

# MODEL 332 MODEL 362

## Interval Timer

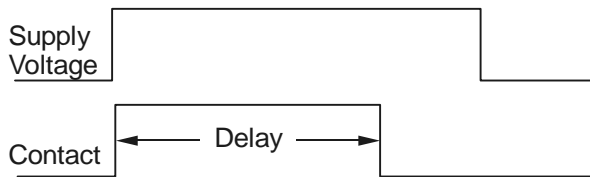
- DPDT Digital or knob-adjust versions
- Wide variety of voltage and timing ranges
- UL and CSA approved to 120VAC
- 5-year unconditional warranty

### DESCRIPTION

The **Models 332 and 362 Interval Timers** are designed for a wide usage in new or replacement industrial applications. Examples include automatic and batch control circuits, where the relay needs to be energized for a specific length of time after start-up.

The Model 332 is a DPDT, knob-adjustable timer. The Model 362 is a DPDT, high-accuracy digital timer. Solid-state timing circuits in each model drive an internal electromechanical relay.

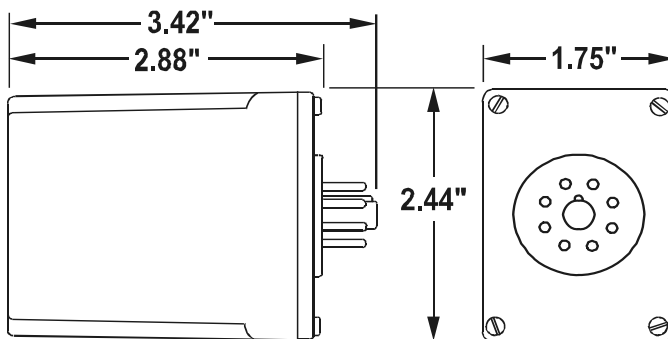
Each model is functionally interchangeable. They are available in a variety of voltage and timing ranges to cover most any application. The 24 and 120 V AC/DC versions of the Model 332 are UL Recognized and CSA Certified. The Model 362 is UL Recognized up through the 120V AC/DC version. All Model 362 voltage versions are CSA Certified.



### OPERATION

The internal relay energizes immediately on application of the supply voltage. Upon completion of the delay period, the relay de-energizes. The supply voltage must be removed to reset the timer.

### DIMENSIONS - Model 362



(dimensions have tolerance of  $\pm 0.06$ )



### SPECIFICATIONS

| MODEL                 | 332   | 362   |
|-----------------------|---|---|
| Supply voltage        | 24, 120 or 230VAC/DC  | 12, 24, 120 or 230VAC/DC                                    |
| Timing range          | 1 - 10 seconds<br>1 - 60 seconds<br>1 - 180 seconds<br>1 - 300 seconds        | 0.1 - 102.3 seconds<br>1 - 1023 seconds<br>1 - 1023 minutes |
| Accuracy              | $\pm 5\%$   | $\pm 2\%$   |
| Repeatability         | $\pm 2\%$   | $\pm 0.1\%$   |
| Recycle time          | 1 second  | 100 msec  |
| Contacts              | DPDT  |   |
| Contact rating        | 10A at 120VAC resistive   |   |
| Transient protection  | 2500 V for 10 msec  |   |
| Operating temperature | -40° to +140° F   |   |
| Humidity tolerance    | 0 - 97% w/o condensation  |   |
| Enclosure material    | ABS plastic   |   |
| Mounting              | 8-pin socket (*not included)  |   |
| Weight                | 5 oz.   |   |
| Agency approval       | *UL Recognized and CSA Certified<br>*see exceptions in the <b>DESCRIPTION</b> |   |

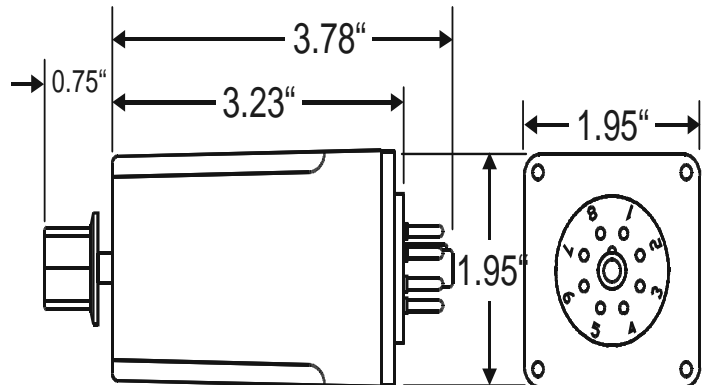
\* order 8 -pin socket number 51X120

### ORDERING INFORMATION

| order by: | MODEL          | MODEL          | DELAY       |             |
|-----------|----------------|----------------|-------------|-------------|
|           | (knob-adj)     | (digital)      | 332 ONLY    | 362 ONLY    |
| options:  | 332-24V AC/DC  | 362-12V AC/DC  | 10 seconds  | 0.1 seconds |
|           | 332-120V AC/DC | 362-24V AC/DC  | 60 seconds  | 1 Second    |
|           | 332-230V AC/DC | 362-120V AC/DC | 180 seconds | 1 Minute    |
|           |                | 362-230V AC/DC | 300 seconds |             |

