

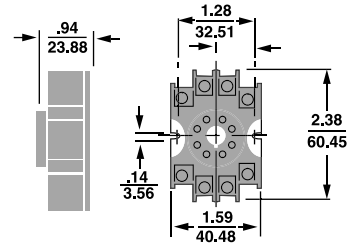
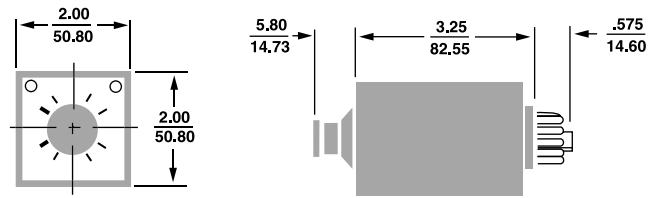
# 319 SERIES

Plug-In Adjustable AC/DC

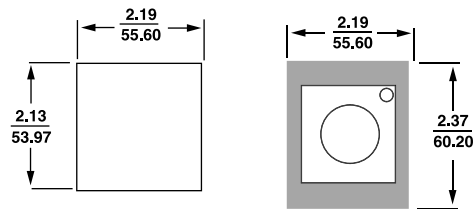


DIMENSIONS  
INCHES  
MILLIMETERS

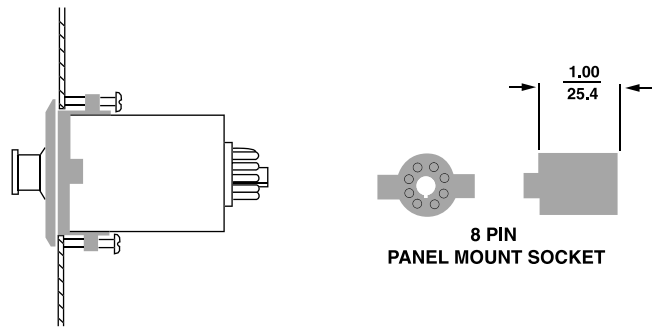
TIME DELAY  
RELAYS



8 PIN OPTIONAL OCTAL SOCKET



PANEL MOUNT BEZEL



8 PIN  
PANEL MOUNT SOCKET

An economical solid-state TDR with octal plug-in base, the ATC 319 maintains excellent repeat accuracy despite wide voltage and temperature variations, even after long periods of down-time. One model has five dial-selected adjustable ranges and provides any timing period between 0.02 SEC and 30 MIN; Lower-cost models incorporate three dials elected ranges or a single adjustable range.

## PRODUCT HIGHLIGHTS

### WIDE CHOICE OF RANGES

In addition to the short ranges expected of an electronic TDR, the 319E is also available with ranges as long as 100 minutes, for AC or DC operation. An unusually versatile model, the 319E five ranger has five dial-selected ranges—from 0.3 sec to 30 min—and provides any dial-adjustable timing period between 0.02 seconds and 30 minutes; (1, 10 and 100 sec and 10 and 100 min). A single 319E model thus accommodates the needs of a wide range of applications, allowing the user to select—easily and precisely—an appropriate range to permit optimum setting accuracy. The dial face automatically displays the selected range. The 319B offers a choice of five dial-adjustable fixed ranges between 1 sec. and 30 sec.

### CYCLE PROGRESS INDICATION

#### MODEL 319E

All options incorporate a light-emitting diode (LED) which is **on** during the time cycle, **off** at the end of timing. The 5-range option also includes a second LED which separately indicates the status of the output relay: **on** when energized, **off** when de-energized.

### HIGH ACCURACY

The 319's timing circuit is not subject to the large *plus* error that plagues many electronic TDRs after long periods of down-time: it maintains rated accuracy regardless of reset time variations, provided that there is at least 0.1 sec between cycles for Model 319E; or at least 10 sec between cycles for Model 319B. All models hold unusually high repeat accuracy in the face of wide voltage and temperature swings.

## OPERATION

### Model 319E

Timing begins when the start switch is closed. At the same time, the Timing LED goes on and a relaxation oscillator starts to run at a rate determined by the set-pot. The 319E times out when the oscillator count is equal to the level set by the range switch, a second LED turns on at time-out. At time-out, the load relay is energized, transferring its contacts. Reset occurs when the start switch is opened or when power is interrupted.

