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# PERCENTAGE TIMERS



CATALOG OF PRODUCTS

# PERCENTAGE TIMER

## PTA SERIES | WITH MEMORY



- ◆ Industry-standard panel cutout and mounting pattern
- ◆ Retains timing sequence in the event of power loss
- ◆ Onboard potentiometer for easy time delay adjustment
- ◆ LED indicates relay status
- ◆ 10A SPNO output
- ◆ Terminal block makes wiring easier from top or bottom
- ◆ Secure termination with bare wire or crimp terminals
- ◆ Touch-safe terminal cover available - Macromatic P/N 70600
- ◆ Mounting hardware included



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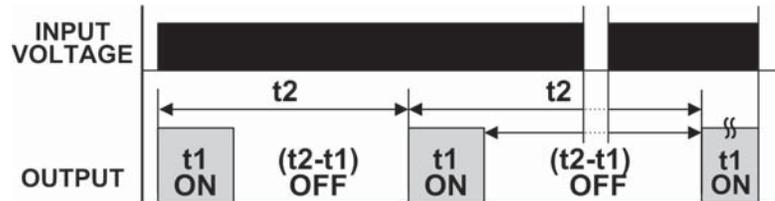
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The PTA Series is a microprocessor-based Percentage Timer that delivers reliable and accurate timing for critical applications where the ON time ( $t_1$ ), as a percentage of the total cycle time, must be adjustable. The fixed overall length ( $t_2$ ) of the repeating ON/OFF cycle is selected as the time range with multiple ranges offered in seconds, minutes, and hours. Typical applications include controls for irrigation, chemical feeding, electric heating & cooling, motors and lubrication systems.

### FUNCTION: PERCENTAGE

Upon initial application of input voltage, the output is energized and time delay ( $t_1$ ) begins. Time Delay ( $t_1$ ) is adjustable as a percentage of the overall cycle time ( $t_2$ ). At the end of time delay ( $t_1$ ), the output is de-energized for the remainder of overall cycle ( $t_2-t_1$ ). The sequence then repeats until input voltage is removed. If input voltage is removed and reapplied, the timing cycle will continue from where it left off when the input voltage was removed. A setting of 100% energizes the output continuously while a setting of 0% de-energizes the output continuously.



| INPUT VOLTAGE (50/60HZ) | TIME RANGE ( $t_2$ )  | PRODUCT NUMBER   | WIRING             |
|-------------------------|---|--|--------------------|
| 120V AC                 | 15 Seconds<br>30 Seconds<br>1 Minute<br>2 Minutes<br>15 Minutes<br>30 Minutes<br>1 Hour | PTA2015S<br>PTA2030S<br>PTA2001M<br>PTA2002M<br>PTA2015M<br>PTA2030M<br>PTA2001H | <p>DIAGRAM 209</p> |
| 240V AC                 | 15 Seconds<br>30 Seconds<br>1 Minute<br>2 Minutes<br>15 Minutes<br>30 Minutes<br>1 Hour | PTA1015S<br>PTA1030S<br>PTA1001M<br>PTA1002M<br>PTA1015M<br>PTA1030M<br>PTA1001H |                    |

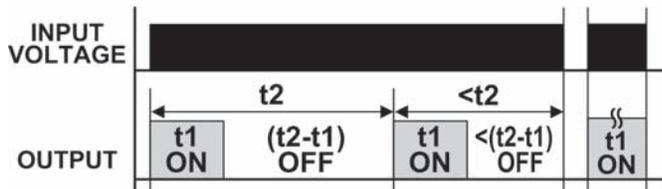
# PERCENTAGE TIMER

## PTA SERIES | NO MEMORY

The PTA Series without memory is a microprocessor-based Percentage Timer that delivers reliable and accurate timing for critical applications where the ON time ( $t_1$ ), as a percentage of the total cycle time, must be adjustable. The fixed overall length ( $t_2$ ) of the repeating ON/OFF cycle is selected as the time range with multiple ranges offered in seconds, minutes, and hours. Typical applications include controls for irrigation, chemical feeding, electric heating & cooling, motors and lubrication systems.

