

MODEL 272

3-Phase Current Unbalance Detector

- Adjustable Trip Delay
- Adjustable Unbalance Percentage
- Automatic Reset

DESCRIPTION

The Model 272 3-Phase Current Unbalance Detector monitors 3-phase lines to detect an unbalanced current. It can also monitor three separate single phase lines for equal current levels.

The percentage of unbalance is adjustable from 2% to 25% by adjusting a front panel control. An unbalance greater than this setting energizes the relay. The formula for an unbalance is:

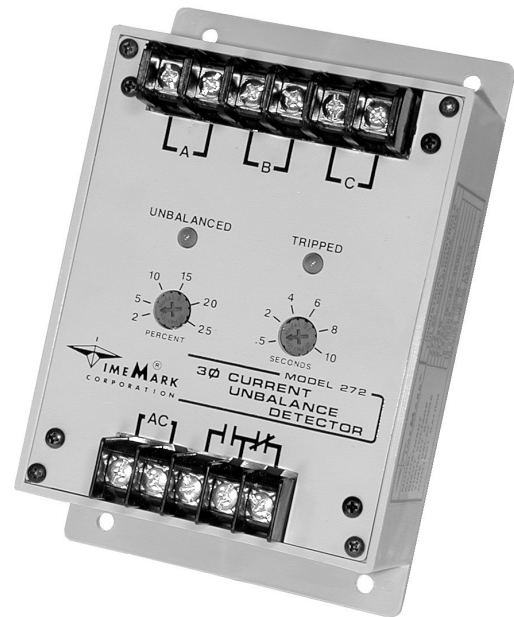
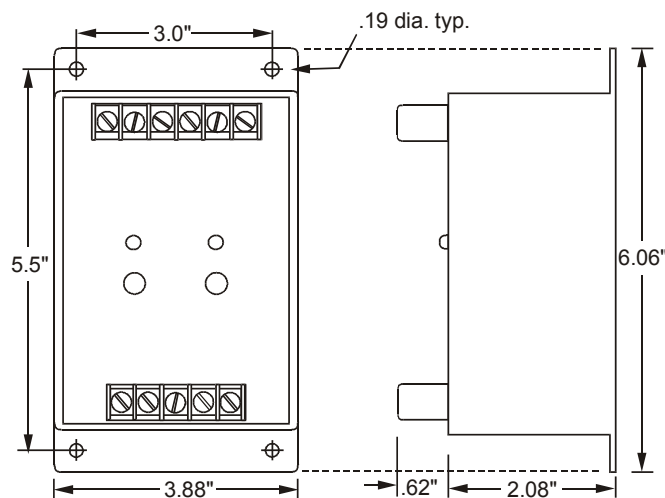
$$\left(\frac{\text{MAX CURRENT} - \text{MIN CURRENT}}{\text{MAX CURRENT}} \right) 100 = \%$$

An adjustable trip delay of 0.5 to 10 seconds is also provided. For optimum performance, operating currents should be kept in the 1 to 5 amps range. However, zero current on each phase is considered to be a balanced condition.

Continuous currents, up to 10 amps per phase, will not damage the unit, nor will current surges up to 40 amps for 2 seconds. The contacts are automatically reset when the unbalanced condition is corrected.

A supply voltage of 24 or 120VAC is required for this unit.

DIMENSIONS



SPECIFICATIONS

Model	272-24	272-120
Input Voltage	24VAC	115VAC
Input Voltage Range	20-28VAC	100-130VAC
Power Consumption	1.5W	
VA Burden	0.5VA per phase	
Frequency Range	50 - 400Hz	
Current Range	1 - 5 amps AC	
Max. Input Current	40 amps for 2 seconds	
Unbalance Adjustment	2% to 25%	
Trip Delay	0.5 to 10 seconds ± 20%	
Contact Rating	SPDT 10A at 240VAC resistive	
Expected Relay Life	Mech: 10 million operations Elec: 100,000 at rated load	
Transient Protection	2500V for 10ms	
Operating Temperature	- 20° to +131° F	
Humidity Tolerance	0-97% w/o condensation	
Enclosure Material	ABS plastic	
Weight	1 lb. 1.5 oz.	

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



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11/2011
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MODEL 272

3-Phase Current Unbalance Detector

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 272.
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 the Model 272 in a suitable enclosure.

Connect AC operating power to the appropriate terminals.

Connect the normally closed (N.C.) relay contacts to the load control wiring.

Connect the 3-phase currents or CT outputs to the current input terminals marked **A B C**.

Set the **PERCENT UNBALANCE** and **TRIP DELAY** adjustments to the desired levels, and apply operating power.

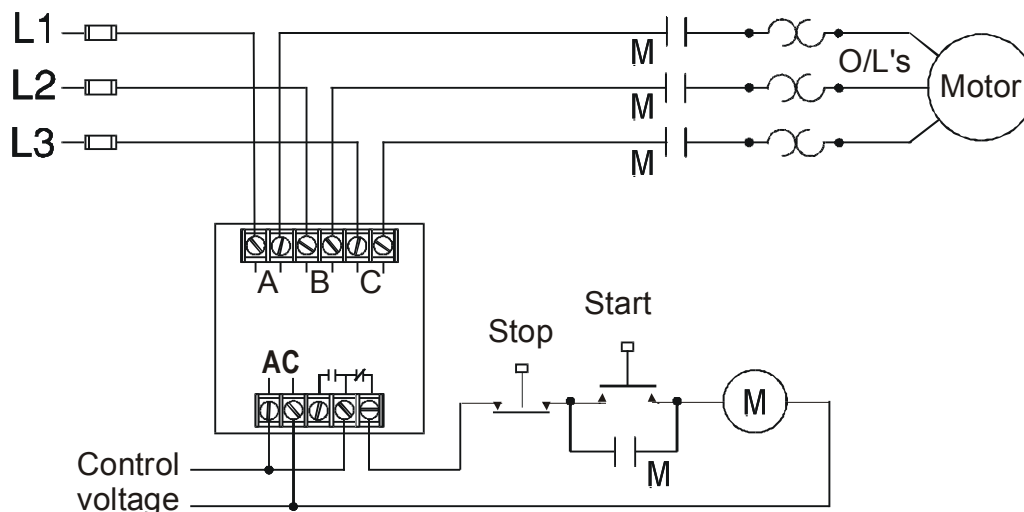
TROUBLESHOOTING

Should the monitor fail to operate properly, check that all three currents are present and are of the correct level. Check all fuses and verify that all wiring connections are correct. Should problems persist, contact the factory at **800-862-2875** for assistance.

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.

TYPICAL APPLICATION



Shows No Power Applied

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