

# 319D TDR SS



INSTALLATION  
INSTRUCTIONS  
SEPTEMBER 2000

## OPERATION:

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 319D times out – and the Timing LED turns off – when the oscillator count is equal to the level set by the range switch.

At time-out, the load relay is energized, transferring its contacts, and the timing circuit is automatically

de-energized. Reset occurs when the start switch is opened or when power is interrupted.

With the 5-range option, a second LED (labeled Timed Out) turns on when the load relay is energized at time-out; and off when the start switch is opened or power is interrupted.

## MOUNTING:

Mounting position of the 319D is not critical. However, the use of a retaining clip is recommended. To surface mount, use an ATC surface mounting socket No. 00008256400, with a retaining clip No. 03190250200.

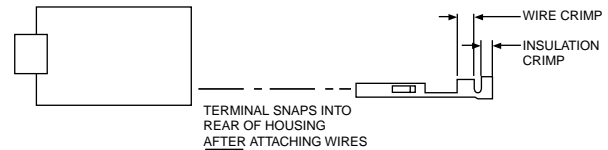
To panel mount, cut a 2 1/8" square cutout.

1. Position the bezel with the mounting screws on the side.
2. Snap the bezel assembly through the front of panel hole.

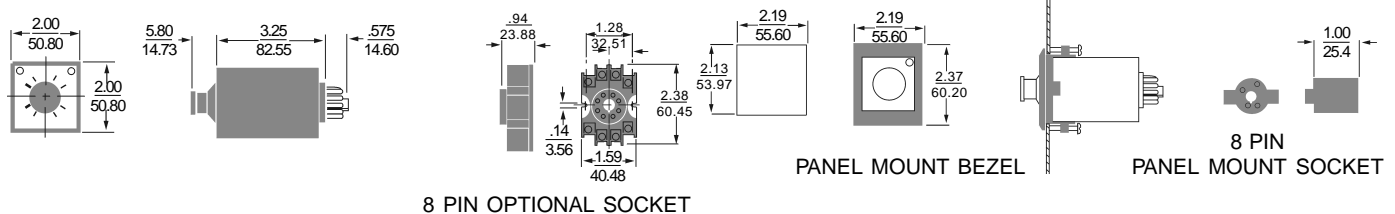
3. From the rear of the panel, loosely fit the mounting screws into the holes.
4. With the timer scale facing up, snap the unit into the bezel from the rear of the panel so it is retained in the cutout.
5. Tighten the mounting screws. Do not over-tighten.

Use ATC No. 03192614500 for plug-on panel mounting. Attach the wires to the solderless connector with a crimping tool.

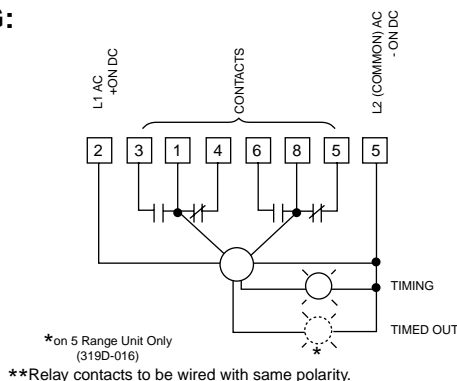
### Wire Attachment Instructions



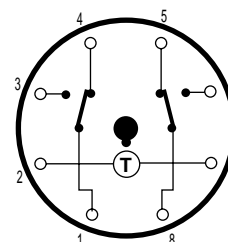
## DIMENSIONS:



## WIRING:



## TERMINAL WIRING:



**LOCKING THE RANGE SETTING:**

Set required range. Remove knob, loosening with size 3/64 Allen Wrench. Pull off knob. Remove pin from end of shaft. Insert pin in either empty hole which will lock unit in position. Turn shaft ccw and replace knob with pointer at zero. Tighten set screw.

**SETTING THE RANGE:**

You have received either a 3-range or 5-range model; in either case you have to set the range. Position the knob near mid scale. Pull the spring loaded knob out and twist cw to increase to a longer range, turn ccw to decrease down to a smaller range. A click will be heard as you make the progression through the ranges. See Specifications for minimum and maximum ranges. All graphs and electrical connections are switched by rotating the knob.

**SPECIFICATIONS:**

**MODELS**

Choice of two:  
 319D-016 has **five** dial-selected ranges, from 0.3 sec to 30 min. Available in 24 VAC, 120 VAC, 240 VAC, and 24 VDC.  
 319D-134 has **three** dial-selected ranges, from 1 sec to 100 sec. Available in 24 VAC, 120 VAC, 240 VAC.  
 Both operate in **on delay** mode only

**RANGES AND MIN. SETTING**

	Range	Min. Setting
319D-016:	0-0.3 sec	0.02 sec
	0-3 sec	0.07 sec
	0-30 sec	0.6 sec
	0-3 min	3.5 sec
	0-30 min	35.0 sec
319D-134:	0-1 sec	0.04 sec
	0-10 sec	0.2 sec
	0-100 sec	2.0 sec
319D-360:	0-1 min	2.5 sec
	0-10 min	23.0 sec
	0-100 min	3.0 min

**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 setting or 2.0 ms, when temperature is constant and line voltage is constant or varies within limits\*  
 ±4% of setting or 2.0 ms, when line voltage is constant and temperature varies within limits\*  
 ±6% of setting or 2.0 ms, 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 interval is timed at full repeat accuracy; when only 0.07 sec is allowed, the next interval is shortened by as much as 1%.

**RESET**

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

**LOAD RELAY**

TYPE: DPDT, hard-wired  
 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

**POWER REQUIREMENTS**

120V AC: 95 to 132V, 50/60 Hz, .011A  
 240V AC: 190 to 264V, 50/60 Hz, .011A  
 24V AC: 19 to 28V, 50/60 Hz, 0.05A  
 24V DC: 19 to 28V, 0.05A (5 Ranger Model Only) 50% Ripple Max.

**TEMPERATURE RATING**

0° to 70°C (32° to 158°F)

**WEIGHT**

NET: 6 oz  
 SHIPPING: 10 oz

**MOUNTING**

Plug-in octal base; mounts in any position. Optional Surface mounting socket.

**HOUSING**

Dust, moisture and impact-resistant molded plastic case.



**A WORD ABOUT SAFETY**

Most of ATC's products are designed for general and not for specific applications. Because of this, we usually are not aware of how they eventually will be used. However, they are frequently employed in controlling automatic machinery or processes. Although ATC makes products of high reliability, every product, given enough time, can be expected to fail. Statistically, devices can fail at any time. Failure typically means failure to provide logic signal or power to an electrical load when it should or to provide it when it should be absent. Less often, failure means failure to meet some other specification. Since the failure of automatic machinery or processes can create hazardous conditions for personnel or property, whatever the definition of failure might be, it is necessary to consider the consequences of failure and design in such a way that failure will not create a hazard to personnel or property. The design must insure that any failure will result in a fail safe condition and there will be no danger to personnel and/or property involved in the use of the product. Designs incorporating controls of any kind should be carefully considered to provide for their eventual failure.

**Important Notice**

Our recommendations, if any, for the use of this product are based on tests believed to be reliable. The greatest care is exercised in the selection of our raw materials and in our manufacturing operations. However, since the use of this product is beyond the control of the manufacturer, no guarantee or warranty, express or implied is made as to such use or effects incidental to such use, handling or possession or the results to be obtained, whether in accordance with the directions or claimed so to be. The manufacturer expressly disclaims responsibility therefore. Furthermore, nothing contained herein shall be construed as a recommendation to use any product in conflict with existing laws and/or patents covering any material or use.



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