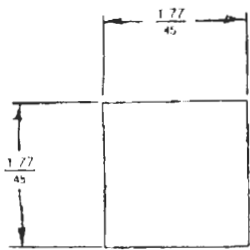
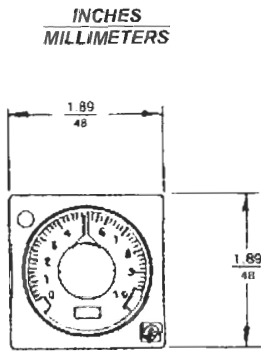


407B Multi-Mode 1/16 DIN Timer

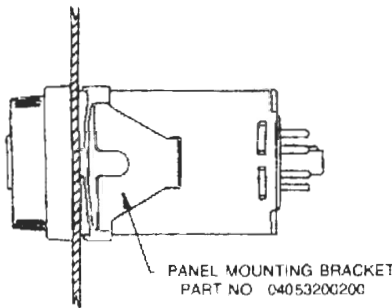
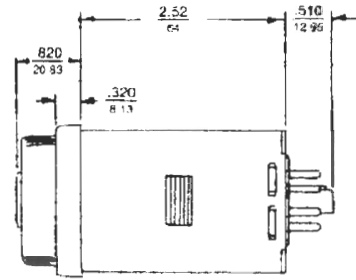


Installation
Instructions
407-000-03-00
041105

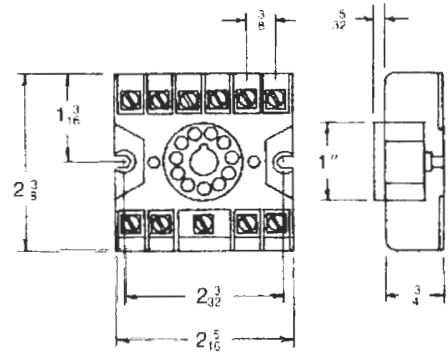
DIMENSIONS



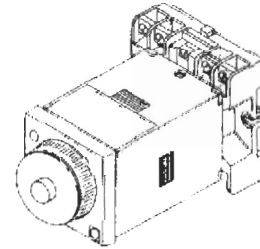
Before starting your design read the safety statement



PANEL MOUNTING (UP TO .188 THICK)



11 PIN OPTIONAL SOCKET NO 00008258600



Note 1: Status LED Operation

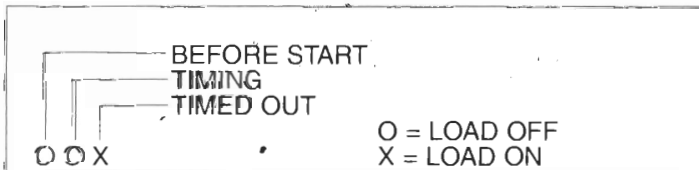
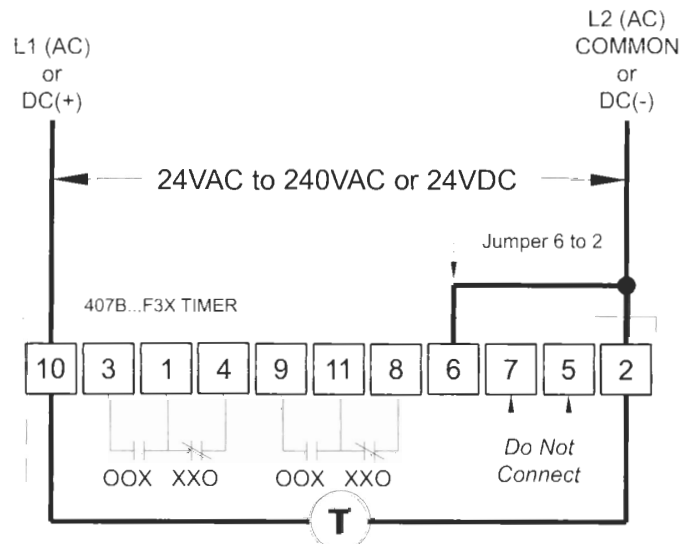
When either the Min or Hrs range is selected, a LED located on the dial face blinks. During the first 10% of the cycle, the Led blinks once followed by a pause. After 20% of the cycle, the Led blinks twice followed by a pause, after 30% three times and so on, indicating cycle progress. The Led blinks rapidly after time-out. When the Sec range is selected the LED is on steady during timing and blinks rapidly after time-out.

ON DELAY OPERATION

When power is applied to terminals #10 and #2, and a jumper installed across #6 and #2, the timer starts timing and the status LED begins to blink¹. When the preset time is reached, or time-out, the DPDT relay energizes, timing stops, and the status LED blinks rapidly. The timer remains in this condition until reset by removing power.

