



Also see Series HP5E  
in Section 5 for Solid-  
State Model

*The high quality timer  
that has become an  
industry standard...  
knob setpoint, cycle  
progress pointer, pilot  
light, and patented  
plug-in housing*



The HP5 CYCL-FLEX® series timer is a high quality, synchronous motor driven reset timer housed in the standard CYCL-FLEX® plug-in housing.

- 16 standard time ranges from 5 seconds to 60 hours
- Knob adjustable time ranges - progress pointer for each
- Highly visible, calibrated dials (7.85 inch circumference)
- Easily read and well-spaced calibrations
- Red progress pointer displays remaining time interval
- Pilot light indicates when timer motor is energized
- Standard timers supplied with "power on" clutch operation
- Optional reverse action clutch will not reset on power failure
- 15 terminal ABS (UL rated 94V-0) molded housing has high impact resistance and will not support combustion

## OPERATION

Application of power to terminals 1, 2, and 11 energizes the clutch coil, closes contacts 9-10 and 6-8, and starts the timing period. At time out, contacts 4-3 close, 11-12 open, and the motor stops. The timer will remain in this condition until power is removed from the clutch coil.

Contacts 6-7-8 and 9-10-C are instantaneous contacts and operate with the application of power to the clutch coil. Contacts 3-4-5 and 11-12-A operate at time out with contacts 3-4-5 operating prior to contacts 11-12-A.

## SPECIFICATIONS

### Time Ranges:

| Sym. | Dial     | Minimum Setting | Dial Divisions | Repeat Accuracy |
|------|----------|-----------------|----------------|-----------------|
| 17   | 5 Sec.   | 1/6 Sec.        | .05 Sec.       | ±.05 Sec.       |
| 15   | 10 Sec.  | 1/3 Sec.        | 1/6 Sec.       | ±.05 Sec.       |
| 14   | 15 Sec.  | 1/2 Sec.        | 1/4 Sec.       | ±.08 Sec.       |
| 0    | 30 Sec.  | 1 Sec.          | 1/2 Sec.       | ±.15 Sec.       |
| 1    | 60 Sec.  | 2 Sec.          | 1 Sec.         | ±.3 Sec.        |
| 2    | 150 Sec. | 4.5 Sec.        | 2 Sec.         | ±.75 Sec.       |
| 3    | 5 Min.   | 9 Sec.          | 3 Sec.         | ±1.5 Sec.       |
| 4    | 10 Min.  | 20 Sec.         | 10 Sec.        | ±3 Sec.         |

### Time Ranges Cont.:

| Sym. | Dial     | Minimum Setting | Dial Divisions | Repeat Accuracy |
|------|----------|-----------------|----------------|-----------------|
| 18   | 15 Min.  | 30 Sec.         | 15 Sec.        | ±4.5 Sec.       |
| 5    | 30 Min.  | 1 Min.          | 1/2 Min.       | ±9 Sec.         |
| 6    | 60 Min.  | 2 Min.          | 1 Min.         | ±18 Sec.        |
| 7    | 150 Min. | 4.5 Min.        | 2 Min.         | ±45 Sec.        |
| 8    | 5 Hr.    | 9 Min.          | 3 Min.         | ±1.5 Min.       |
| 9    | 10 Hr.   | 20 Min.         | 10 Min.        | ±3 Min.         |
| 10   | 30 Hr.   | 1 Hr.           | 1/2 Hr.        | ±9 Min.         |
| 11   | 60 Hr.   | 2 Hr.           | 1 Hr.          | ±18 Min.        |

**Reset Time:** 1/2 second at max. setting

**Voltage/Frequency:** 120V (+10, -15%), 60 Hz  
240V (+10, -15%), 60 Hz

**Burden:** Motor: 2.45 VA, 120 VAC  
Clutch: 10.5 VA

**Output Rating:** 10 amps, resistive, 120 VAC  
5 amps, resistive, 240 VAC

**Electrical Lifetime:** Contingent on load characteristics. Average contact life at full load is 250,000 operations. At 1 amp load, switch life increases to 5 million cycles. Inrush current should not exceed 10 amps.

