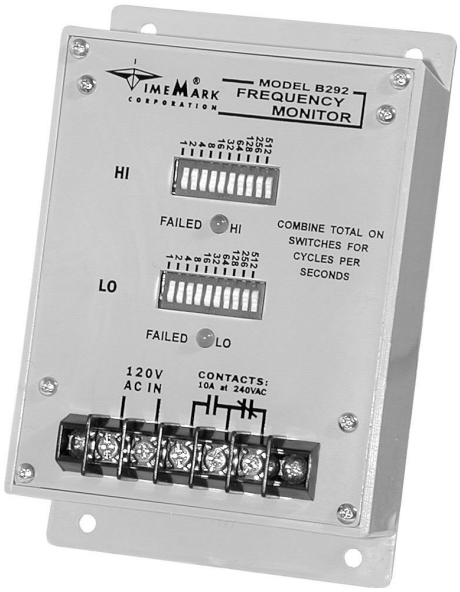
# MODEL 292

# Frequency Monitor




- **Monitors over and/or under frequency**
- **Automatic reset**
- **Solid-state electronic circuitry**

## DESCRIPTION

**The Model 292 Frequency Monitor** is designed to monitor power line frequency. It is intended for systems where line frequency variations will cause improper operation of electrical equipment.

A solid-state sensing circuit drives an internal electromechanical relay which is energized when the line frequency is correct. Operating power is drawn from the same line being monitored.

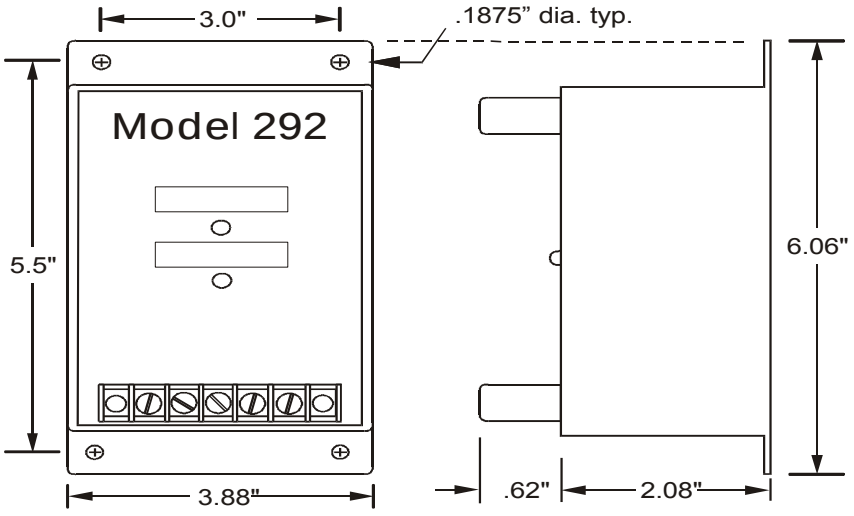
The Model 292 is set to the over and/or under frequency trip points using ten binary-coded switches. A frequency variation outside the trip point(s) causes the internal relay to drop out and an appropriate L E D indicator to illuminate.

Applications for the Model 292 include stand by power plants, portable power supplies, and windmill generators.

## SPECIFICATIONS

| Model | A292 | B292 | C292 |
|---|---|---|---|
| Nominal AC Voltages | 24 VAC | 120 VAC | 230 VAC |
| Voltage Range | 20-30 VAC | 90-130 VAC | 190-240 VAC |
| Operating Frequency | 45-1023 Hz | | |
| Response Time | 1 second | | |
| Transient Protection | 2500 V for 10 msec | | |
| Contact Rating | SPDT 10 amps at 240VAC resistive | | |
| Expected Relay Life | Mech: 10 million operations<br>Elec: 100,000 at rated load | | |
| Operating Temp | - 40° to +122° F | | |
| Humidity Tolerance | 0-97% w/o condensation | | |
| Enclosure Material | ABS plastic | | |
| Weight | 12 oz. Max. | | |

## DIMENSIONS





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

TIME MARK CORPORATION

11440 East Pine Street
Tulsa, Oklahoma 74116



Doc No. 87A083 12/00


© 2000 TIME MARK CORPORATION

TIME MARK is a division of AEMT, Inc.