TYPICAL CIRCUIT - ON-DELAY OPERATING MODE*

*Mode Switch in ON-DELAY Position



INTERVAL OPERATION

When power is applied to terminals #10 and #2, and a jumper installed across #6 and #2, the timer starts timing, the DPDT relay energizes, and the status LED begins to blink¹. When the preset time is reached, or time-out, the DPDT relay de-energizes, timing stops, and the status LED blinks rapidly. The timer remains in this condition until reset by removing power.

OFF DELAY OPERATION

Power is applied to terminals #10 and #2, and a Start switch installed² across terminals #6 and #2. When the start switch closes, the timer is held reset and the DPDT relay energizes. The timer remains in this condition until the start switch opens, at which point, the timer starts timing and the status LED begins to blink¹. When the preset time is reached, or time-out, the DPDT relay de-energizes, timing stops, and the status LED blinks rapidly. The timer remains in this condition until reset by closing the Start switch.

SETTING THE RANGE AND TIMING MODE³

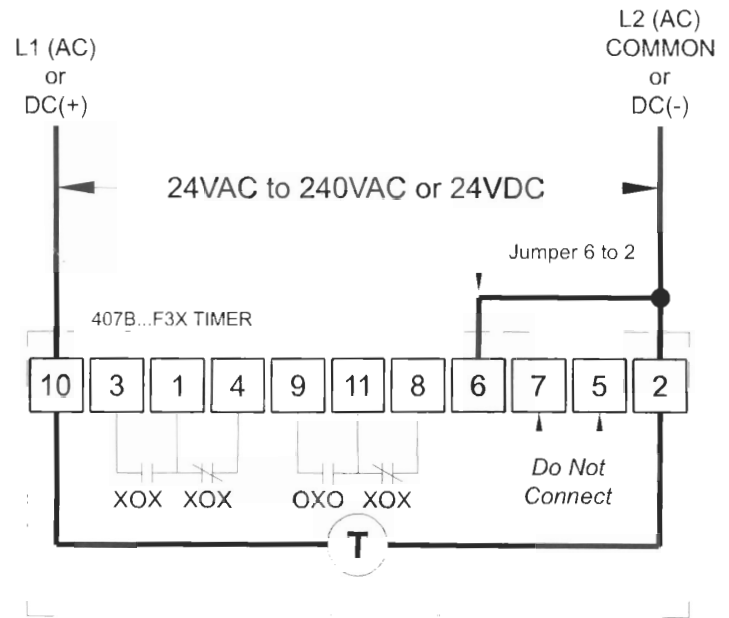
Refer to the drawing. Using a small screwdriver inserted into the adjusting slot as shown, rotate the range (SEC/MIN/HRS) or mode (ON/INTERVAL/OFF) adjusting switches. The range selected will appear through the window at the top of the dial face. The timing mode is indicated on the housing.

Note 3 (Caution):

To prevent hazard to personnel or property, change range and/or timing mode with electrical power off.

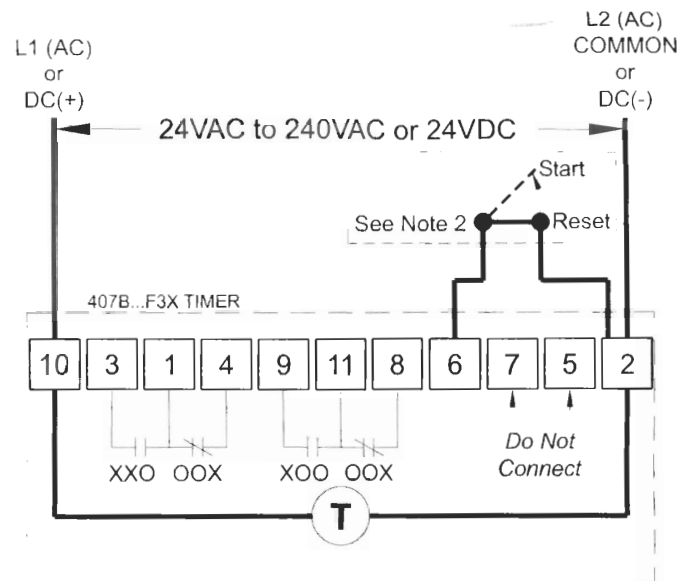
TYPICAL CIRCUIT - INTERVAL OPERATING MODE*

*Mode Switch in INTERVAL Position



TYPICAL CIRCUIT - OFF-DELAY OPERATING MODE*

*Mode Switch in OFF-DELAY Position



Note 2:

1. Start switch can be located up to 50 feet away from timer. Twisted pair wiring is recommended.
2. Do not connect loads in parallel with switch.
3. Open switch to start timer, close to reset timer.

