

MODEL 330 MODEL 360

Operate Delay Timers



- Solid-State Design
- 10 Amp Relay Contacts
- Multiple Voltage and Timing Ranges
- 5-Year Unconditional Warranty



DESCRIPTION

The **Models 330 and 360 Operate Delay Timers** are designed for a wide range of industrial applications. Examples include automatic and machine tool control circuits, HVAC circuits, and warm-up delay circuits. The Model 330 is a DPDT potentiometer (knob-adjust) timer. The Model 360 is a DPDT, high-accuracy digital input 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 all possible applications.

An "SG" version of this model is available using silver with gold flash contacts.

Models 330 and 360 are UL Recognized and CSA Certified.

UL SPECIFICATIONS*

Models	330 and 360
Input	
Voltage (VAC)	10-28V AC/DC OR 40-260V AC/DC
Power	3 Watts Max
Output	240V AC, 10A, Resistive 120V AC, 4A, General Use 240V AC, 2A, General Use C300, Pilot Duty

* Pilot Duty:

120V: Make 15A, Break 1.5A
240V: Make 7.5A, Break 0.75A

SPECIFICATIONS

MODEL	330 (knob adj.)	360 (digital)
Voltage	L = 10-28V AC/DC H = 40-260V AC/DC	
Timing range	10SEC: 1 - 10 Sec. 60SEC: 1 - 60 Sec. 180SEC: 1 - 180 Sec. 300SEC: 1 - 300 Sec.	.1SEC: 0.1 - 102.3 Sec. 1SEC: 1 - 1023 Sec. 1MIN: 1 - 1023 Min.
Accuracy	± 5%	± 2%
Repeatability	± 2%	± 0.1%
Recycle time	100ms	
Operating temp	-20°F to 140°F	
Contacts	DPDT	
Contact rating	10A at 240VAC resistive	
Transient protection	775V, 80 Joules	
Humidity tolerance	0 - 97% w/o condensation	
Enclosure material	NORYL Plastic	
Mounting	8-pin socket (*not included) **	
Weight	5 oz.	
Agency approval	UL Recognized and CSA Certified	
Additional Options	/C = Custom (Voltage and/or Timing) /SG = Silver with Gold Flash Contacts	

** order 8-pin socket number 51X120

Ordering Examples (Model-Voltage-Timing Range [/Options]):

360-H-.1SEC = Model 360 with a 40-260V AC/DC voltage range and a timing range of 0.1-102.3 seconds.

330-L-180SEC /SG = Model 330 with a 10-28V AC/DC voltage range, a timing range of 1-180 seconds, and optional silver with gold flash contacts.

Contact Time Mark to order a custom programmed unit

Telephone: Main - (918) 438-1220
Sales - (800) 862-2875
Fax: (918) 437-7584
E-mail: sales@time-mark.com
Internet: http://www.time-mark.com



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Tulsa, Oklahoma 74116

Page 1 of 3 05/2014
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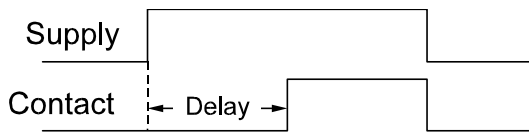
READ ALL INSTRUCTIONS BEFORE INSTALLING, OPERATING OR SERVICING THIS DEVICE.
KEEP THIS DATA SHEET FOR FUTURE REFERENCE.

GENERAL SAFETY

POTENTIALLY HAZARDOUS VOLTAGES ARE PRESENT AT THE TERMINALS OF THE MODEL 330 OR 360.
ALL ELECTRICAL POWER SHOULD BE REMOVED WHEN CONNECTING OR DISCONNECTING WIRING.
THIS DEVICE SHOULD BE INSTALLED AND SERVICED BY QUALIFIED PERSONNEL.

Installation Instructions

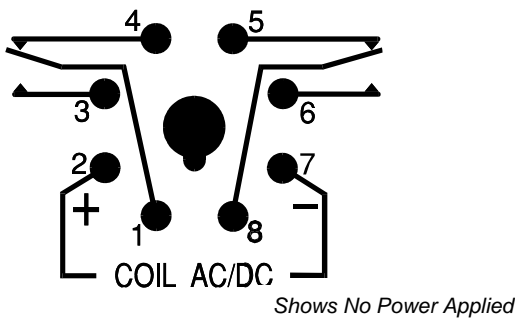
OPERATION



The time delay begins when the supply voltage is applied. Upon completion of the delay period, the internal relay will energize, and remain that way until the supply voltage is removed.

