Motor-Driven Analog Reset Timer

Noted for its circuit flexibility, the 305 also provides the highest accuracy among analog timers. Available for either ON-Delay or OFF-Delay operation.

The 305 provides delay, interval or pulse timing function for up to 7 load circuits through two instantaneous and two delayed switches. It features a plug-in design and cycle progress indication.

HIGHEST ACCURACY: Because of its exclusive infinite engagement clutch, the 305 has a repeat accuracy of 0.2%, highest of any timer in its class.

PLUG-IN AND DUST-TIGHT DESIGN: By virtue of its true plug-in design, the body of a 305 can be replaced in seconds without disturbing the housing or disconnecting the wiring. Its gasketed dial assembly forms a dust-tight seal against the housing, whether panel or surface-mounted.

FASTEST RESET: All 305 timers reset to a full-scale setting within 0.1 second, proportionately faster for shorter settings.

CIRCUIT FLEXIBILITY: All the contacts of its two instantaneous and two delayed load switches are externally accessible at a 14 point terminal block.

LONGEST LIFE: With an average mechanical life expectancy of over 5,000,000 operations before the first failure, the 305 is the leader in its class.

PILOT LIGHT: A built-in pilot light indicates that the timer is running.

### OPERATION

The 305 is a synchronous motor-driven timer with an electrically-operated clutch equipped either for ON-Delay or OFF-Delay operation.

ON-DELAY: When power is applied (start signal on), the clutch solenoid is energized. Two things happen immediately and simultaneously, the instantaneous switches transfer from one set of contacts to the other, and the motor begins to drive the cycle progress pointer toward zero.

At the end of the timed period, the pointer trips one of the delayed switches, a brief time later (about 1/2% of full scale), the other delayed switch is tripped, stopping the timer motor but leaving the clutch engaged. The timer does not reset until power to the clutch is removed.

OFF-DELAY: Timing starts when power is removed (start signal off), from the spring-loaded, normally engaged clutch. The timer is reset when power is restored to the clutch solenoid; simultaneously, the instantaneous contacts are tripped. Action of the delayed contacts is the same as with ON-Delay timers. A power outage stops the motor but does not reset the OFF-Delay 305E.
### ELECTROMECHANICAL TIMER

#### ELECTROMAGNETIC TIMER 305E Series

#### SPECIFICATIONS

**MODELS**
- ON-Delay
- OFF-Delay

**RANGES (AC)**
- 13 standard ranges, from 6 SEC to 60 HRS at 60 Hz.

**REPEAT ACCURACY**
- AC MODELS: – 0.2% of full scale (For ranges of 60 SEC or less, it may be necessary to run timer motor before start to achieve related accuracy)

**RESET TIME**
- 0.1 SEC, full scale

**MIN. SETTING**
- 1/60th of range (all models except 0.3 SEC for 6 SEC model)

**DIAL DIVISIONS**
- 6 SEC, 60 SEC, 120 SEC, 240 SEC,
- 60 MIN, 240 MIN, 6 HR, and
- 60 HR = 120 Dial Divisions
- 30 SEC, 15 MIN, 30 MIN, 15 HR.,
- and 30 HR = 150 Dial Divisions

**LIFE EXPECTANCY**
- MECHANICAL: over 5,000,000 operations
- CONTACTS: 3,000,000 operations under resistive or inductive load of 1A

**TIMING MOTOR**
- Synchronous, permanently lubricated

**TIMING**
- Single cycle interval or delay

**LOAD SWITCHES**
- INSTANTANEOUS: two, each SPDT; self cleaning, heavy-duty silver contacts.
- DELAYED: two, each SPDT; precision type, silver contacts

**CONTACT RATING (non-inductive):**
- 10 amps, 120 VAC
- 5 amps, 240 VAC

**PILOT LIGHT**
- Wired in parallel with motor.

**TERMINALS**
- 14 screw terminals accessible at rear; integral wiring diagram on timer housing.

**HOUSING**
- Plug-in design; completely gasketed, dust-tight when surface or panel-mounted

**POWER REQUIREMENTS**
- AC MODELS: 120, 60Hz (all ranges), (– 10%, – 10%)
- AC MODELS: running current 0.128 A (115 VAC)
- inrush current 0.628 A (115 VAC)

**TEMPERATURE RATING**
- 32° to 140°F (0° to 60°C)

**WEIGHT**
- NET: 2 lb., 6 oz. SHIPPING: 2 lb., 12 oz.

**MOUNTING ACCESSORIES**
- STANDARD: Hardware is provided to mount timer so that it is dust-tight from front of panel.
- OPTIONAL: Surface mounting with rear-facing terminals. (See Accessories)
ELECTROMECHANICAL TIMER

MODEL NUMBER

MODEL NUMBER  305E  [ ]  [ ]  [ ]  0  [ ]  [ ]

RANGE

VOLTAGE & FREQUENCY

ARRANGEMENTS

ON-DELAY (reset on power interruption)  1
OFF-DELAY (non-reset on power interruption)  2
Special  0

SETTING

Knob  0

FEATURES

Basic plug-in timer  P
Standard Timer  X
Basic standard unit  X
Special  K

ACCESSORIES:
Surface mounting bracket rear facing terminals  0305-263-64-00

TYPICAL INSTALLATIONS

CLUTCH SOLENOID
MOTOR
INDEPENDENT LOADS
DEPENDENT LOADS
MOMENTARY STARTING CONTACT
SUSTAINED STARTING CONTACT
LOAD ENERGIZED
LOAD DE-ENERGIZED
DELAYED CONTACTS
Switch 4-5-3 transfers at dial "0." Sweep 11-12-13 transfers 1% later.

INSTANTANEOUS CONTACTS
Contacts are transferred when clutch is energized; transferred back, as shown when de-energized.

ON-DELAY - Reset on power failure.
OFF-DELAY - Non-reset on power failure.

SUSTAINED START (ON DELAY)  MOMENTARY START (ON DELAY)  OFF DELAY

INDEPENDENT LOAD LINE

All timers shown in "before start" position. Diagrams shown with power off unless otherwise marked. Maximum load current through any load carrying contact is 10 amperes.