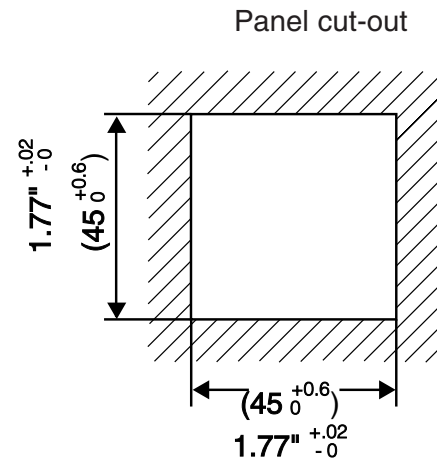
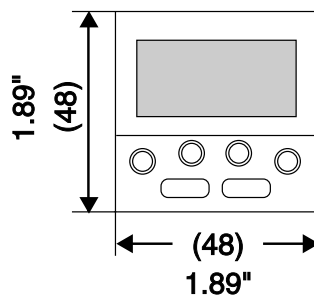
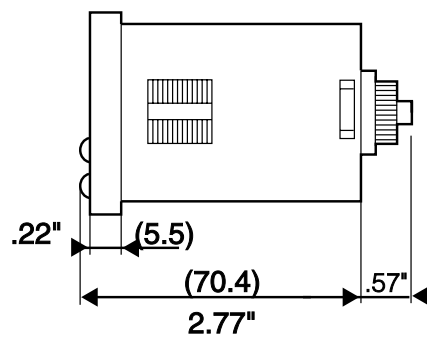
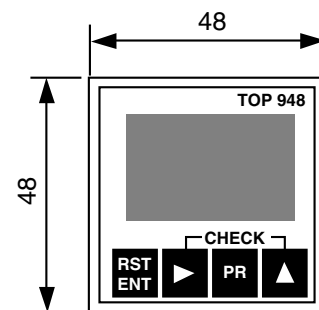
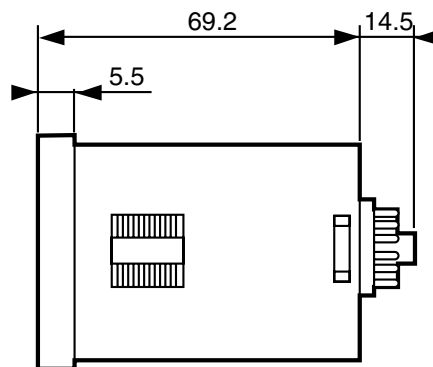
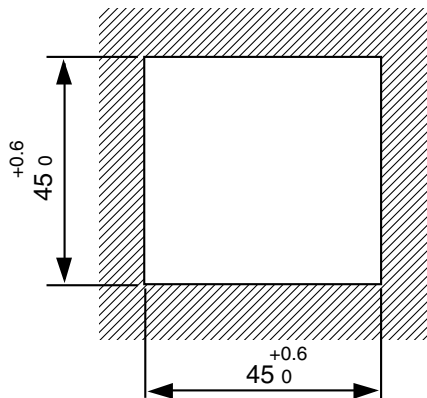