# MODEL 292 Frequency 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 292.**
**ALL ELECTRICAL POWER SHOULD BE REMOVED WHEN CONNECTING OR DISCONNECTING WIRING.**
**THIS DEVICE SHOULD BE INSTALLED AND SERVICED BY QUALIFIED PERSONNEL.**

# Installation Instructions

## INSTALLATION

Connect the control wiring to the terminals with the contact markings (refer to the diagram on the unit). Apply power.

## TROUBLESHOOTING

Should the Model 292 Frequency Monitor fail to operate, check all connections. Verify that power is present, and check all fuses. Should problems persist, contact the factory at 800-862-2875 for assistance.

## OPERATION

To select a frequency trip point, set the appropriate switches to ON. Figure 1 shows the Model 292 set to trip at frequencies below 58 Hz and above 62 Hz.

Figure 2 shows the Model 292 set for a frequency band of 400 Hz +/-5 Hz.

## WARRANTY

The **Model 292 Frequency Monitor** is warranted to be free from defects in materials and workmanship for one year. Should this device fail to operate, we will repair or replace it for one year from the date of purchase. For complete warranty details, see the *Terms and Conditions of Sales* page in the front section of the Time Mark catalog.

**Figure 1**

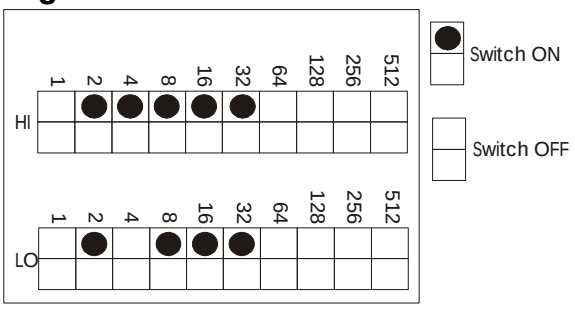
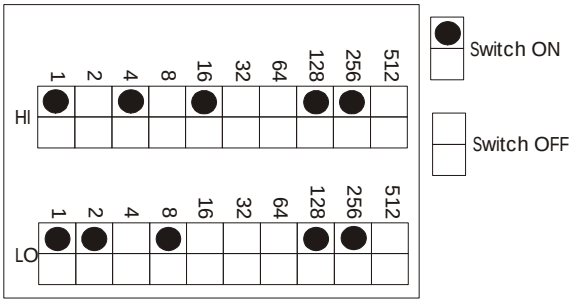
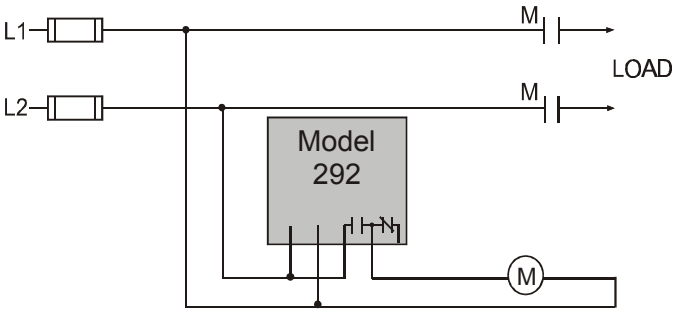



**Figure 2**




## TYPICAL APPLICATION




*Shows No Power Applied*


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

TIME MARK CORPORATION

11440 East Pine Street
Tulsa, Oklahoma 74116



Doc No. 87A083 12/00


© 2000 TIME MARK CORPORATION


TIME MARK is a division of AEMT, Inc.