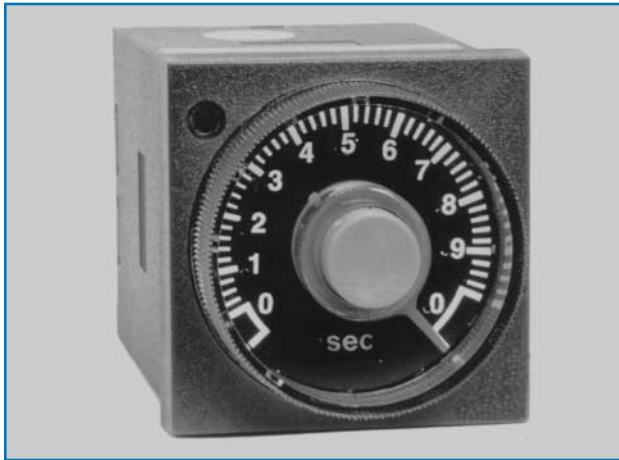


# Series 409

## 1/16 DIN Push-Button Timer



### PRODUCT HIGHLIGHTS

#### PUSH BUTTON START/INTERVAL TIMING MODE

The 409 has a Push Button built into its front dial. When pressed, the timer starts and provides an interval time delay. The 409 has a set of DPDT output contacts. When the Push Button is pressed with power applied, the contacts immediately transfer. After the timer has timed out, the contacts release.

#### UNIVERSAL POWER SUPPLY

All 409 timers can be powered using 24-240 VAC or 24 VDC power, greatly simplifying ordering and inventory management of replacement units.

#### HIGH ACCURACY

The 409's timing circuit is not a simple RC circuit. It utilizes the sophistication of a proprietary integrated circuit that includes counting technology along with a stable oscillator to provide repeatable time delays.

#### 48mm<sup>2</sup> DIN HOUSING

The 48mm<sup>2</sup> (1/16 DIN) housing is compact and is watertight when panel mounted. The 409 is mounted in an 8-pin round (octal) socket. With an optional mounting clip, the 409 can be panel mounted.

The Dial on the 409 is extra large and is easy to read. When fractional ranges are selected, decimal points are clearly indicated.

The Range select switch is located on the side of the unit, so that when panel mounted, this switch is not accessible to the operator. This tamper proof feature prevents unauthorized or hazardous changes to the timing range from being made.

#### CYCLE PROGRESS INDICATION

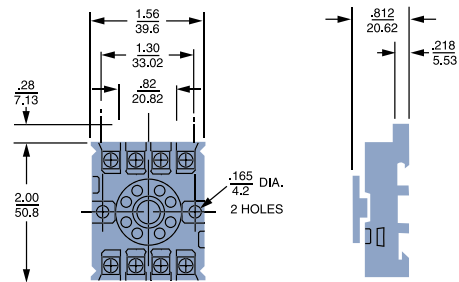
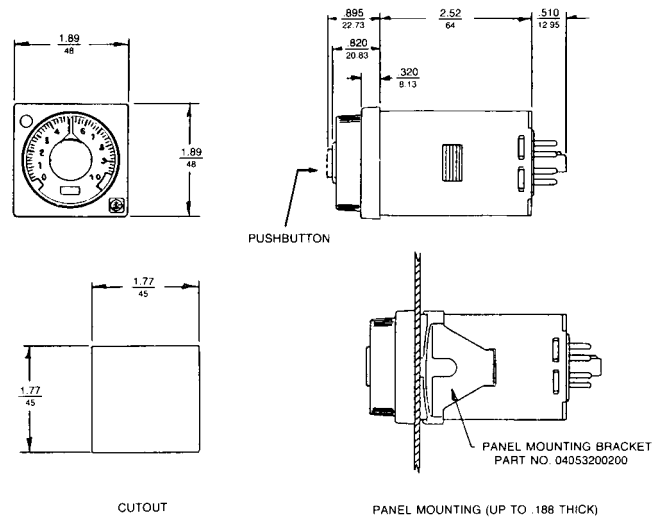
The 409 LED indicator provides a unique and effective method of cycle progress indication. Off before timing, the LED blinks at an ever increasing rate as the cycle progresses: once every 3 1/2 seconds during the first 10%, of the cycle, twice during the second 10%, and so on. At time out, the LED pulses at a high rate, (In the 1, 5, 10 and 50 second ranges, the LED is Off before timing, steady On during timing, and pulsing On after time-out.)

