

MODEL 358

MODEL 388

Recycle Timers "On Time First"



- Most Common Voltage & Timing Ranges
- Cycles Load on/off, or Between Two Loads
- On Time First (before Off time)
- 5-Year Unconditional Warranty



DESCRIPTION

The **Models 358 and 388 Recycle Timers** ("On" Time First) 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 358 is a DPDT potentiometer (knob-adjust) timer. The Model 388 is a DPDT, high-accuracy digital input 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.

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

Models 358 and 388 are UL Recognized and CSA Certified.

SPECIFICATIONS

MODEL	358 (knob adj.)	388 (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 120VAC resistive	
Transient protection	775V, 80 Joules	
Humidity tolerance	0 - 97% w/o condensation	
Enclosure material	NORYL Plastic	
Mounting	8-pin socket**	
Weight	5 oz.	
Agency approvals*	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**

UL SPECIFICATIONS*

Models	358 and 388
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

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

388-H-.1SEC = Model 388 with a 40-260V AC/DC voltage range and a timing range of 0.1-102.3 seconds.

358-L-180SEC /SG = Model 358 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

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MODEL 358 / 388

Recycle Timers

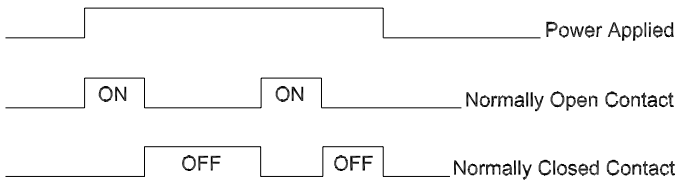
READ ALL INSTRUCTIONS BEFORE INSTALLING, OPERATING OR SERVICING THIS DEVICE.
KEEP THIS DATA SHEET FOR FUTURE REFERENCE.

GENERAL SAFETY

POTENTIALLY HAZARDOUS VOLTAGES ARE PRESENT AT THE TERMINALS OF THE MODEL 358 OR 388.
ALL ELECTRICAL POWER SHOULD BE REMOVED WHEN CONNECTING OR DISCONNECTING WIRING.
THIS DEVICE SHOULD BE INSTALLED AND SERVICED BY QUALIFIED PERSONNEL.

Installation Instructions

OPERATION

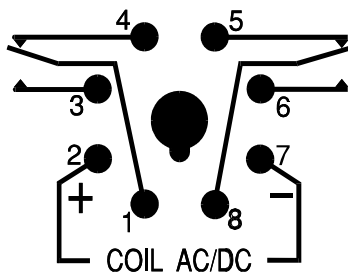


When power is applied to the coil, the relay will energize immediately and stay on for the time set for the "ON" time. When the "ON" time elapses, the relay will de-energize and will time for the "OFF" time. At the end of the "OFF" time, the relay will energize again and run for the "ON" time setting. This will continue as long as power is applied to the coil. If power is removed, the relay will de-energize immediately, or remain de-energized depending on what part of the cycle is active when power is removed. Re-applying power will energize the relay immediately and stay energized for the "ON" time. Timing will continue as above with the "OFF" time.

"ON" time switch controls the Normally Open contacts timing.
"OFF" time switch will control the Normally Closed contacts timing.

PIN CONNECTIONS

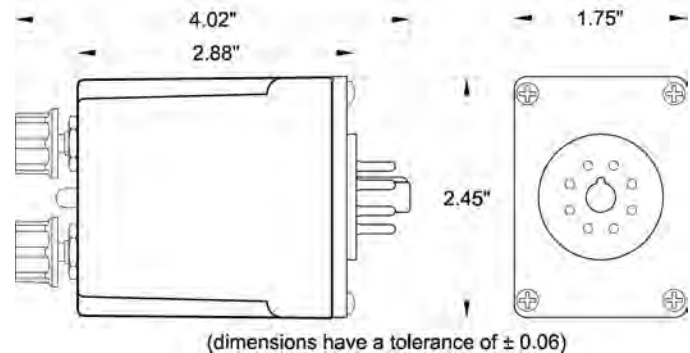
The Models 358 and 388 Recycle Timers require a standard 8-pin socket for mounting, and use a standard pin configuration. Refer to the pin diagram below, or on the timer, for pin connections.



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

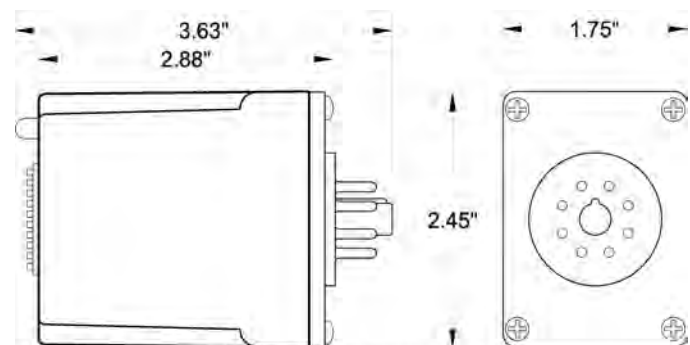
LED Indicator	Unit Status
Green	Energized
Red	De-energized
Flashing (Green or Red)	Relay is Timing

DIMENSIONS - Model 358



(dimensions have a tolerance of ± 0.06)

DIMENSIONS - Model 388



(dimensions have a tolerance of ± 0.06)

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Installation Instructions

ADJUSTMENT PROCEDURE - Model 388

The procedure to determine the switch selections for the digital Model 388 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:

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

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

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

- To set a 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 OFF; 900 seconds ON

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

Code: = switch OFF
 = switch ON

$$512 + 256 + 128 + 4 = 900 \text{ second ON delay}$$

$$64 + 32 + 4 = 100 \text{ second OFF delay}$$

e.g. #2: 5 minutes OFF; 55 minutes ON

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

Code: = switch OFF
 = switch ON

$$32 + 16 + 4 + 2 + 1 = 55 \text{ minute ON delay}$$

$$4 + 1 = 5 \text{ minute OFF delay}$$

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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