

MODEL 331 MODEL 361

Release Delay Timers

- Solid-State Design
- Multiple Voltage & Timing Ranges
- 5-Year Unconditional Warranty

DESCRIPTION

The **Models 331 and 361 Release Delay Timers** are designed for a wide usage in new or replacement industrial applications. Examples include delay-off circuits, batch processing circuits, and other applications requiring a remote-triggered, off-delay timer.

The Model 331 is a DPDT potentiometer (knob-adjust) timer. The Model 361 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 any application.

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

Models 331 and 361 are UL Recognized and CSA Certified.

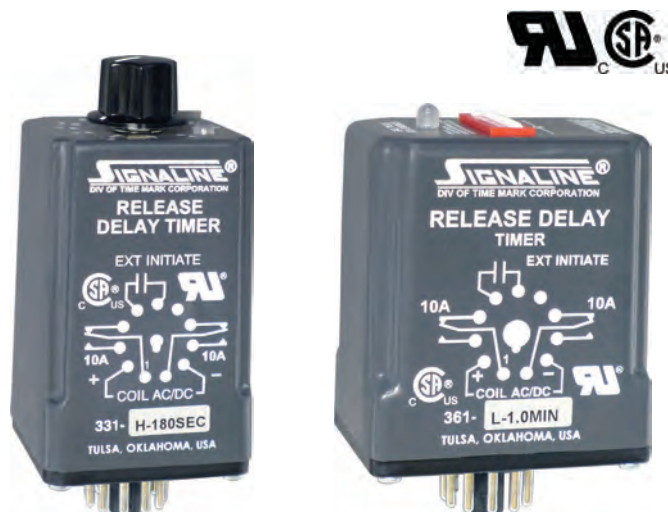
UL SPECIFICATIONS*

Models	331 and 361
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	331 (knob adj.)	361 (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	11-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 11-pin socket number 51X016

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

361-H-.1SEC = Model 361 with a 40-260V AC/DC voltage range and a timing range of 0.1-102.3 seconds.

331-L-180SEC /SG = Model 331 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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DIV OF TIME MARK CORPORATION

11440 East Pine Street
Tulsa, Oklahoma 74116

Page 1 of 3 05/2014
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MODEL 331 / 361 Release Delay Timers

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

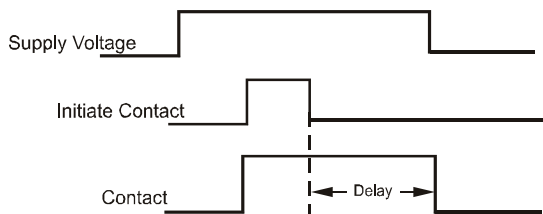
GENERAL SAFETY

POTENTIALLY HAZARDOUS VOLTAGES ARE PRESENT AT THE TERMINALS OF THE MODELS 331 OR 361.
ALL ELECTRICAL POWER SHOULD BE REMOVED WHEN CONNECTING OR DISCONNECTING WIRING.
THIS DEVICE SHOULD BE INSTALLED AND SERVICED BY QUALIFIED PERSONNEL.

Installation Instructions

OPERATION

Supply voltage must be constantly applied. When the control switch is closed, the internal relay will energize. Timing begins when the control switch is opened. The delay can be reset by reclosing the control switch. On completion of the delay, the relay will de-energize.

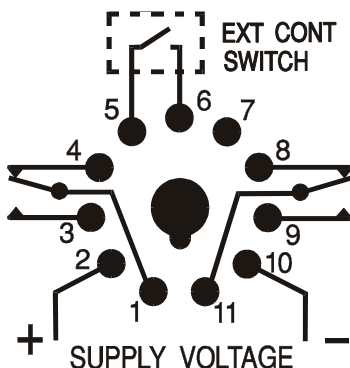


An LED on top of the unit provides a quick visual indicator of the relay's status.

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

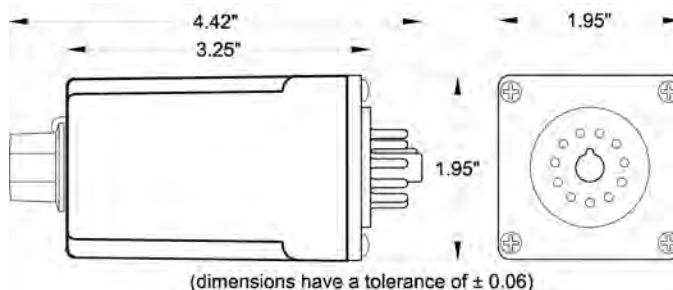
PIN CONNECTIONS

The Models 331 and 361 Release Delay Timers require a standard 11-pin socket for mounting, and use a standard pin configuration. Refer to the pin diagram below, or on the timer, for terminal connections.

