. For 24 VAC/VDC service voltage for 11 pin versions jumper terminals 2 and 11.

\*Load, such as light bulb or contactor, can be connected in parallel with the start switch

**ORDERING INFORMATION:**

<b>VOLTAGE</b>	<b>VOLTAGE</b>	<b>PART NUMBER</b>	<b>PART NUMBER</b>	<b>DIMENSIONS</b> See page 4-2
		<b>8 PIN</b>	<b>11 PIN</b>	
<b>VOLTAGE</b>		<b>8 PIN VERSION</b>	<b>11 PIN VERSION</b>	
220/110 VAC/24 VAC/DC		88 857 005	88 857 105	
48/24 VAC/DC/12 VDC		88 857 003	88 857 103	

Products and specifications subject to change without notice. Consult factory for application assistance.

# TOP 948

## LCD MULTI-FUNCTION TIMER

UL listed CSA recognized

- 8 Timing Functions
- Multi-timing Range
- DIN-Sized (48 x 48mm) Housing
- Large LCD Display
- NEMA 4 Front Panel
- 10 year EEPROM Memory



### GENERAL FEATURES:

The 88 857 Series is a programmable timer with multi-time ranges (0.01s to 999.9 hrs) housed in 1/16 DIN (48 x 48mm) style enclosure. The 8 available functions — On Delay, Interval, Single Shot, Repeat Cycle... the large 4 Digit display and the NEMA 4 front panel will fit most industrial applications. The large LCD permits easy programming and monitoring of status such as time remaining, preset value, output relay, time range, function, etc... All functions can operate with the 10 year EEPROM Memory option.

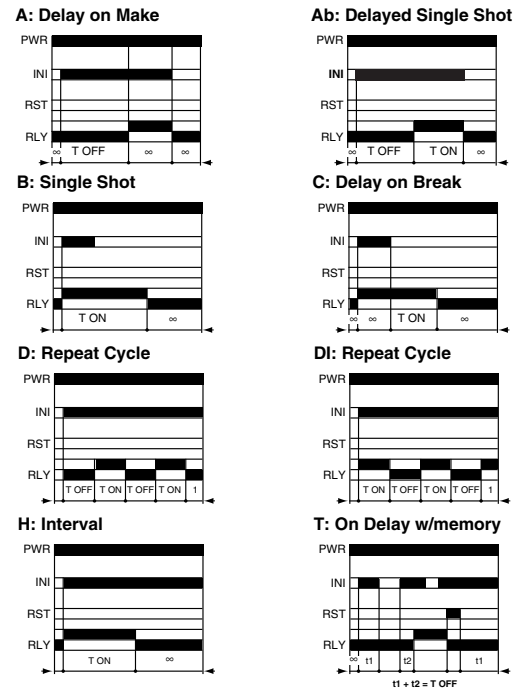
### SPECIFICATIONS:

<b>Input Power</b>	220 VAC, 110 VAC, 24/48 VAC, 50/60 Hz $\pm 15\%$ 24/12 VDC $\pm 10\%$
<b>Input Power Consumption</b>	8 VA at 115 VAC, 0.5 W at 12 VDC
<b>Display</b>	4 Digit .3" (8mm) High LCD
<b>Memory</b>	10 years (EEPROM)
<b>Repeat Accuracy</b>	$\pm 0.05\%$
<b>Protection Rating</b>	NEMA 4 (IP 65)
<b>Dielectric Strength</b>	3000V (IEC 255-5)
<b>Initiate Switch Input</b>	
Initiate Switch Input	Dry Contact, PNP Open Collector, Voltage
Minimum Initiate Closure Time	50 ms
<b>Output</b>	
Output	SPDT Relay
Maximum Switching Current	8 Amp AC Resistive, 8 Amp DC Resistive
Maximum Switching Voltage	250 VAC, 250 VDC
Maximum Power Rating	1250 VA, 30 W
Mechanical Life of Relay	$2 \times 10^7$ Operations
Electrical Life of Relay	$1 \times 10^6$ Operations
<b>Time Ranges</b>	99.99 sec, 999.9 sec, 99.99 min, 999.9 min, 999.9 hrs, 99 min, 59 sec, 99 hrs, 99 min
<b>Weight</b>	1.77 oz.
<b>Operating Temperature</b>	14°F to 122°F
<b>Storage Temperature</b>	13°F to 158°F

### ORDERING INFORMATION:

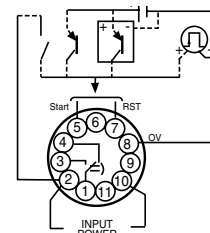
<b>Voltage</b>	<b>Part Number</b>	<b>Part Number</b>
12/24 VDC	<b>8-PIN VERSION</b>	<b>11-PIN VERSION</b>
24/48 VAC		
110 VAC	88 857 800	88 857 502
110/220 VAC		88 857 504
		88 857 506
		88 857 508

### FUNCTIONS:

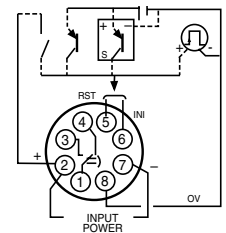


### WIRING DIAGRAM:

Part Number 88 857 506



Part Number 88 857 800



DIMENSIONS See page 4-2

Products and specifications subject to change without notice.  
Consult factory for application assistance.