**Power On Response:** 28 ms average pull-in  
17 ms average drop-out

**Temperature Range:** 0° to 140°F (-18° to +60°C)

**Vibration:** Unaffected by 2.5G sinusoidal vibration magnitudes in both directions of three perpendicular mounting axes imposed from 10 to 900 Hz

**Approximate Weight:** 2 lb. 14 oz.

**Agency Approvals:** UL Recognition E61735  
UL Recognition 71726 (Feature 92 only)  
CSA Certification LR26861  
CSA Certification (Feature 92 only)  
FM Approval 15030  
RoHS

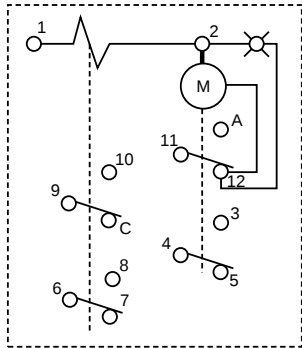
# OPERATION

## Standard and Reverse Start

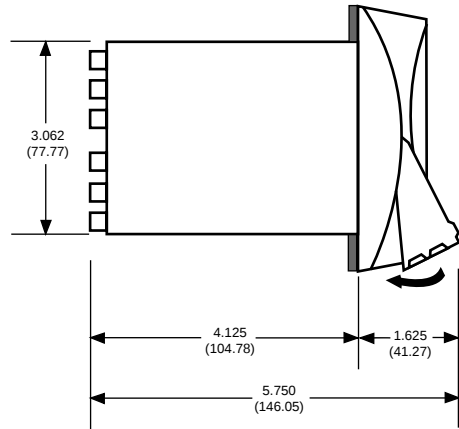
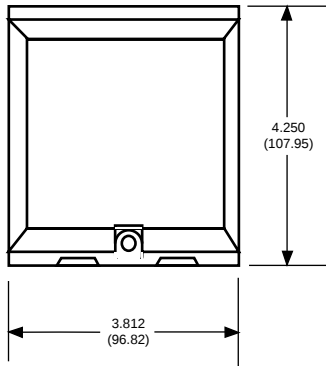
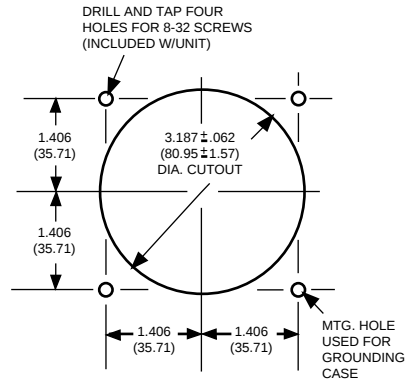
Instantaneous contacts 9-10-C and 6-7-8 operate directly with the clutch offering different sequences of operation depending on the control circuit configuration.

Delayed contacts 4-3 and 11-A close and contacts 4-5 and 11-12 open when timer reaches a timed out condition. Contacts 4-5 and 11-12 close and contacts 4-3 and 11-A open when timer is reset.

## Schematic Diagram



# MOUNTING



# ORDERING INFORMATION

## TIME RANGE

| Sym. | Description | Sym. | Description |
|------|-------------|------|-------------|
| 17   | 0-5 Sec.    | 18   | 0-15 Min.   |
| 15   | 0-10 Sec.   | 5    | 0-30 Min.   |
| 14   | 0-15 Sec.   | 6    | 0-60 Min.   |
| 0    | 0-30 Sec.   | 7    | 0-150 Min.  |
| 1    | 0-60 Sec.   | 8    | 0-5 Hr.     |
| 2    | 0-150 Sec.  | 9    | 0-10 Hr.    |
| 3    | 0-5 Min.    | 10   | 0-30 Hr.    |
| 4    | 0-10 Min.   | 11   | 0-60 Hr.    |

## VOLTAGE & FREQUENCY

| Sym. | Description |
|------|-------------|
| A6   | 120V, 60 Hz |
| B6   | 240V, 60 Hz |

## FEATURES

| Sym. | Description                                                                                                        |
|------|--------------------------------------------------------------------------------------------------------------------|
| 01   | Reverse Clutch Arrangement                                                                                         |
| 07   | Dial Lock                                                                                                          |
| 19   | Revision for Mtg. to HN383 Explosion Proof Cabinet. Add when purchased without cabinet. DOES NOT have pilot light. |
| 22   | Water Resistant Window & Housing                                                                                   |
| 92*  | Enclosed in HN383 Explosion Proof Cabinet                                                                          |

\*Laboratory Testing: UL Recognition E61735  
CSA Certification LR45132-1

# ENCLOSURES

| Model No. | NEMA Class | Description                                                                              |
|-----------|------------|------------------------------------------------------------------------------------------|
| HN308     | 1          | Surface Mtg. with terminal block                                                         |
| HN364     | 1          | Surface Mtg. without terminal block                                                      |
| HN368     | 1A         | Dual unit cabinet with 9 position terminal block, timer housings, and DPST toggle switch |
| 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                                               |
| HP50-103  | 120 VAC, 50/60 Hz Repeat Cycle Kit<br>Not applicable with Feature 19 |
| HP50-131  | CYCL-FLEX® Water-Sealed Housing                                      |
| HP50-133  | Surface Mounting Adapter to use in place of brackets                 |
| HP50-295  | Dial Lock                                                            |