### **MODEL 292**

## **Frequency Monitor**

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

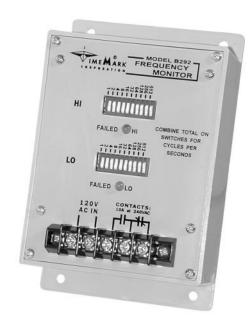
#### DESCRIPTION

**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.

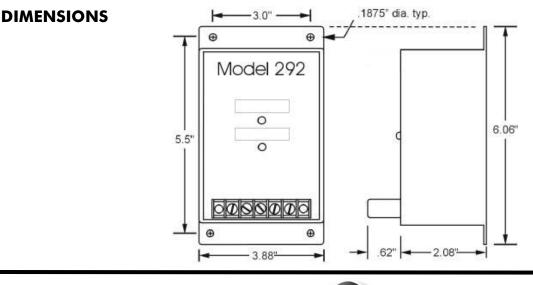
The Model 292 is set to the over and/or under frequency trip points using ten binary-coded switches. A frequency variation outside the trip point(s) causes the internal relay to drop out and an appropriate LED indicator to illuminate.

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



#### **SPECIFICATIONS**

Model	A292	B292	C292	
Nominal AC Voltages	24VAC	120VAC	230VAC	
Voltage Range	20-30VAC	90-130VAC	190-240VAC	
Operating Frequency		45-1023Hz		
Response Time		1 second		
Transient Protection		2500 V for 10ms		
Contact Rating	SPDT	SPDT 10 amps at 240VAC resistive		
Expected Relay Life		······································		
Operating Temp		- 20° to +122° F		
Humidity Tolerance		0-97% w/o condensation		
Enclosure Material		ABS plastic		
Weight	12 oz. Max.			



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# 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**

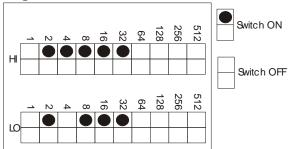
To select a frequency trip point, set the appropriate switches to ON. Figure 1 shows the Model 292 set to trip at frequencies below 58Hz and above 62Hz.

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

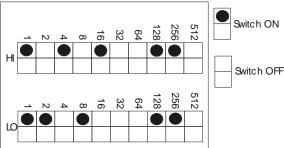
#### WARRANTY

This product is warranted to be free from defects in materials and workmanship for one year. Should this device fail to operate, we will repair it for one year 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.

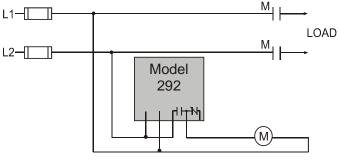
#### Figure 1



#### Figure 2



#### TYPICAL APPLICATION



Shows No Power Applied

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