



**Dual setpoint,
microprocessor
based timer/counter...
packaged in
CYCL-FLEX® case**



The CX400 is a microprocessor based, dual setpoint timer/counter housed in a standard 15 terminal CYCL-FLEX® plug-in case which allows easy removal for programming changes and replacement. Time or count operation, time range, and the type of start input switch operation are programmed with 7 miniature rocker switches located inside the unit housing.

The front panel of the CX400 is a sealed membrane keypad which provides excellent protection for most industrial environments. The time or count setpoint is entered using the increment and decrement keys for each digit position. The SET and ENT keys provide access to the setpoint, as well as to the front panel programmable software functions. These programmable functions control the pulse output length, setpoint to zero/zero to setpoint cycle progress indication, and count input scale factor. The software programming functions are indicated with prompts to help the user program these functions without the need for written instructions.

- Keypad lock function allows viewing of setpoint, but does not allow unauthorized changes
- 4 1/2 digit (19999) liquid crystal display - .5 inch high digits
- Annunciators (right of the display) flash to indicate timing or counting
- Five time ranges from 19.999 sec. to 199 hr.: 59 min.
- Three count input rate speeds are programmable with a max. count display of 19999 - can be extended via count input scale factor
- Designed for 120 VAC operations
- Count input available for 120 volt AC or low voltage AC/DC operations
- When programmed as timer, count input circuit serves as time inhibit (without resetting the unit)
- Non-volatile memory data retention

SPECIFICATIONS

Time/Count Ranges:

| Sym. | Maximum Range | Minimum Setting | Count Rate |
|------|-------------------|-----------------|---------------------------------|
| 1 | 19999 Cts. | 1 Ct. | 4000/Sec. 12-50 VDC Count Input |
| 2 | 19999 Cts. | 1 Ct. | 500/Min. AC or DC |
| 3 | 19999 Cts. | 1 Ct. | 5000/Min. AC or DC |
| 4 | 199.99 Sec. | .01 Sec. | |
| 5 | 1999.9 Sec. | .1 Sec. | |
| 6 | 19.999 Sec. | .001 Sec. | |
| 7 | 199 Min.: 59 Sec. | 1 Sec. | |
| 8 | 199 Hr.: 59 Min. | 1 Min. | |

Operating Voltage/Frequency: A6 - 120 VAC, 50/60 Hz

Time Inhibit/Count Line Terminals B & C:

CX411/CX441 - 12-50 VDC or 20-28 VAC, 50/60 Hz
CX412/CX442 - 120 VAC, 50/60 Hz or 120 VDC

Setting Accuracy: Time: $\pm 0.1\%$ or 50 ms, whichever is larger (0° to 60°C)
Count: 100%

Repeat Accuracy:

Time: $\pm 0.1\%$ or 35 ms, whichever is larger (0° to 60°C)
Count: 100%

Reset Time: 30 ms following voltage removal from terminal 1

Power on Response: 300 ms max. after voltage applied to terminal 11

Operating Temperature: +32° to +140°F (0° to +60°C)

Output Rating:

Relay Contacts:

Instantaneous: 10 amp (resistive), 120 VAC
Delayed: 5 amp (resistive) @ 120 VAC, 60 Hz
Early Trip: 5 amp (resistive) @ 120 VAC, 60 Hz

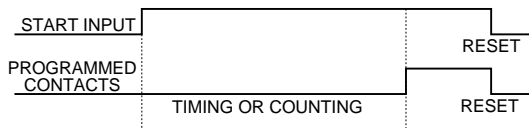
Mechanical Life: in excess of 20 million operations
Electrical Life: contingent upon contact load
Solid State: 1 amp, 0-264 VAC, VDC

Approvals: UL Recognition E96337
CSA Certification LR26861

OUTPUT OPERATING MODES

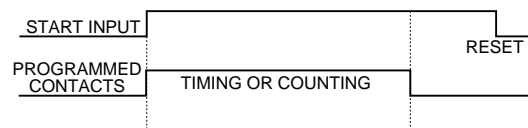
ON-Delay Operation

The contacts are energized at the end of the timing/counting cycle and remain energized until the unit is reset.



