

# MODEL 338

# MODEL 368

## Recycle Timers

- Most Common Voltage & Timing Ranges
- Cycles Load on/off, or Between Two Loads
- UL and CSA\*
- 5-Year Unconditional Warranty

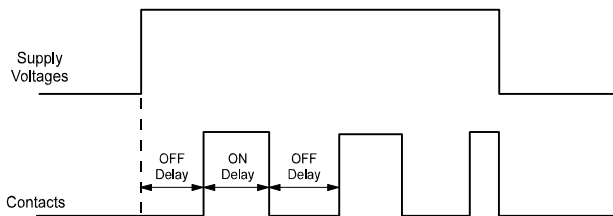


### DESCRIPTION

The **Models 338 and 368 Recycle Timers** are designed to cycle a load on and off, or to cycle between two loads. The ON and OFF cycles are independently adjustable on each model. The Model 338 is a DPDT, knob-adjust timer. The Model 368 is a DPDT, high-accuracy digital timer. Solid-state circuits in each model drive an internal electromechanical relay.

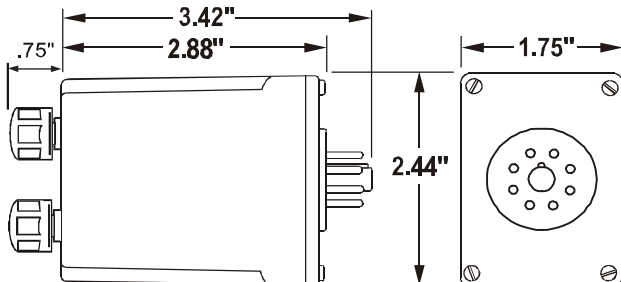
Each model is functionally interchangeable. They are available in a wide variety of voltage and timing ranges, to cover the majority of application requirements. Both the Model 338 and Model 368 are UL Recognized and CSA/NRTL Certified up to 120v. The Model 368 is CSA/NRTL Certified up to 240v.

### OPERATION



When the supply voltage is applied, the OFF cycle begins timing. Upon completion of the delay, the internal relay energizes and the ON cycle begins timing. The timer will continue cycling until the supply voltage is removed. ON and OFF cycles can be of equal or unequal durations.

### DIMENSIONS - Model 338



(dimensions have tolerance of  $\pm 0.06$ )

### SPECIFICATIONS

MODEL	338	368
Supply voltage	12, 24, 120 or 230 vac/dc	
Timing range	1 - 10 seconds 1 - 60 seconds 1 - 180 seconds 1 - 300 seconds	0.1 - 102.3 seconds 1 - 1023 seconds 1 - 1023 minutes
Accuracy	$\pm 5\%$	$\pm 2\%$
Repeatability	$\pm 2\%$	$\pm 0.1\%$
Recycle time	1 sec	100 msec
Contacts	DPDT	
Contact rating	10A at 120vac resistive	
Transient protection	2500 VRMS for 10 msec	
Operating temp	- 40° to +140° F	
Humidity tolerance	0 - 97% w/o condensation	
Enclosure material	ABS plastic	
Mounting	8-pin socket**	
Weight	5 oz.	
Agency approvals*	<b>Model 338:</b> UL Recognized & CSA/NRTL to 120v <b>Model 368:</b> UL Recognized to 120v; CSA/NRTL to 240v	

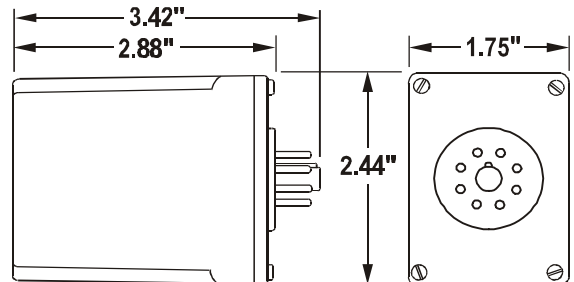
\*\* order 8-pin socket number **51X120**

### ORDERING OPTIONS

MODEL	VOLTS	DELAY	
		338 ONLY	368 ONLY
338 (knob-adj)	12 vac/dc		
368 (digital)	24 vac/dc	10 seconds	0.1 seconds
	120 vac/dc	60 seconds	1 Second
	230 vac/dc	180 seconds	1 Minute
		300 seconds	

EXAMPLE: **338-24-180** orders a knob-adjustable 24vac/dc timer, with a range of 1 to 180 seconds.

### DIMENSIONS - Model 368



(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 338 / 368 Recycle Timers

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

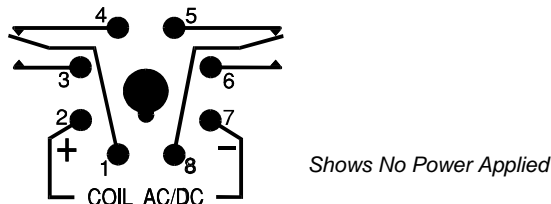
## GENERAL SAFETY

POTENTIALLY HAZARDOUS VOLTAGES ARE PRESENT AT THE TERMINALS OF THE MODEL 338 OR 368.  
ALL ELECTRICAL POWER SHOULD BE REMOVED WHEN CONNECTING OR DISCONNECTING WIRING.  
THIS DEVICE SHOULD BE INSTALLED AND SERVICED BY QUALIFIED PERSONNEL.

## Installation Instructions

### PIN CONNECTIONS

The Models 338 and 368 Recycle 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 pin connections.



### ADJUSTMENT PROCEDURE - Model 368

The procedure to determine the switch selections for the digital Model 368 Recycle Timer requires some simple calculations, which can be completed easily after the basic steps are explained.

- Convert the 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 recycle time for both the ON period or the OFF period on the timer, you must perform a series of subtractions from each desired time (using binary numbers), until the remainder is equal to zero. This is how you 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 300 seconds	Time Delay 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 368-1 min set at - 5 minutes OFF; 55 minutes ON.

<b>example-OFF:</b>	<table border="1"> <tr><td>1</td><td>●</td></tr> <tr><td>2</td><td></td></tr> <tr><td>4</td><td>●</td></tr> <tr><td>8</td><td></td></tr> <tr><td>16</td><td></td></tr> <tr><td>32</td><td></td></tr> <tr><td>64</td><td></td></tr> <tr><td>128</td><td></td></tr> <tr><td>256</td><td></td></tr> <tr><td>512</td><td></td></tr> </table>	1	●	2		4	●	8		16		32		64		128		256		512		<table border="1"> <tr><td>1</td><td>●</td></tr> <tr><td>2</td><td>●</td></tr> <tr><td>4</td><td>●</td></tr> <tr><td>8</td><td></td></tr> <tr><td>16</td><td>●</td></tr> <tr><td>32</td><td>●</td></tr> <tr><td>64</td><td></td></tr> <tr><td>128</td><td></td></tr> <tr><td>256</td><td></td></tr> <tr><td>512</td><td></td></tr> </table>	1	●	2	●	4	●	8		16	●	32	●	64		128		256		512		<b>example-ON:</b>
1	●																																										
2																																											
4	●																																										
8																																											
16																																											
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Code:  = switch OFF  
 = switch ON

### WARRANTY

The **Models 338 and 368 Recycle Timers** are covered by the Time Mark Corporation **5-Year Unconditional Warranty**. Should this device fail, for any reason within five years from the date of purchase, we will repair or replace it, free. For a complete warranty statement, refer to the "Terms and Conditions" page in the front of your Time Mark catalog, or contact the Time Mark Sales department, Monday-Friday, 8 a.m. to 5 p.m., CST for further details.

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