

# Series 342

## Multi-Range Repeat Cycle Timer



**DIMENSIONS**  
INCHES  
MILLIMETERS



### PRODUCT HIGHLIGHTS

#### LOWER INSTALLATION COSTS

For repeat cycle applications, a single 342 timer does the job of two ordinary timers. Installation cost is cut by more than half; a single panel cutout is required and wiring is simplified since the 342 is prewired to perform flip-flop repeat cycle timing control.

#### MULTIPLE RANGES REDUCE INVENTORY REQUIREMENTS

The 342 incorporates six switch-selected ranges for each of its two timing circuits. A single 342 thus provides any dial-adjustable timing period between 50 ms and 10 hours for each cycle of the flip-flop operation. Thus you need stock only one timer—and only one model of that timer—to satisfy all your needs.

#### PROGRAMMABLE RELAY OPERATION

The 342's DPDT relay can be energized either during the first timing cycle (T1) or during the second (T2) simply by moving a push-on connector from one programming pin to another on the circuit board. Thus you can change load operation from one set of contacts to the other (N O to N C) without changing the wiring.

#### CYCLE PROGRESS INDICATION

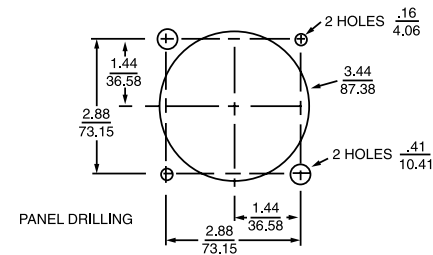
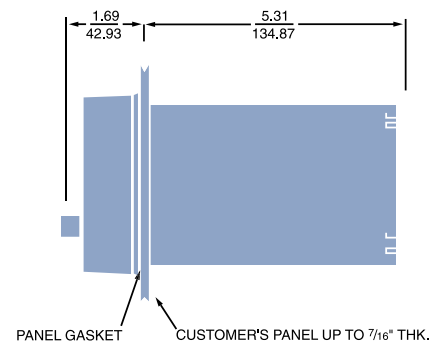
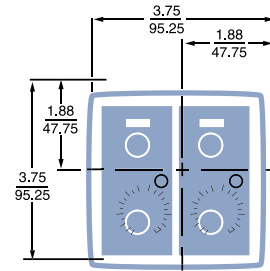
The 342's two pilot lights provide a unique and effective method of cycle progress indication in the minutes and hours timing ranges ... blinking at an ever-increasing rate as the cycle progresses. In the 1 and 10-second ranges, the pilot light is **off** before timing cycles and steady **on** during timing.

#### DESIGNED FOR INDUSTRIAL SERVICE

In the 342, a number of features and characteristics have been incorporated to ensure a long trouble-free life expectancy, even in difficult industrial environments: transformer-isolation for high noise immunity; reliable relay rated for 100,000,000 mechanical operations; oscillator-based timing circuit for high accuracy even with changes in temperature and voltage; and a versatile mounting capability in a compact housing that is dust and impact-resistant.

#### APPROVALS

See Agency Listing on page 391.

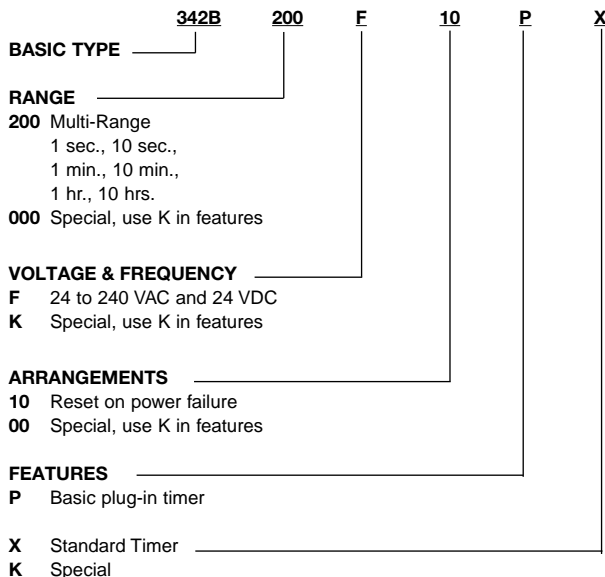


***A repeat cycle timer with two separately adjustable MOS digital timing circuits, the 342 is prewired to provide Flip-Flop operation of a DPDT load relay. The 342 also features cycle progress annunciation and multiple range adjustability for each circuit.***