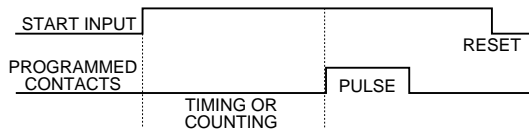
Interval Operation

The contacts are energized during the timing/counting cycle and then shut off at the end of the cycle.



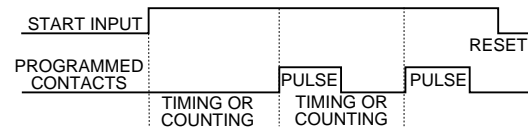
Pulse Output Operation

The contacts are energized at the end of the timing/counting cycle for a pulse which is user programmable. See **Front Panel Feature Programming** instructions for details on how to program the pulse length..

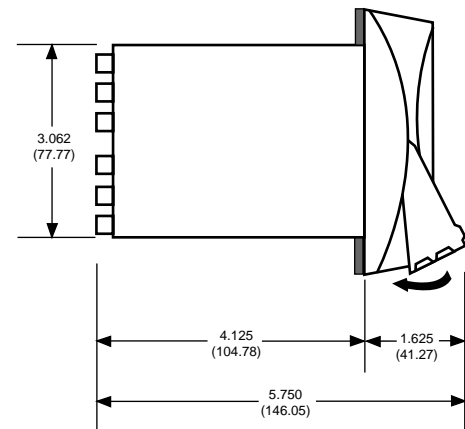
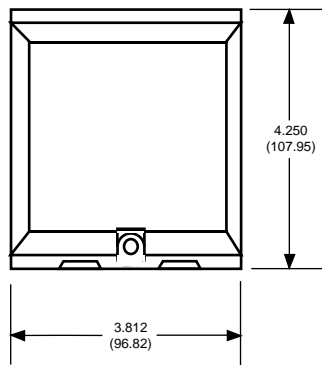
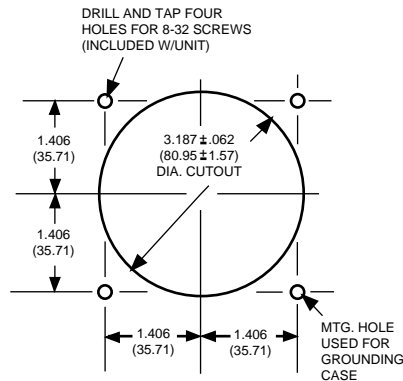


Pulse and Repeat Operation

The contacts are energized at the end of the timing/counting cycle for a pulse which is user programmable. At the same time that the cycle is completed and the pulse output begins, the timing/counting cycle resets and begins again. This repeat operation continues as long as the start circuit is energized.



MOUNTING



ENCLOSURES

| Model No. | NEMA Class | Description |
|-----------|------------|--|
| HN308 | 1 | Surface Mtg. with terminal block |
| HN364 | 1 | Surface Mtg. without terminal block |
| HN370 | 1A | Dual unit cabinet less unit cases and toggle switch, with 9 terminal block |

ACCESSORIES

| Model No. | Description |
|-----------|--|
| H-5331 | Mounting Brackets 2 req'd per timer |
| HP50-31 | One Hole Mounting Ring |
| HP50-131 | CYCL-FLEX Water-Sealed Housing |
| HP50-133 | Surface Mounting Adapter to use in place of brackets |
| PDM-534 | 1/4 DIN Adapter Plate |

ORDERING INFORMATION

OUTPUT TYPE

| Sym. | Description |
|------|--|
| 1 | 10A DPDT Instantaneous 5A SPDT Programmed 5A SPDT Early Trip |
| 4 | 1A Solid State Programmed 1A Solid State Early Trip |

CX4 **1** **2** **A6**

COUNTINPUT / TIME INHIBIT VOLTAGE

| Sym. | Description |
|------|--------------------------------|
| 1 | 12-50 VDC, 20-28 VAC, 50/60 Hz |
| 2 | 120 VDC, 120 VAC, 50/60 Hz |

VOLTAGE & FREQUENCY

| Sym. | Description |
|------|-------------------|
| A6 | 120 VAC, 50/60 Hz |