PIN CONNECTIONS

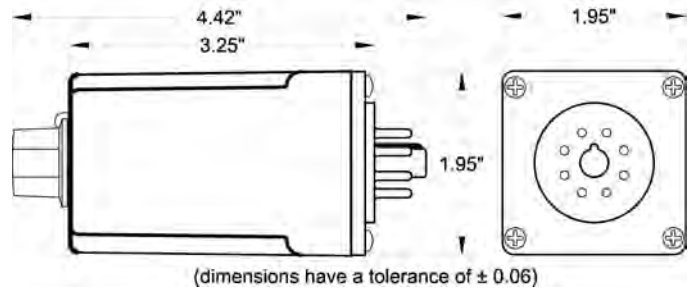
The Models 330 and 360 Operate Delay Timers require a standard 8-pin socket for mounting, and use a standard pin configuration. Refer to the pin diagram below, or on the timer, for terminal connections.



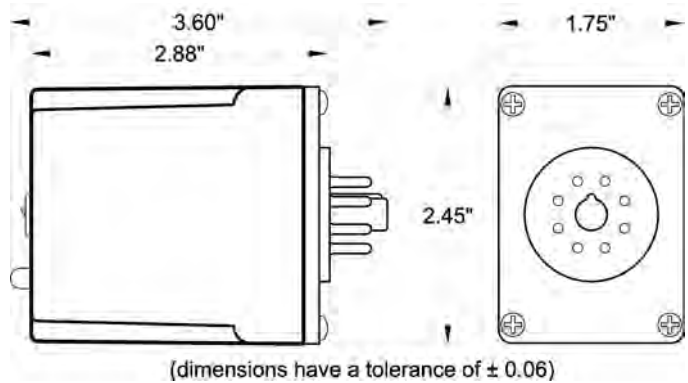
An LED on top of the unit provides a quick visual indicator of the relay's status.

LED Indicator	Unit Status
Green	Energized
Red	De-energized
Flashing (Green or Red)	Relay is Timing

DIMENSIONS - Model 330



DIMENSIONS - Model 360



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Page 2 of 3 05/2014
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Installation Instructions

ADJUSTMENT PROCEDURE - Model 360

The procedure to determine the switch selections for the digital Model 360 Operate Delay Timer requires some simple calculations, which can be completed easily after the basic steps are explained.

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

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

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

$$6.7 \text{ secs} = (6.7 \times 10) = 67 \text{ tenths of a second}$$

2. To set the desired delay period on the timer, just add the values of the selected dip switches (beginning with the largest value first) to total the desired time.

e.g. #1: 100 seconds with a 1 second increment

1	<input type="checkbox"/>	Code: <input type="checkbox"/> = switch OFF <input checked="" type="checkbox"/> = switch ON
2	<input type="checkbox"/>	
4	<input checked="" type="checkbox"/>	
8	<input type="checkbox"/>	
16	<input type="checkbox"/>	
32	<input checked="" type="checkbox"/>	
64	<input checked="" type="checkbox"/>	
128	<input type="checkbox"/>	
256	<input type="checkbox"/>	
512	<input type="checkbox"/>	

$$64 + 32 + 4 = 100 \text{ seconds}$$

e.g. #2: 100 seconds with a .1 second increment

1	<input type="checkbox"/>	Code: <input type="checkbox"/> = switch OFF <input checked="" type="checkbox"/> = switch ON
2	<input type="checkbox"/>	
4	<input type="checkbox"/>	
8	<input checked="" type="checkbox"/>	
16	<input type="checkbox"/>	
32	<input checked="" type="checkbox"/>	
64	<input checked="" type="checkbox"/>	
128	<input checked="" type="checkbox"/>	
256	<input checked="" type="checkbox"/>	
512	<input checked="" type="checkbox"/>	

$$512 + 256 + 128 + 64 + 32 + 8 = 1000 \text{ tenths of a seconds}$$

WARRANTY

This product is warranted to be free from defects in materials and workmanship, and is covered by our exclusive **5-year Unconditional Warranty**. Should this device fail to operate for any reason, we will repair it for five years from the date of manufacture. For complete warranty details, see the *Terms and Conditions of Sales* page in the front section of the Time Mark catalog or contact Time Mark at 1-800-862-2875.

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