

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 dial selected ranges or a single adjustable range.

**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 319 offers a choice of five dial-adjustable fixed ranges between 1 SEC and 30 SEC.

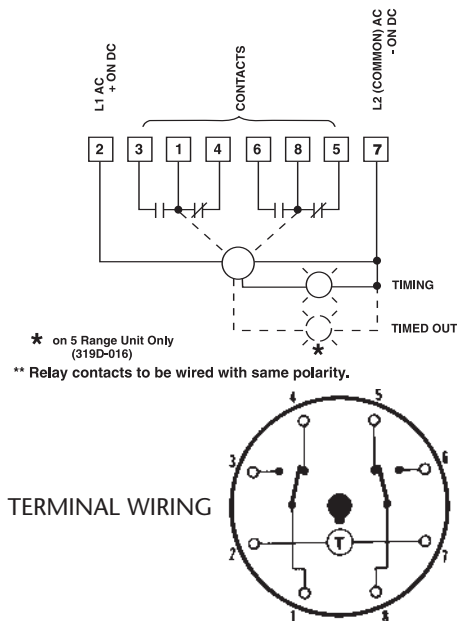
**CYCLE PROGRESS INDICATION—MODEL 319E:** All options incorporate a light-emitting diode (LED) which is on during the time cycle, off at the end of timing. The 5-range option also includes a second LED which separately indicates the status of the output relay: on when energized, off when de-energized.

**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. All models hold unusually high repeat accuracy in the face of wide voltage and temperature swings.

**OPERATIONS**

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.

**WIRING**



Plug-In Adjustable AC/DC TDR

MODEL NUMBER >>>>>>	319E	F	
Range			
Five dial-selected ranges (0.3 SEC., 3 SEC., 30 SEC., 3 MIN, 30 MIN)	030		
1 SEC., 10 SEC, 100 SEC, 10 MIN, 100 MIN	100		
Voltage & Frequency		F	
24-240 VAC, 24 VDC			
Arrangement			
On-Delay	1		
Special	0		
Features			
Standard	C		
Special	K		
Accessories			
Surface/DIN rail mounting socket	0000-825-85-00		
Surface mounting socket	0000-825-64-00		
Retaining clip for mounting socket	0319-025-06-00		
Panel mount bezel kit	0319-261-44-00		
Panel mount socket kit, 8-pin	0319-261-45-00		

Time Delay Relays // 319 Series

## SPECIFICATIONS

MODELS	319E-AC or DC; 5 dial-selected adj. ranges	
	All models operate in on-delay mode only	
RANGES AND MINIMUM SETTINGS	Model 319E-030F	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
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)	
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.	
POWER REQUIREMENTS	24 - 240 VAC or 24 VDC	
SETTING ACCURACY	10% at full scale	
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 mSEC (whichever is greater), when temperature is constant and line voltage is constant or varies within limits*	
	± 4% of range or 2.0 mSEC (whichever is greater), when line voltage is constant and temperature varies within limits*	
	± 6% of range or 2.0 mSEC (whichever is greater), when line voltage and temperature vary within limits*	
RESET TIME	5 mSEC if power is interrupted any time after time-out; 70 mSEC if power is interrupted during timing.	
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%.	
HOUSING	Dust, moisture and impact-resistant molded plastic case.	
WEIGHT	NET: 6 oz. SHIPPING: 10 oz.	

## DIMENSIONS (INCHES/MILLIMETERS)

