

250A SERIES

3-Phase Voltage/Phase Monitor

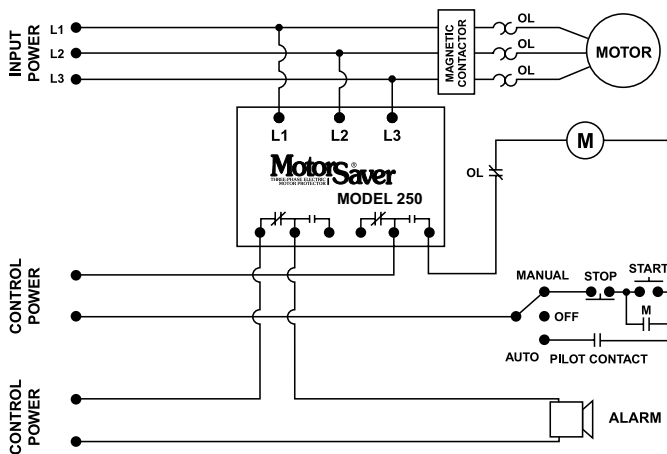


Description

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 |
|--|--|
| Proprietary microcontroller based circuitry | Constant monitoring of single-phase, low voltage, voltage unbalance, phase reversal, harmful power line conditions. |
| Auto-sensing wide voltage range | Automatically senses system voltage between 190–480 V ac. Saves setup time. |
| Advanced LED diagnostics | 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 |
| Adjustable trip delay | Prevent nuisance tripping due to rapidly fluctuating power line conditions. |
| DPDT relay output | Allows for versatility to meet wide application needs |
| Manual Reset | 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. |

250A SERIES

Specifications

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

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

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