

## 250A SERIES

### 3-Phase Voltage/Phase Monitor

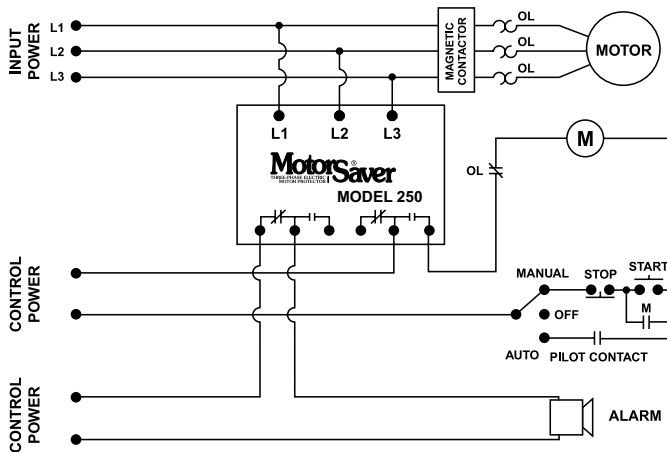


### Description

The 250A is a 3-phase, auto-ranging, dual-range voltage monitor that protects 190–480 V ac, 50/60 Hz motors regardless of size from low and high voltage, unbalance/single-phase, and reverse-phase. The product provides a user selectable nominal voltage setpoint and the voltage monitor automatically selects between the 200 V and 400 V range. The 250 A also features adjustable or manual restart delay.

This unique microcontroller-based voltage and phase-sensing device constantly monitors the 3-phase voltages to detect harmful power line conditions. When a harmful condition is detected, the output relay is deactivated after a specified trip delay. The output relay reactivates after power line conditions return to acceptable levels. The Model 250 A includes advanced single LED diagnostics. Five different light patterns distinguish between faults and normal conditions.

### Wiring Diagram



### Features & Benefits

FEATURES	BENEFITS
<b>Proprietary microcontroller based circuitry</b>	Constant monitoring of single-phase, low voltage, voltage unbalance, phase reversal, harmful power line conditions.
<b>Auto-sensing wide voltage range</b>	Automatically senses system voltage between 190–480 V ac. Saves setup time.
<b>Advanced LED diagnostics</b>	Quick visual indicator for cause of trip. LED indications include: normal operation, power-up restart delay, reverse-phase trip, unbalance/single-phase trip, high or low voltage trip
<b>Adjustable trip delay</b>	Prevent nuisance tripping due to rapidly fluctuating power line conditions.
<b>DPDT relay output</b>	Allows for versatility to meet wide application needs
<b>Manual Reset</b>	Allows for inspection of equipment before system is re-energized

### Ordering Information

MODEL	LINE VOLTAGE	% OF SETPOINT				DESCRIPTION
		LOW VOLTAGE TRIP	LOW VOLTAGE RESET	HIGH VOLTAGE TRIP	HIGH VOLTAGE RESET	
250A	190–480 V ac	90 %	93 %	110 %	107 %	Provides high and low voltage protection at fixed percentage of nominal voltage.
250600	475–600 V ac	90 %	93 %	110 %	107 %	Provides high and low voltage protection at fixed percentage of nominal voltage.
250A-MET	190–480 V ac	85 %	88 %	N/A	N/A	Designed for use with Fire Control Panels. Has 2 Form C contacts that operate independently. Left Form C energizes when voltage conditions are good and de-energize when a fault condition is detected. Right Form C only energizes during a reverse-phase condition. No high voltage protection.
250-100-MET	95–120 V ac	85 %	88 %	N/A	N/A	Designed for use with Fire Control Panels. Has 2 Form C contacts that operate independently. Left Form C energizes when voltage conditions are good and de-energize when a fault condition is detected. Right Form C only energizes during a reverse-phase condition. No high voltage protection.

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### Specifications

<b>Frequency</b>	50*/60 Hz Low Voltage
<b>Functional Characteristics</b>	
<b>Voltage Unbalance (NEMA)</b>	
<b>Trip</b>	6 %
<b>Reset</b>	4.5 %
<b>Trip Delay Time</b>	
<b>Low Voltage, High Voltage</b>	4 seconds
<b>Unbalance, Phasing Faults</b>	2 seconds
<b>Restart Delay Time</b>	
<b>After a Fault or Complete Power Loss</b>	Manual, 2–300 seconds adj.
<b>Output Characteristics</b>	
<b>Output Contact Rating (DPDT - 2 Form C)</b>	
<b>Pilot Duty</b>	480 VA @ 240 V ac
<b>General Purpose</b>	10 A @ 240 V ac
<b>Temperature Range</b>	-40° to 70°C (-40° to 158°F)
<b>Trip &amp; Reset Accuracy</b>	±1 %
<b>Maximum Input Power</b>	5 W
<b>Relative Humidity</b>	Up to 95 % non-condensing per IEC 68-2-3
<b>Terminal Torque</b>	7 in.-lbs.
<b>Wire Size</b>	12–18 AWG
<b>Transient Protection (Internal)</b>	IEC 61000-4-5; 1995 ±6 kV
<b>Approvals</b>	
<b>UL</b>	UL 508 (File #E68520)
<b>CSA</b>	CSA 22.2 No. 14 (File#46510)
<b>Dimensions</b>	<b>H</b> 74.4 mm (2.93"); <b>W</b> 133.9 mm (5.27"); <b>D</b> 74.9 mm (2.95")
<b>Weight</b>	1.02 lb. (16.32 oz., 462.66 g)
<b>Mounting Method</b>	#8 screws

\*Note: 50 Hz will increase all delay timers by 20 %.