

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

The 305E 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 305E 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 305E is the leader in its class.

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



Motor-Driven Analog Reset Timer

OPERATION

The 305E 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.

SWITCH	CONTACTS	ON DELAY				
		Timing Sequence**				
		Before Start	During Cycle	*		End of Cycle
Instantaneous	14-9/6-8					
	14-10/6-7					
Delayed (D ₂)	11-12					
	11-13					
Delayed (D ₁)	4-5					
	4-3					

*D₂ trips approximately 1/2% of range after end of cycle.
 ** Assumes a sustained closed start signal (i.e. longer than the dial set time).

SWITCH	CONTACTS	OFF DELAY				
		Timing Sequence**				
		Before Start	During Cycle	*		End of Cycle
Instantaneous	14-9/6-8					
	14-10/6-7					
Delayed (D ₂)	11-12					
	11-13					
Delayed (D ₁)	4-5					
	4-3					

*D₂ trips approximately 1/2% of range after end of cycle.
 ** Assumes a sustained open start signal (i.e. longer than the dial set time).
 Shown power on.

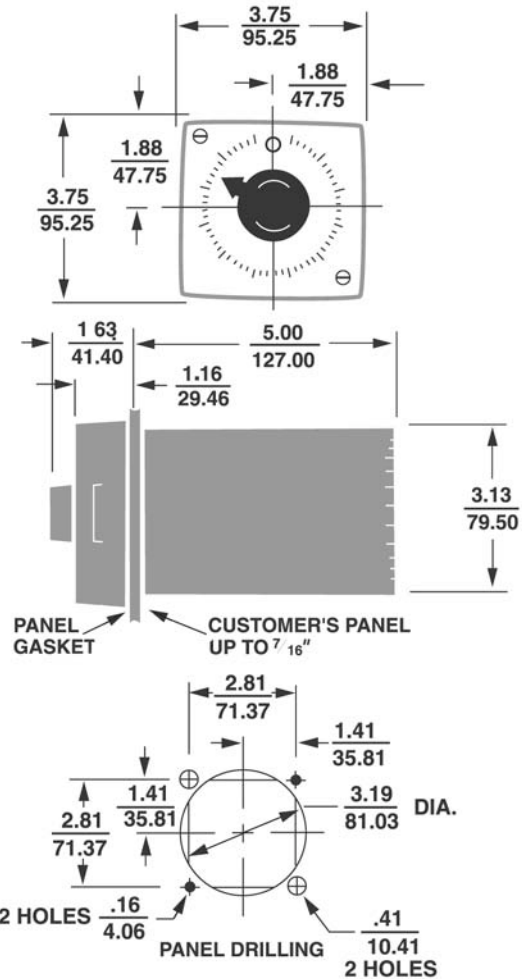
BLACK—Circuit Closed

GRAY—Circuit Open

SPECIFICATIONS

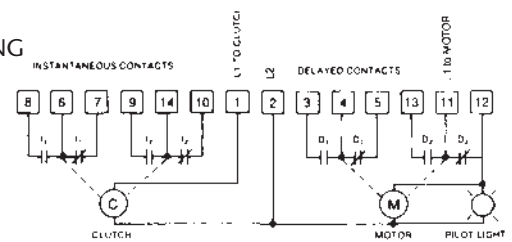
MODELS	ON-Delay OFF-Delay
RANGES (AC)	16 standard ranges, from 6 SEC to 60 HRS at 60 Hz (7 SEC to 70 HRS at 50 Hz) other ranges on special order.
REPEAT ACCURACY	AC MODELS: $\pm 0.2\%$ of full scale (For ranges of 60 SEC or less, it may be necessary to run timer motor before start to achieve related accuracy) DC MODELS: $\pm 1.75\%$ of full scale at constant ambient temperature and $\pm 15\%$ voltage variation (48, 125 and 250V models); $\pm 3.5\%$ of full scale at constant voltage and 32 to 120°F ambient temperature variations (all models).
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, 6 MIN, 60 MIN, 120 MIN, 240 MIN, 6 HR, and 60 HR — 120 Dial Divisions 15 SEC, 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 MODES	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 1/4 amp, 115 VDC
PILOT LIGHT	Wired in parallel with motor; standard with all AC and DC models
TERMINALS	14 screw terminals accessible at rear; integral wiring diagram on timer housing (On DC timers, terminal 10 is not available for load circuit use on units rated 48 VDC or higher)
HOUSING	Plug-in design; completely gasketed, dust-tight when surface or panel-mounted
POWER REQUIREMENTS	AC MODELS: 120 or 240V, 50/60 Hz (all ranges), ($\pm 10\%$, - 10%) DC MODELS: 48, 125 or 250V with zener regulations; 28V without zener regulation. 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 front or rear-facing terminals. NEMA 12 (See Accessories)

DIMENSIONS (INCHES/MILLIMETERS)

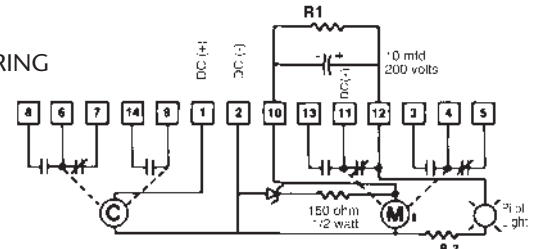


WIRING

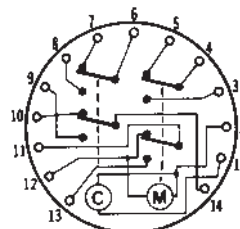
AC WIRING



DC WIRING



TERMINAL WIRING



UNIT RATING	RESISTOR VALUES	
DC VOLTS	R1	R2
48	800	500
125	4K	30K
250	10K	150K

CAUTION! Power for motor must be jumped from Terminal 1 to 11. Do NOT apply power to Terminal 12.