### FUNCTION: PERCENTAGE (NO MEMORY)

Upon initial application of input voltage, the output is energized and time delay ( $t_1$ ) begins. Time Delay ( $t_1$ ) is adjustable as a percentage of the overall cycle time ( $t_2$ ). At the end of time delay ( $t_1$ ), the output is de-energized for the remainder of overall cycle ( $t_2 - t_1$ ). The sequence then repeats until input voltage is removed. If input voltage is removed and reapplied, the timing cycle will be reset. A setting of 100% energizes the output continuously while a setting of 0% de-energizes the output continuously.



- ◆ Industry-standard panel cutout and mounting pattern
- ◆ No memory
- ◆ Onboard potentiometer for easy time delay adjustment
- ◆ LED indicates relay status
- ◆ 10A SPNO output
- ◆ Terminal block makes wiring easier from top or bottom
- ◆ Secure termination with bare wire or crimp terminals
- ◆ Touch-safe terminal cover available - Macromatic P/N 70600
- ◆ Mounting hardware included

| INPUT VOLTAGE (50/60HZ) | TIME RANGE ( $t_2$ )  | PRODUCT NUMBER  | WIRING             |
|-------------------------|---|---|--------------------|
| 120V AC                 | 15 Seconds<br>30 Seconds<br>1 Minute<br>2 Minutes<br>15 Minutes<br>30 Minutes<br>1 Hour | PTA2015SB<br>PTA2030SB<br>PTA2001MB<br>PTA2002MB<br>PTA2015MB<br>PTA2030MB<br>PTA2001HB |                    |
| 240V AC                 | 15 Seconds<br>30 Seconds<br>1 Minute<br>2 Minutes<br>15 Minutes<br>30 Minutes<br>1 Hour | PTA1015SB<br>PTA1030SB<br>PTA1001MB<br>PTA1002MB<br>PTA1015MB<br>PTA1030MB<br>PTA1001HB | <p>DIAGRAM 209</p> |



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# PERCENTAGE TIMER

## PTA SERIES

### APPLICATION DATA

**Voltage Tolerance:**

+10/-15% of nominal at 50/60 Hz

**Load (Burden):** Maximum of 3 VA for all voltages

**Setting Accuracy:** +/- 2%

**Setting Precision:** +/- 1% of total cycle time

**Dial Resolution:** Dial settings marked in 1% increments

**Indication:**

LED remains on steady during relay OFF time

LED blinks during relay ON time

**Repeat Accuracy:** (constant voltage and temperature):

+/-0.1% or +/- 0.04 seconds, whichever is greater

**Reset Time:** 300ms

**Start-up Time:** (Time from when power is applied until unit is

timing): 0.05 Seconds

**Temperature:**

Operating: -28° to 65°C (-18° to 149°F)

Storage: -40° to 85°C (-40° to 185°F)

**Output Contacts:**

10A @ 240VAC / 7A @ 28V DC SPNO, 1/4hp @ 120V AC

**Life:**

Mechanical: 10,000,000 operations

Full Load: 100,000 operations

**Mounting:**

Panel Mount with supplied hardware

**Termination:**

Pressure Clamp Screw Terminals

#12-22 AWG Wire, Solid, Stranded Wire

Recommended Tightening Torque 7 in.-lbs. (12 in.-lbs maximum)

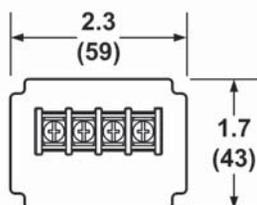
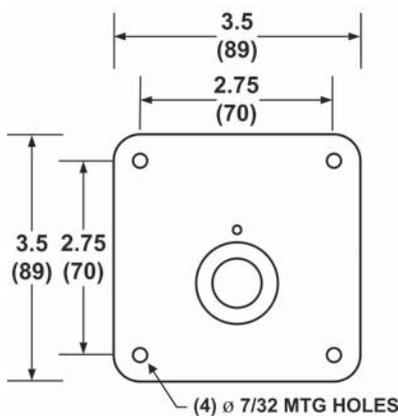
PT Series Finger-Safe Terminal Cover P/N 70600