SPECIFICATIONS

MODELS

407B100F3X
1 or 10 SEC/MIN/HRS

407B500F3X
5 or 50 SEC/MIN/HRS

MODES OF OPERATION

Three operating modes:
On Delay - Interval - Off Delay
Each mode is switch selectable
By a side mounted rotary switch.

TIMING RANGES

Each model has six (6) switch selectable timing Ranges.

Model 407B100F3X:
(1 sec, 10 sec, 1 min, 10 min,
1 hr, 10 hrs)

Model 407B500F3X:
(5 sec, 50 sec, 5 min, 50 min,
5 hrs, 50 hrs)

LOAD RELAY

Type: DPDT
Contact Rating: 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 operations (no load) 50,000
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 60°C (0°F to 140°F)

APPROVALS

UL, FM, CSA
CE Compliant

WEIGHT:

5 oz. (140g)

MOUNTING:

11-Pin Plug-in base

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
20 to 264 Volts AC or
20 to 28.8 Volts DC

AC: Inrush-15 Amps
Power required – 12 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:

Power Interruption:
0 to 20 msec power interruption: guaranteed no reset.
20 to 65 msec; it may reset (40 msec typical reset).
Over 65 msec guaranteed to reset.

The Unit will reset properly and will not start timing when subjected to an open start switch leakage of 15 mA or less. (Prox switch and Triac drive Applications, on-delay and interval operations)

OFF DELAY MODE OPERATION START SWITCH REQUIREMENTS TERMINALS #6 TO #2

The start switch can be located up to 50 feet away From the timer. It is recommended that twisted pair Wire be used.

Do not connect any loads in parallel with the start switch.

Terminal #6 is positive (+) for DC & transistor applications.

Terminal #6 to #2 open circuit voltage is 5 volts maximum.

The switching device used to connect terminal #6 To #2 must be able to conduct 2 mA with a Saturation drop of less than 1 volt.

Wire Attachment Instructions

INSULATION CRIMP
WIRE CRIMP

SOLDERLESS CONNECTOR
USE CRIMPING TOOL
TYPICAL EIGHT REQUIRED

ATC P/N:
314-260-07-00

MODE SWITCH

RANGE SWITCH

PANEL MOUNTING:

To panel mount, cut a 1-25/32" square cutout (1.77 inches)

1. Insert the 407B through the panel from the front with the plug going through the cutout first.
2. While holding the 407B in place, push the mounting bracket over the 407B from the back and snap into place as shown in the panel mounting dimensions drawing.
3. When using the 407B in a panel mounted configuration, the optional ATC P/N 314-260-07-00 plug-on socket can be used. See illustration above.

Ordering Code

407B **100** **F** **3** **X**

BASIC TYPE _____

RANGE _____

100 Six dial-selected ranges
 (1 or 10 SEC/MIN/HRS.)

500 Six dial-selected ranges
 (5 or 50 SEC/MIN/HRS.)

VOLTAGE & FREQUENCY _____

E – 12 VDC

F – 24 to 240 VAC (50/60 Hz) and 24 VDC

N – 24 VDC (low inrush current for short-circuit
 protected sensors)

ARRANGEMENT _____

3 – 11-pin On-Delay, Off-Delay, Interval Timing Modes

FEATURES _____

X – Standard

K – Special

ACCESSORIES

- 0000-825-86-00:** 11 Pin surface/DIN rail socket
- 0405-025-07-00:** Hold down for above 11 Pin socket
- 0000-825-88-00:** 11 Pin panel socket w/rear facing terminals
- 0405-320-02-00:** Panel mounting bracket
- 0314-260-07-00:** Plug on socket kit (11-pin)

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 after a short period of time or a long period of time or anything in between. In essentially all cases, failure means failure to provide a logic signal or power to an electric load when it should or to provide it when it should be absent. Less often, failure means failure to meet some other specification. But, in all cases, it means to do something unwanted or unexpected.

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.

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Cleveland, OH 44133 USA
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<http://iseinc.com>

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, expressed or implied, is made as to such use of 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. Warranties of Sale, disclaimer thereof and limitations of liability are covered exclusively by Automatic Timing and Controls printed warranty statement for the controls. These instructions do not expand, reduce, modify or alter Automatic Timing and Controls warranty statement and no warranty or remedy in favor of a customer or any other person arises out of these instructions.