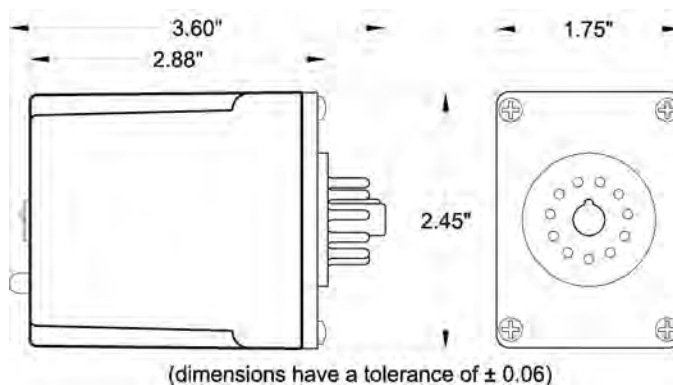


The external control switch must be a dry contact. **DO NOT APPLY POWER TO PINS 5 AND 6.** The external control switch can be a maximum of 10 feet away. The recommended wire is 22 gauge.

DIMENSIONS - Model 331



DIMENSIONS - Model 361



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Installation Instructions

ADJUSTMENT PROCEDURE - Model 361

The procedure to determine the switch selections for the digital Model 361 Release 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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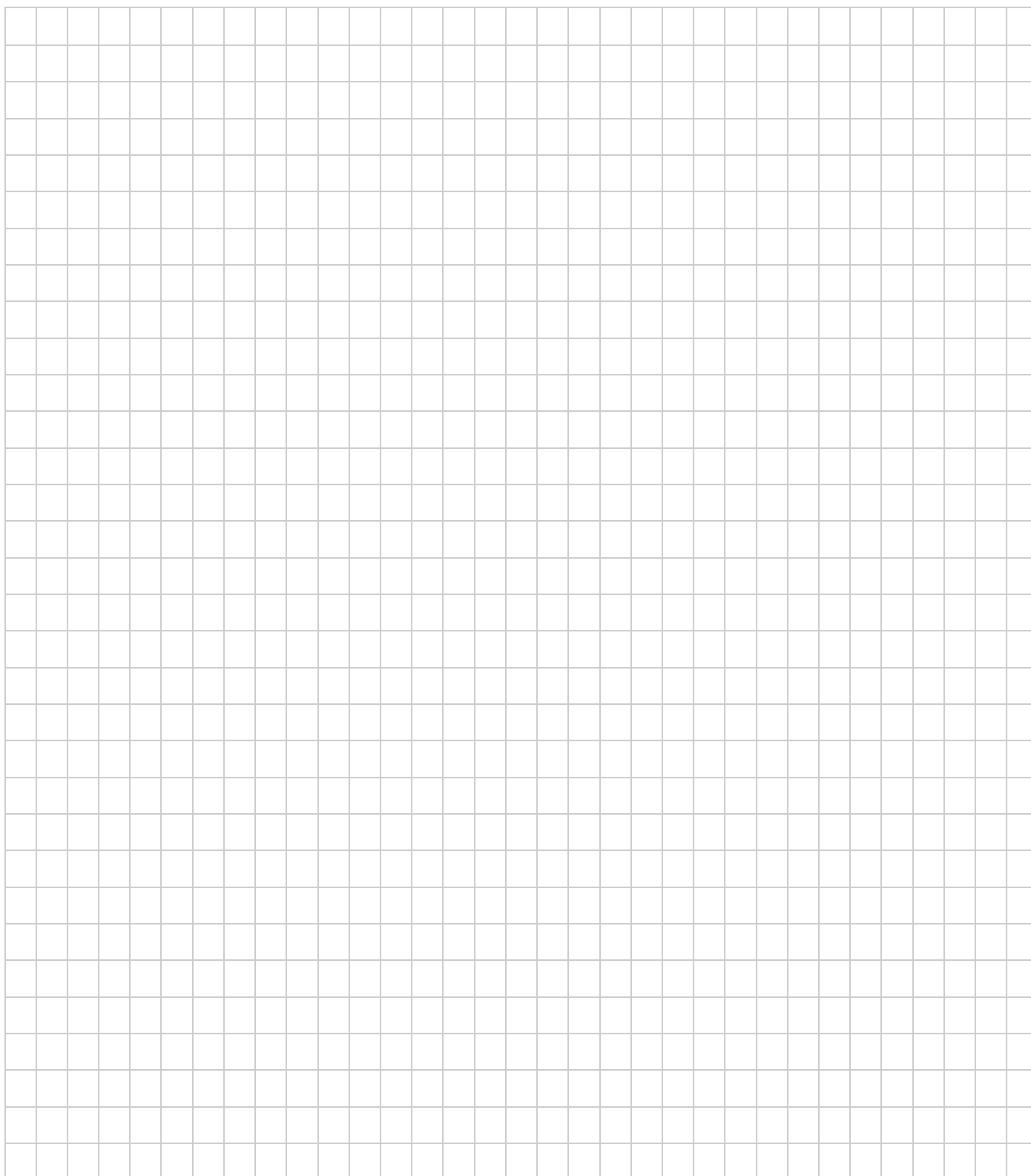
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Page 3 of 3 05/2014
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Have Questions? Call us at (800) 862-2875 and talk to a real live person.



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