EXAMPLE: to order a knob-adj 24VAC timer with a 1 to 60 sec range  
Order Model Number 332-24-60

### DIMENSIONS - Model 332



(dimensions have tolerance of  $\pm 0.06$ )

Telephone: Main - (918) 438-1220  
Sales - (800) 862-2875  
Fax: (918) 437-7584  
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# MODEL 332 / 362

# Interval Timer

READ ALL INSTRUCTIONS BEFORE INSTALLING, OPERATING OR SERVICING THIS DEVICE.  
KEEP THIS DATA SHEET FOR FUTURE REFERENCE.

## GENERAL SAFETY

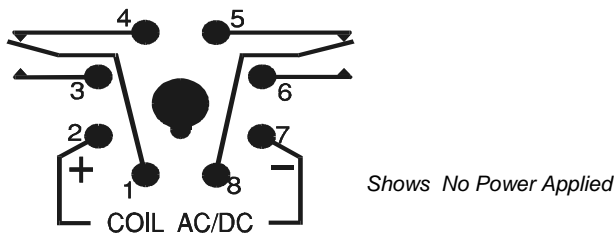
POTENTIALLY HAZARDOUS VOLTAGES ARE PRESENT AT THE TERMINALS OF THE MODEL 332 OR 362.  
ALL ELECTRICAL POWER SHOULD BE REMOVED WHEN CONNECTING OR DISCONNECTING WIRING.  
THIS DEVICE SHOULD BE INSTALLED AND SERVICED BY QUALIFIED PERSONNEL.

## Installation Instructions

### INSTALLATION

The Models 332 and 362 Interval Timers require a standard 8-pin socket for mounting, and use a standard pin configuration. Refer to the pin diagram below, or on the timer, for terminal connections.

### PIN DIAGRAM



### ADJUSTMENT PROCEDURE - Model 362

The procedure to determine the switch selections for the digital Model 362 Interval Timer requires some simple calculations, which can be completed easily after the basic steps are explained.

- Convert the delay time required to minutes, seconds, or tenths of seconds, depending upon the timing range of the unit. **For example:**

$$7 \text{ hrs, } 32 \text{ min} = 420 \text{ mins } (7 \times 60) + 32 = 452 \text{ minutes}$$

$$15 \text{ min, } 2 \text{ secs} = 900 \text{ secs } (15 \times 60) + 2 \text{ secs} = 902 \text{ seconds}$$

60.7 secs is set to 607, omitting the decimal point

- To set the desired delay period on the timer, you must perform a series of subtractions from the desired time (using binary numbers), until the remainder is equal to zero. This is how you will determine which switches to set to the ON position, on the DIP switch.

The subtraction process must begin with the largest binary number that can be subtracted from the desired time.

The remaining time after each subtraction must be reduced by the largest binary number possible (see figures 1 and 2).

figure 1

| Binary numbers | Time Delay<br>300 seconds | Time Delay<br>400 seconds |
|----------------|---------------------------|---------------------------|
| 512            | 300                       | 400                       |
| 256            | -256                      | -256                      |
| 128            | 44                        | 144                       |
| 64             | -32                       | -128                      |
| 32             | 12                        | 16                        |
| 16             | -8                        | -16                       |
| 8              | 4                         | 0                         |
| 4              | -4                        | 256+128+16=400            |
| 2              | 0                         |                           |
| 1              | 256+32+8+4=300            |                           |

figure 2

Model 362-1 sec; set for a 600 seconds delay

|      |     |                                     |  |
|------|-----|-------------------------------------|--|
| 600  | 1   | <input type="checkbox"/>            | Code: <input type="checkbox"/> = switch OFF<br><input checked="" type="checkbox"/> = switch ON |
| -512 | 2   | <input type="checkbox"/>            |  |
| 88   | 4   | <input type="checkbox"/>            |  |
| -64  | 8   | <input checked="" type="checkbox"/> |  |
| 24   | 16  | <input checked="" type="checkbox"/> |  |
| -16  | 32  | <input type="checkbox"/>            |  |
| 8    | 64  | <input checked="" type="checkbox"/> |  |
| -8   | 128 | <input type="checkbox"/>            |  |
| 0    | 256 | <input type="checkbox"/>            |  |
|      | 512 | <input checked="" type="checkbox"/> |  |

### WARRANTY

The Models 332 and 362 Interval Timers are covered by the Time Mark Corporation 5-Year Unconditional Warranty. Should either of these devices fail, for any reason, within five years from the date of purchase, they will be repaired or replaced, free. Contact the Time Mark Sales department, Monday through Friday; 8 a.m. to 5 p.m., CST, for further details.

Telephone: Main - (918) 438-1220

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