

# MODEL 171

# 1 AMP CURRENT MONITOR

- Monitors AC Current from 0.1 - 1A
- Adjustable Drop-out Set Point
- Adjustable Trip and Restart Delays
- Monitors for Undercurrent Conditions

## DESCRIPTION

The **Model 171** is an AC current monitor for detecting undercurrent conditions. The monitor contains a proprietary microcontroller-based circuit monitoring current passed through an internal shunt resistor and driving an electromechanical SPDT relay. Two status lights are provided to indicate relay status, fault condition, and timing. An adjustable trip delay is provided to prevent nuisance tripping and an adjustable restart delay has been provided for applications requiring a delay to start an additional load.

When AC current is 5% or greater than the drop-out set point, the relay will pick-up after the completion of the restart delay. The RUN status light will blink during the restart delay and remain on when the relay energizes. When the AC current remains at or below the drop-out set point for a period longer than the trip delay, the relay will drop-out. The RUN status indicator will remain on during the trip delay time indicating the relay is still energized. The FAULT status indicator lights during an undercurrent condition.

## LED STATUS INDICATORS

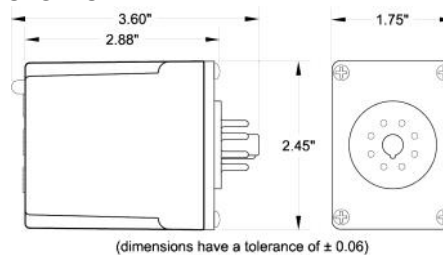
STATUS INDICATORS		STATUS
FAULT (RED LED)	RUN (GREEN LED)	
OFF	ON	RELAY ON
OFF	BLINKING	RESTART DELAY TIMING, RELAY OFF
ON	ON	UNDERCURRENT CONDITION, TRIP DELAY TIMING, RELAY ON
ON	OFF	UNDERCURRENT CONDITION, RELAY OFF



SPECIFICATIONS	
MODEL	171
Operating Voltage	120VAC
Frequency	50/60Hz
Power Consumption	2W
Drop-out Adjustment	0.1 - 1 A
Pick-up Set Point	Fixed at 5% above Drop-out set point
Repeat Accuracy	+/- 0.5% of set point
Trip Delay	0.1 - 10 sec
Restart Delay	0.1 - 300 sec
Timing Accuracy	+/- 5%
Reset Type	Automatic
Output Contacts	SPDT 10A at 240VAC resistive
Expected Relay Life	Mechanical: 10 million operations Electrical: 100,000 at rated load
Operating Temperature	- 20 to +131 °F
Humidity Tolerance	0 - 97% w/o condensation
Enclosure Material	NORYL cover; 6/6 Nylon base
Mounting	8-pin socket**
Weight	6.3 oz

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

## DIMENSIONS



(dimensions have a tolerance of ± 0.06)

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



11440 East Pine Street  
Tulsa, Oklahoma 74116

04/2017  
© 2017 TIME MARK CORPORATION

TIME MARK is a division of  AEMT, Inc.

# MODEL 171

# 1 AMP CURRENT MONITOR

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 171.  
ALL ELECTRICAL POWER SHOULD BE REMOVED WHEN CONNECTING OR DISCONNECTING WIRING.  
THIS DEVICE SHOULD BE INSTALLED AND SERVICED BY QUALIFIED PERSONNEL.

## Installation Instructions

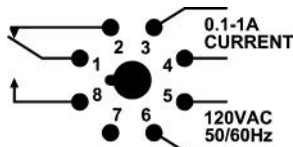
### INSTALLATION

Mount an 8-pin socket in a suitable enclosure. A NEMA-1 rated enclosure is available from Time Mark Corporation.

Connect 120VAC control power to terminals 5 and 6. Connect the relay output contacts on terminals 1, 2, and 8 as required for the application.

Connect the internal current shunt resistor in series with the load and proper short circuit protection device (e.g. a fuse) rated maximum of 10A (shunt is between pins 3 & 4). Refer to wiring diagrams for examples of typical applications.

### PIN DRAWING

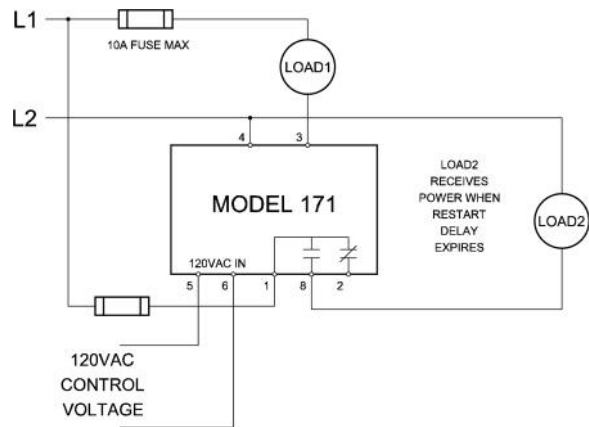
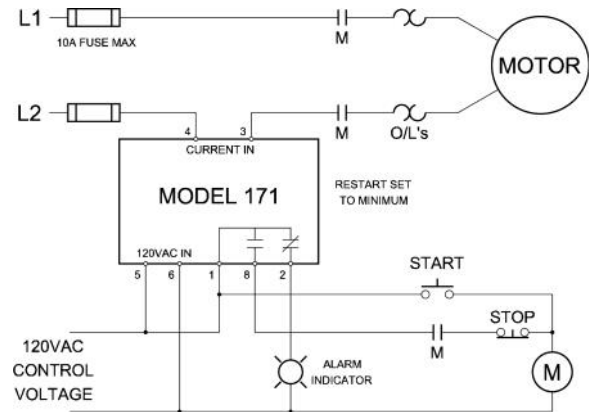
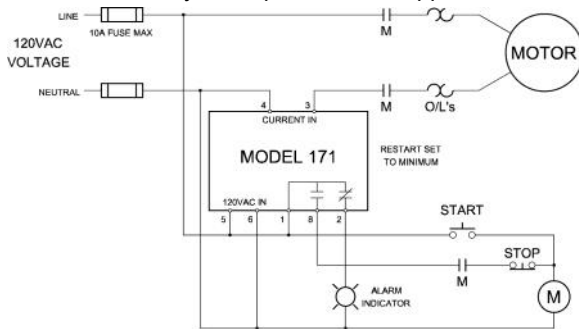


**NOTE:** When installing the Model 171 Current Monitor in areas of high humidity or contamination, it is recommended that the base area and all exposed metal parts of the socket be coated liberally with a good quality silicone grease, such as Dow Corning DC-4 or DC-4X. Insert the unit into the socket and wipe off excess grease around the base. This will prevent the entrance of moisture and other contaminants into the base and socket areas.

### ADJUSTMENT SETTINGS

Set both delay adjustments fully counterclockwise and the drop-out adjustment fully clockwise. Apply normal operating current, then adjust drop-out control counterclockwise until the Model 171 just picks up. This will result in the unit dropping out on relatively small current changes.

Increase trip delay as needed to prevent nuisance tripping. Set the restart delay as required for the application.



### TROUBLESHOOTING

Should the Model 171 Monitor fail to operate properly, check all connections to the monitor, and to the control circuits. Verify that the proper voltage and currents are present, and check all fuses.

### 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.

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



11440 East Pine Street  
Tulsa, Oklahoma 74116

04/2017  
© 2017 TIME MARK CORPORATION

TIME MARK is a division of  AEMT, Inc.