812, 814, 815, 816 Series



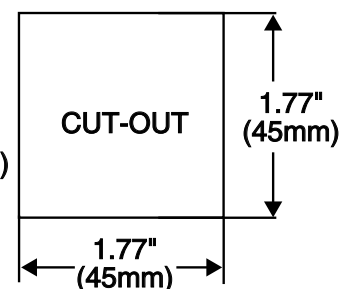
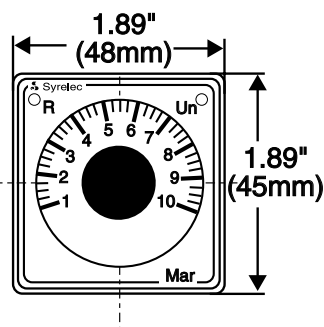
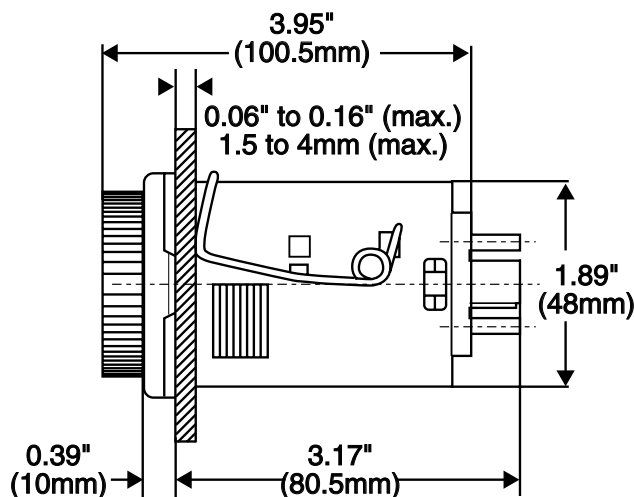
88857 Series

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 setpoint 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:

Input Power 220 VAC, 110 VAC, 24 VAC/DC, +10%, -15%
Input Power Consumption .. 1 VA at 24 VAC, 4 VA at 110 VAC, 12 VA at 230 VAC, .5 W at 24 VDC

Display 7 mm High, 4 Digit Backlit LCD

Initiate Switch Input Dry Contact (50 ms min.)

Output

Output SPDT

Max Switching Current/Voltage 8 Amp 250 VAC

Max Power Rating 200 VA/190 W

Min Switch Current 100 mA

Electrical Life of Relay 10⁵ Operations at full load

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 hrs

Note: The 99.99 s time range is not available in the Repeat Cycle Mode

Front Panel Rating NEMA 12

Repeat Accuracy ±0.03%, ±20 ms

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

Noise Immunity/Interference .. IEC 1000.4.4
 Level IV (Direct 4 KV)

IEC 1000.4.3

Level III (10 V/m)

Operating Temperature +14°F to +140°F (-10°C to +60°C)

Weight 3.5 oz. (100g)

Panel Cutout 45 x 45mm (+0.6)

ORDERING INFORMATION:

VOLTAGE
VOLTAGE

VOLTAGE
 110 VAC/24 VAC/DC
 220 VAC/24 VAC/VDC

PART NUMBER
8 PIN

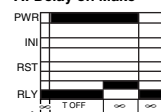
8 PIN VERSION
 88 857 607
 88 857 601

PART NUMBER
11 PIN

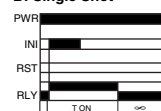
11 PIN VERSION
 88 857 707
 88 857 701

MODE OF OPERATIONS:

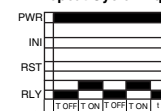
A: Delay on Make



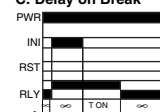
B: Single Shot



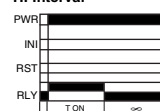
D: Repeat Cycle - Equal



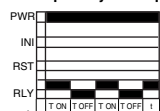
C: Delay on Break



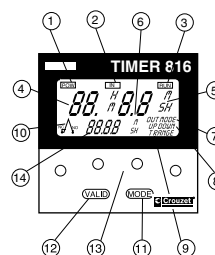
H: Interval



DI: Repeat Cycle - Equal

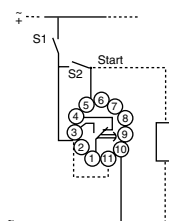
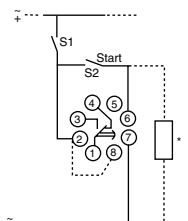


PROGRAMMING:



- 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

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.

