MODEL 2581

3-Phase Monitor



- **Detects Phase Loss, Low Voltage and Phase Reversal**
- **Encapsulated Circuitry**
- **LED Status Indicator**
- **1/4" Quick-connect Terminals**

DESCRIPTION

The **Model 2581 3-Phase Monitor** is designed to continuously monitor 3-phase power lines for phase loss, low voltage and phase reversal. The Model 2581 Monitor will detect phase loss on a loaded motor even when regenerated voltage is present.

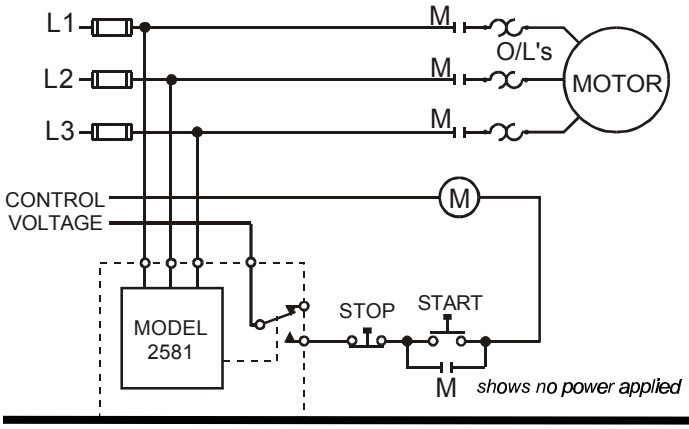
This device consists of a solid-state voltage and phase-angle sensing circuit, driving an electromechanical relay. When correct voltage and phase rotation are applied, the internal relay will energize. A fault condition will de-energize the relay. When the fault is corrected, the monitor will automatically reset .

The Model 2581 3-Phase Monitor does not require a neutral connection and can be used with Wye or Delta configured systems. Low voltage trip point is factory set at 10% below nominal. An LED indicator is provided for system troubleshooting.

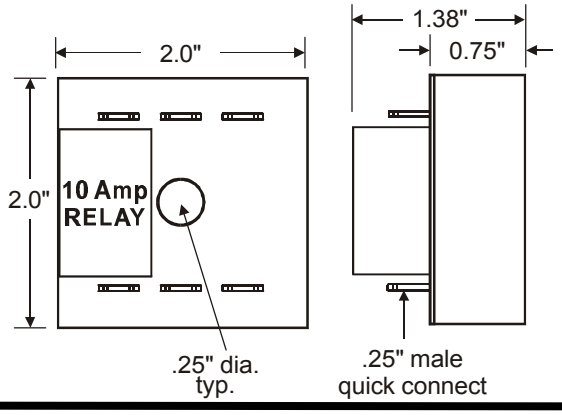
SPECIFICATIONS

Model	2581-208	2581-220	2581-240	2581-480
Nominal Voltage (phase to phase)	208VAC	220VAC	240VAC	480VAC
Trip Point	189VAC	200VAC	218VAC	436VAC
Trip Point Tolerance	± 2%			
Frequency	60 Hz			
Power Consumption	1.5W	1.65W	1.86W	4.5W
Transient Protection	2500 VRMS for 10msec			
Repeat Accuracy	±0.1% (fixed conditions)			
Response Time	50 msec (set or reset)			
Dead Band	Approx. 4%			
Contact Rating	SPDT 10 amps at 240VAC resistive			
Expected Relay Life	Mech:10 million operations Elec: 100,000 operations at rated load			
Operating Temperature	- 40° to +131° F			
Humidity Tolerance	97% w/o condensation			
Enclosure Material	ABS plastic			
Agency Approvals	Recognized to U.S. and Canadian requirements under the Component Recognition Program of Underwriters Laboratories, Inc.			

TYPICAL APPLICATION



DIMENSIONS - 208 to 240V versions



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MODEL 2581 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 2581. 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 2581 3-Phase Monitor** on a flat surface, in a well ventilated area. It should be fastened in position with a 1/4" bolt, washer and nut *(not included)*, through the center mounting hole on the unit.

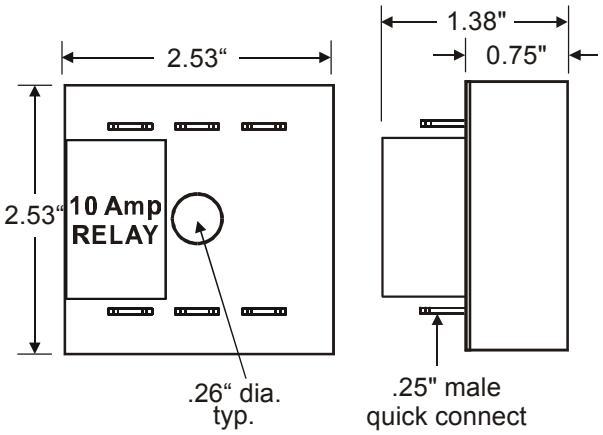
Use 1/4" quick disconnect lugs, or an equivalent, to connect the 3-phase power to the terminals marked **A**, **B** and **C**.

Connect the control circuit to the terminals with the contact markings. A standard wiring diagram is shown in the TYPICAL APPLICATION drawing.

If the contact does not transfer (LED indicator-On), check that all phases are present and of the correct voltage.

If the contact still does not transfer, remove power and reverse any two of the three phase wires *(phase rotation is reversed)*. Re-apply power. The contact should transfer to provide a signal path between terminals.

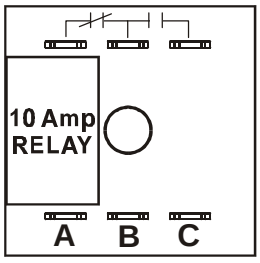
DIMENSIONS - 480V version



TROUBLESHOOTING

Should the Model 2581 Monitor fail to operate properly, check that all three voltages are present, and are of the correct voltage level and phase rotation (a Time Mark Model 108A or 108B Phase Sequence Detector should 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 factory for assistance *(Monday-Friday, 8 a.m. to 5 p.m. CST).*

PIN DIAGRAM



WARRANTY

The **Model 2581 3-Phase Monitor** is covered by Time Mark Corporation’s exclusive **5-Year Unconditional Warranty**. Should this device fail, for any reason, within five years from the date of purchase, we will repair or replace it free. Contact the Time Mark Sales department, Monday through Friday; 8 a.m. to 5 p.m., CST, for further details.

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