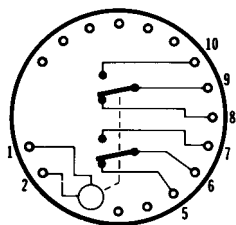
## OPERATION

The 342 is a repeat-cycle timer that operates continuously through its two timing ranges (T1 and T2), one after the other, transferring the relay contacts as it times out of each range. There is no start circuit and the timer resets on power interruption. The first timing range (T1) begins and the relay is energized when line voltage is applied to the *Run* terminals of the 342. The relay is de-energized when T1 times out and it remains de-energized until T2 times out ... at which time the relay is energized and the flip-flop cycle is repeated. The pattern of relay operation can be reversed — de-energized during T1 and energized during T2 — by changing a push-on connector from one pin to another on the circuit board; no wiring change is required.

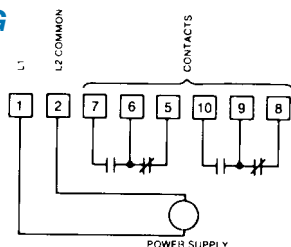
## ORDERING CODE



## TERMINAL WIRING



## WIRING



Before starting your design, read the safety statement on the inside back cover of the ATC catalog.

## SPECIFICATIONS

<b>Timing Mode</b>	Repeat cycle: resets on power interruption. DPDT relay can be energized either during the first timing cycle (T1) or during the second (T2) simply by moving the PCB jumper.
<b>Range</b>	Six independent continuously adjustable switch-selected ranges for each timer: 1 sec.                    10 min. 10 sec.                  1 hr. 1 min.                    10 hr.
<b>Contact Rating</b>	Load Relay Type: DPDT Rated 10 Amps resistive at 30 VDC or 250 VAC (or less); 1/8 HP @ 120 VAC; 1/4 HP @ 240 VAC; 240 VA @ 240 VAC <b>Life:</b> 10 million operations with no load 100,000 operations with: 10 Amps at 30 VDC (or less) or 10 Amps at 250 VAC (or less) <b>Contact Material:</b> Silver Cadmium Oxide
<b>Temperature Rating</b>	-18°C to 60°C (0° to 140°F)
<b>Noise Immunity</b>	Showering arc per NEMA ICS 2-230, in addition the 342B will withstand a voltage surge of 4500 volts for 50 usec. without damage.
<b>Mounting</b>	<b>Standard:</b> Hardware is provided to mount timer from front panel through cutout. <b>Optional:</b> Bracket and hardware for surface mounting. NEMA 12 molded case; DIN size (96mm x 96mm)
<b>Housing</b>	Plug-in design; dust, moisture and impact resistant molded plastic case case; DIN size (96mm x 96mm)
<b>Power Requirements</b>	Universal power supply- DC polarity insensitive. Unit will accept power from: 24 to 240 VAC, 50 or 60 Hz, (+10%, -20%) 24 VDC, (+20%, -20%) AC: Inrush - 1.5 Amps Power required - 2 Watts DC: Peak Inrush current = 1.5 Amps @ 24 VDC Maximum ripple @ 100 Hz - 5% Current required - 50 ma Power required - 1.2 Watts
<b>Repeat Accuracy</b>	Any voltage (constant temperature); ±1%* Any voltage (32°F to 140°F); ±3%* Any voltage (0° to 140°F); ±4% *Variation from average actual time.
<b>Minimum Setting</b>	2% of range, with the exception of 50 msec on the 1 second range
<b>Setting Accuracy</b>	± 10% of range
<b>Reset</b>	a: 0 to 20 msec power interruption; guaranteed no reset b: 20 to 65 msec; it may reset (40 msec typical reset) c: Over 65 msec guaranteed to reset. The TDR will reset properly and not start timing when subjected to an open power switch leakage of 1.5 mA or less. (Prox. switch and Triac drive Applications).
<b>Pilot Lights</b>	LED cycle progress annunciator for each timer
<b>Weight</b>	1 lb. (454g)