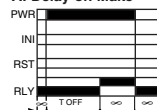
SPECIFICATIONS:

Input Power	220 VAC, 115 VAC, 48 VAC/DC, 24 VAC/DC 12 VDC, 50/60 Hz, $\pm 15\%$
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 ⁶ 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	$\pm 0.03\%$
Reset Time	50 ms during timing 50 ms after timing
Insulation Resistance	100 M Ω 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 (± 0.6)

Note: The 99.99 s time range is not available in the Repeat Cycle Mode

MODE OF OPERATIONS:

A: Delay on Make



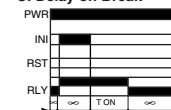
B: Single Shot



D: Repeat Cycle Equal



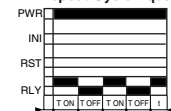
C: Delay on Break



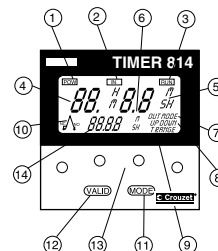
H: Interval



DI: Repeat Cycle Equal

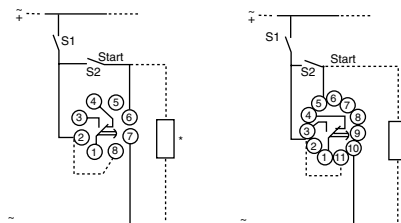


PROGRAMMING:



- 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

ORDERING INFORMATION:

VOLTAGE VOLTAGE

VOLTAGE
220/110 VAC/24 VAC/DC
48/24 VAC/DC/12 VDC

PART NUMBER 8 PIN

8 PIN VERSION
88 857 005
88 857 003

PART NUMBER 11 PIN

11 PIN VERSION
88 857 105
88 857 103

DIMENSIONS See page 4-2

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:

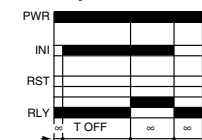
Input Power	220 VAC, 110 VAC, 24/48 VAC, 50/60 Hz $\pm 15\%$
	24/12 VDC $\pm 10\%$
Input Power Consumption	8 VA at 115 VAC, 0.5 W at 12 VDC
Display	4 Digit .3" (8mm) High LCD
Memory	10 years (EEPROM)
Repeat Accuracy	$\pm 0.05\%$
Protection Rating	NEMA 4 (IP 65)
Dielectric Strength	3000V (IEC 255-5)
Initiate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

ORDERING INFORMATION:

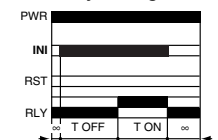
Voltage	Part Number 8-PIN VERSION	Part Number 11-PIN VERSION
VOLTAGE	8-PIN VERSION	11-PIN VERSION
12/24 VDC		88 857 502
24/48 VAC	88 857 800	88 857 504
110 VAC		88 857 506
110/220 VAC		88 857 508

FUNCTIONS:

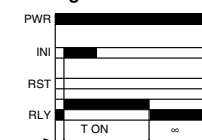
A: Delay on Make



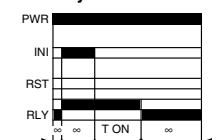
Ab: Delayed Single Shot



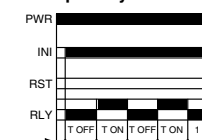
B: Single Shot



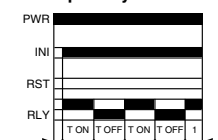
C: Delay on Break



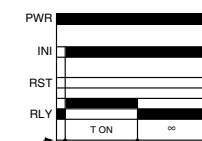
D: Repeat Cycle



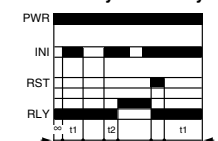
Di: Repeat Cycle



H: Interval

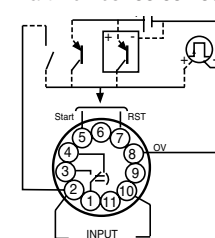


T: On Delay w/memory

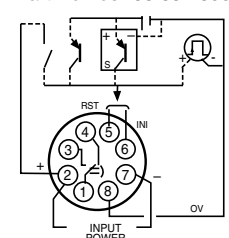


WIRING DIAGRAM:

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.