MODEL 2522

3-Phase Monitor



- **Detects Phase Loss, Low Voltage, Phase Reversal**
- **Automatic or Manual Reset**
- **DPDT Relay Output**

DESCRIPTION

The **Model 2522** continuously monitors 3-phase power lines for abnormal conditions. When properly adjusted, the Model 2522 will detect phase loss on a loaded motor even when regenerated voltage is present.

This unit consists of a solid-state voltage and phase-angle sensing circuit, driving an electromechanical relay with DPDT contacts. When correct voltage and phase rotation are applied, the internal relay will energize. A fault condition will de-energize the relay. When the fault is corrected the Model 2522 will reset.

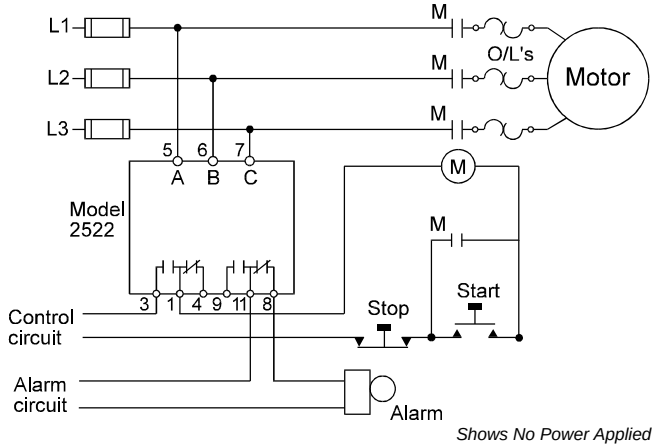
Both automatic and manual reset versions are available. The Model 2522 does not require a neutral connection, and can be used with Wye or Delta systems. Adjustment ranges are sufficiently wide to allow for proper adjustment to existing conditions. A failure indicator is provided to aid in adjustment and system troubleshooting.

SPECIFICATIONS

AUTO Reset MANUAL Reset	B2522B B2522BM	2522B 2522BM
Nominal Voltage	120 VAC	208/240 VAC
Max Input Voltage	132 VAC	262 VAC
Adjustment Range	85-120 VAC	160-240 VAC
Frequency	60 Hz	60 Hz
Power Consumption	.75 W	1.5 W
Transient Protection	2500 VRMS for 10ms	
Repeat Accuracy	±0.1% of set-point (fixed conditions)	
Response Time	0.05 seconds	
Reset Time	0.05 seconds	
Reset Type	Automatic or Manual	
Dead Band	2%	
Contact Rating	DPDT 7.5 amps , 115 VAC resistive	
Max. Contact Rating	870 VA, 30 VDC, 300 VAC	
Expected Relay Life	Mech: 10 million operations Elec: 100,000 operations at rated load	
Operating Temp	- 40° to +131° F	
Humidity Tolerance	97% w/o condensation	
Enclosure Material	ABS plastic	
Mounting	*11-pin socket (order separately)	
Weight	5 oz.	

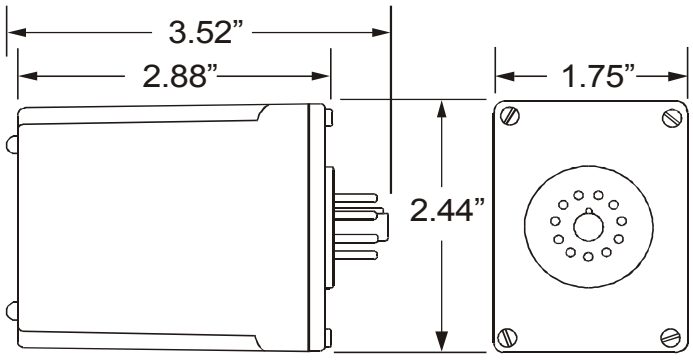
***Order socket number 51X016**

TYPICAL APPLICATION



Shows No Power Applied

DIMENSIONS



(dimensions have tolerance of ± 0.06)

Telephone: Main - (918) 438-1220
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Doc No. 87A382 12/00

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MODEL 2522 3-Phase 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 2522. 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 11-pin socket in a suitable enclosure.

Connect 3-phase power to terminals 5, 6 and 7 on the socket. Phase rotation may be verified using a Time Mark Model 108A or 108B Phase Sequence Detector.

Connect the load control wiring to the appropriate terminals on the socket:

For motor control applications; use terminals 1 and 3.
For phase loss alarm applications; use terminals 11 and 8.

Insert the Model 2522 into the socket and apply power.

If the contacts do not transfer, (green light ON), check that all phases are present and of the correct voltage. If power is correct, rotate the level adjustment counter-clockwise (CCW). If the contact still does not transfer, remove power and reverse any two of the three phase wires at the socket (phase rotation is reversed).

Re-apply power. The contact should transfer to provide a signal path between pins 1 and 3 and pins 9 and 11. The green LED should be lit.

NOTE: *When installing the Model 2522 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 silicon 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 contaminates into the base and socket areas.*

ADJUSTMENT SETTINGS

The following procedure will allow the Model 2522 to be adjusted to achieve a trip point just below the nominal phase-to-phase voltage, where the unit is applied. **On manual reset versions,** hold the reset button down during the following procedure.

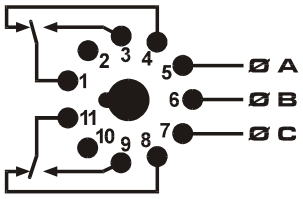
Rotate the adjustment control fully clockwise, or until the red (TRIP) indicator illuminates.

Slowly rotate the adjustment control in a counter clock-wise direction, just until the green (NORM) indicator illuminates.

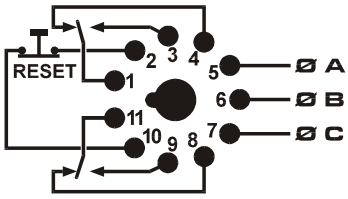
At this point, the Model 2522 is the most sensitive to irregular power line conditions. If nuisance tripping occurs, turn the control slightly farther counter-clockwise.

A more accurate setting will require the use of a 3-phase variac to lower the voltage to an exact measurable setting. Time Mark offers a factory set versions of all models and voltage ranges, for only a small additional charge.

PIN DIAGRAMS



Automatic Reset



Manual Reset

TROUBLESHOOTING

Should the Model 2522 fail to operate properly, check that all three voltages are present and are of the correct voltage level and phase rotation (a Model 108A or 108B phase sequence detector may be used to verify phase rotation). Check all fuses and verify that all wiring connections are correct. If problems persist, contact your local Time Mark Distributor, or the manufacturer at **800-862-2875**.

WARRANTY

The **Model 2522 3-Phase Monitor** is warranted to be free from defects in materials and workmanship, and is covered by our exclusive **5-year Unconditional Warranty**. If this device fails to operate, for any reason, we will repair or replace it free, for five years from the date of purchase. Contact your local Distributor or the Time Mark Sales department, Monday through Friday; 8 a.m. to 5 p.m., CST, for further details.

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