#### APPROVALS

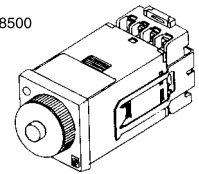
See Agency Listing on page 391.



**DIMENSIONS**  
INCHES  
MILLIMETERS



8 PIN OPTIONAL OCTAL SOCKET NO. 00008258500



00008258500 SOCKET WITH  
04070251300 HOLD DOWN

### FEATURES:

- Push Button Start, Interval Timing Mode
- Push Button Integral to front dial
- Output Contacts rated 10A at 120/240 VAC and 30 VDC
- Six Timing Ranges in a single unit
- Timing Ranges:
  - 1 and 10 sec., min., and hours
  - 5 and 50 sec., min., and hours
- Universal Power Supply: 24-240 VAC and 24 VDC
- 48mm<sup>2</sup> DIN Standard housing
- Large and easy to read dial shows decimal points
- Round (octal) socket mount or mount in panel cutout
- Watertight when panel mounted
- Range and Mode select are tamper proof when panel mounted
- Unique flashing cycle progress indication

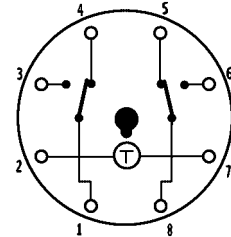
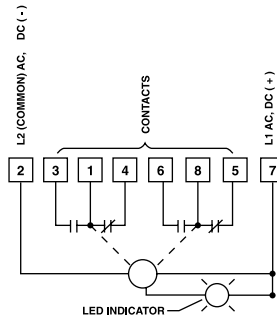
**OPERATION**

Timing begins when the front green push button is pressed. This energizes the DPDT relay and starts an oscillator which runs at a frequency determined by the time setting. A fixed number of counts from the oscillator determines the end of the timing cycle.

During timing, an LED located on the dial face blinks. For the **first** 10% of the cycle, the LED repeatedly blinks **once** followed by a pause. For the **second** 10%, it blinks **twice** and so on indicating the cycle progress. At time out, the LED stops blinking and the relay de-energizes.

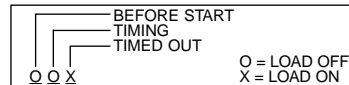
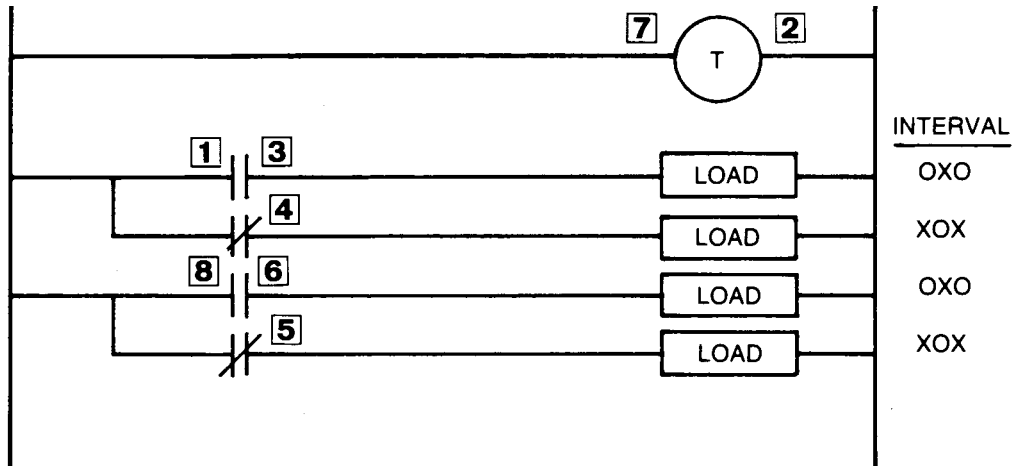
**WIRING**