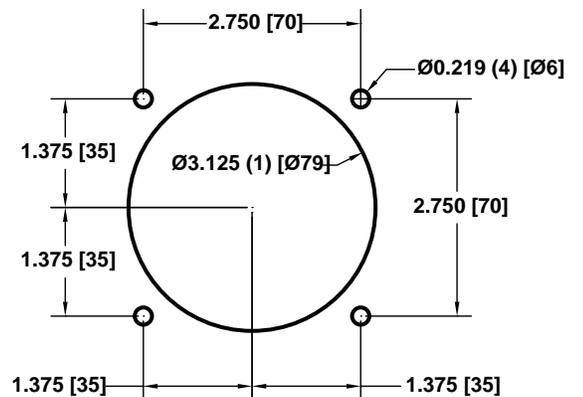
Approvals:



### DIMENSIONS



Panel Cutout



All Dimensions in  
Inches (Millimeters)

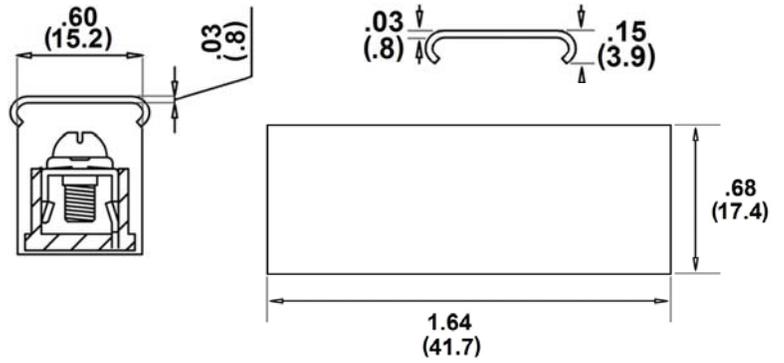
# ACCESSORIES

## PTA SERIES

### PT Series Finger-Safe Terminal Cover Catalog Number 70600

Cover for terminal block on the PT Series Percentage Timer. Snaps in place for a quick and reliable terminal cover solution.

- **Material:** Polycarbonate
- **Flame Rating:** UL94V-2
- **Temperature:** -40 to 80°C



# MACROMATIC INDUSTRIAL CONTROLS

Located in Menomonee Falls, Wisconsin, Macromatic Industrial Controls engineers and manufactures industrial relays that control electrical processes and monitor power for damaging fault conditions.

Macromatic provides solutions for almost any application in any industry. Macromatic's products are used in the HVACR, pump control, material handling, motor control, generator, and lift and elevator industries, plus more.

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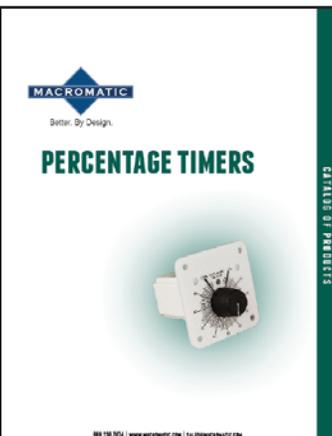
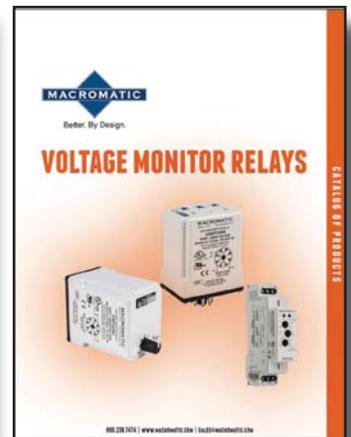
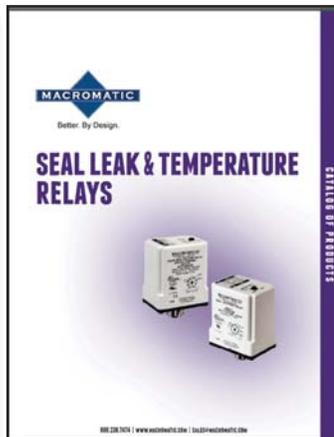
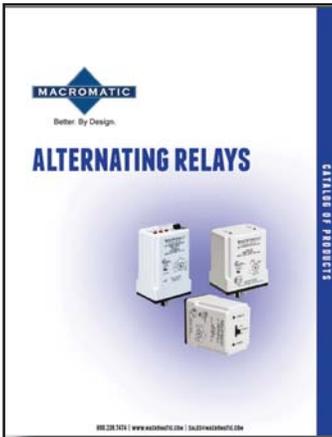
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