## SPECIFICATIONS

### For All Models

**MODELS** Choice of two:  
 (319E--AC or DC; 5 dial-selected adj. ranges)  
 (319B--AC; single adj. range)

All models operate in **on-delay** mode only

### LOAD RELAY

TYPE: DPDT (2 Form C)

LIFE: AC: 50,000,000 operations  
 (no load)

DC: 100,000,000 operations  
 (no load)

CONTACT RATING:

AC: 7A resistive at 120 or 240V

DC: 3A at 30V

### TEMPERATURE RATING

32° to 158°F (0° to 70°C)

### WEIGHT

NET: 6 oz.

SHIPPING: 10 oz.

### MOUNTING

Plug-in octal base; mounts in any position.

OPTIONAL: Surface-mounting socket; panel-mounting bezel kit and plug-on socket kit for Model 319D.

### HOUSING

Dust, moisture and impact-resistant molded plastic case.

### SETTING ACCURACY

10% at full scale

### For Model 319E

#### RANGES AND MINIMUM SETTING

Model 319E-030F:

five dial-selected ranges:

0.02 sec — 0.3 sec

0.07 sec — 3.0 sec

0.6 sec — 30.0 sec

3.5 sec — 3.0 min

35.0 sec — 30.0 min

Model 319E-100F:

0-1 sec. — .003 sec.

0-10 sec. — .1 sec.

0-100 sec. — 1 sec.

0-10 min. — 6 sec.

0-100 min. — 60 sec.

### REPEAT ACCURACY

Varies as a function of line voltage and temperature but not of reset time (see Recycle Characteristics):

± 1% of range or 2.0 ms (whichever is greater), when temperature is constant and line voltage is constant or varies within limits\*

± 4% of range or 2.0 ms (whichever is greater), when line voltage is constant and temperature varies within limits\*

± 6% of range or 2.0 ms (whichever is greater), when line voltage and temperature vary within limits\*

\*Variations of line voltage must be within 95 and 132V; of temperature between 0° and 70°C (32° and 158°F)

### RECYCLE CHARACTERISTICS

When 0.1 sec or longer of reset time is allowed after time-out or after power interruption, the next cycle is timed at full repeat accuracy; when only 0.07 sec is allowed, the next cycle is shortened by as much as 1%.

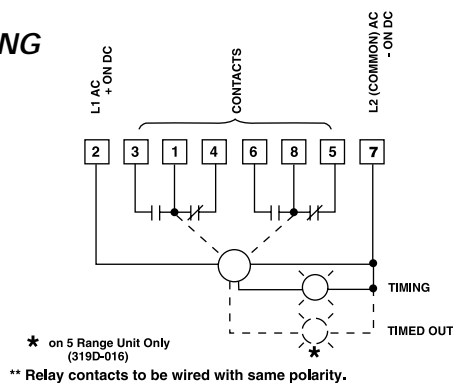
### RESET

5 ms if power is interrupted any time *after* time-out; 70 ms if power is interrupted *during* timing.

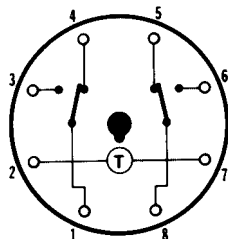
### POWER REQUIREMENTS

24 - 240 VAC or 24 VDC

### WIRING



### TERMINAL WIRING



### ORDERING CODE

	<b>319E</b>	<b>030</b>	<b>F</b>	<b>1</b>	<b>C</b>
<b>BASIC TYPE</b>					
<b>RANGE</b>					
	<b>030</b>	Five dial-selected ranges (0.3 sec., 3 sec., 30 sec., 3 min., 30 min.)			
	<b>100</b>	1 sec., 10 sec., 100 sec., 10 min., 100 min.			
<b>VOLTAGE &amp; FREQUENCY</b>					
	<b>F</b>	24-240 VAC, 24 VDC			
<b>ARRANGEMENT</b>					
	<b>1</b>	On-Delay			
	<b>0</b>	Special			
<b>FEATURES</b>					
	<b>C</b>	Standard			
	<b>K</b>	Special			

### ACCESSORIES

- 0000-825-85-00: Surface/DIN rail mounting socket
- 0000-825-64-00: Surface mounting socket
- 0319-025-06-00: Retaining clip for mounting socket
- 0319-261-44-00: Panel mount bezel kit
- 0319-261-45-00: Panel mount socket kit, 8-pin