**Model 409A...F2X**



**Bottom View of TDR**

**TYPICAL CIRCUITS 409A...F2X**



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

**SPECIFICATIONS****For Model 409A PB Timer****MODELS**

409A100F2X - Push Button Start, Interval Timing with (1) DPDT relay (1 or 10 SEC/MIN/HRS)

409A500F2X - Push Button Start, Interval Timing with (1)DPDT relay (5 or 50 SEC/MIN/HRS)

Both models available in 6 ranges from 1 sec. to 10 hrs. or 5 sec. to 50 hrs.

**CONTACT RATING**

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

LIFE: 10 million operation with no load  
100,000 operations with:  
10 AMPS at 30 VDC (or less) or  
10 AMPS at 250 VAC (or less)

**CONTACT MATERIAL**

Silver Cadmium Oxide

**TEMPERATURE RATING**

-18°C to 50°C (0 to 122°F)

**NOISE IMMUNITY**

Showering ARC per NEMA ICS 2-230. In addition, the 409A will withstand a voltage surge of 4500 volts for 50 usec. without damage.

**MOUNTING**

Plug-in octal base; mounts in any position with retaining clips.

Options: Surface mounting socket

DIN rail mounting socket

Panel-mounting adapter kit

Plug-on socket kit

**POWER REQUIREMENTS**

Universal power supply - reverse polarity protected

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 - 1.2 watts

DC: Maximum ripple @ 100 Hz - 5%

Current required - 50mA

Power required - 1.2 watts

**REPEAT ACCURACY**

Varies as a function of temperature.

Any voltage (constant temperature):  $\pm 0.5\%^*$

Any voltage (32° F to 140° F):  $\pm 1.5\%^*$

Any voltage (0° F to 140° F):  $\pm 2.0\%^*$

\*Variation from average actual time.

**MINIMUM SETTING**

2% of range, with the exception of 50 msec on the 1 second range

**SETTING ACCURACY**

$\pm 5\%$  of range

**RESET**

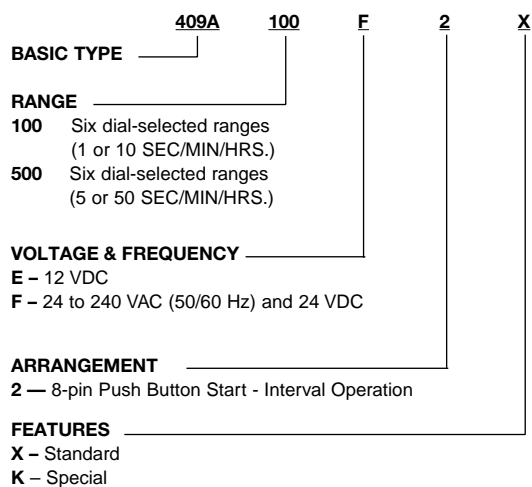
a. 0 to 20 msec power interruption: guaranteed no reset.

b. 20 to 65 msec; it may reset (40 msec typical reset).

c. Over 65 msec guaranteed to reset.

**WEIGHT**

5 oz. (140g)

**ORDERING CODE****ACCESSORIES**

**0000-825-85-00:** 8-Pin surface/DIN rail socket

**0407-025-13-00:** Hold down for above socket

**0405-320-02-00:** Panel mounting bracket

**0319-261-45-00:** Plug-in socket kit (8-pin)

**0000-825-87-00:** 8-Pin panel socket w/rear facing terminals

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