

Voltage Monitoring Relays

201A-AU Series

3-Phase Voltage/Phase Monitor



Description

The 201A-AU series is a three-phase, auto-ranging, dual-range voltage monitor that protects 190–480 V ac, 50/60 Hz motors regardless of their size. This monitor provides a user-selectable nominal voltage setpoint and will automatically select between the 200 V and 400 V range. Additional adjustment knobs allow the user to set a 1–30 second trip delay, a manual restart or 1–500 second restart delay, and a 2–8% voltage unbalance trip point. It includes advanced, single LED diagnostics where color and light patterns distinguish between faults and normal conditions. This unique microcontroller-based voltage and phase-sensing unit constantly monitors the three-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 for a specified restart delay time (or manual reset).

Features & Benefits

| FEATURES | BENEFITS |
|--|---|
| Proprietary microcontroller-based circuitry | Constant monitoring of loss of any phase, low-voltage, high-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 |
| Compact design for 8-pin; DIN-rail or surface mount | Allows flexibility in panel installation |
| Adjustable voltage unbalance trip setting | Allows compatibility with a variety of motors and reduces nuisance tripping |
| Adjustable trip and restart delay settings | Prevents nuisance tripping due to rapidly fluctuating power line conditions. |

Applications

- Fan motors
- Air conditioners
- Compressors
- Heat, well, and sump pumps
- Small conveyer motors

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Specifications

| | |
|---|--|
| Frequency | 50/60 Hz |
| Functional Characteristics | |
| Low Voltage (% of setpoint) | |
| Trip | 90% ±1% |
| Reset | 93% ±1% |
| High Voltage (% of setpoint) | |
| Trip | 110% ±1% |
| Reset | 107% ±1% |
| Voltage Unbalance (NEMA) | |
| Trip | 2–8% adjustable |
| Reset | Trip setting minus 1% (5–8%) Trip setting minus 0.5% (2–4%) |
| Trip Delay Time | |
| High, Low and Unbalanced Voltage | 1–30 seconds adjustable |
| Single-Phasing Faults | 1 second fixed |
| Restart Delay Time | |
| After a Fault | Manual, 1–500 seconds adjustable |
| After a Complete Power Loss | Manual, 1–500 seconds adjustable |
| Output Characteristics | |
| Output Contact Rating (1-Form C) | |
| Pilot Duty | 480 VA @ 240 V ac, B300 |
| General Purpose | 10 A @ 240 V ac |
| General Characteristics | |
| Ambient Temperature Range | |
| Operating | -40° to 70 °C (-40° to 158 °F) |
| Storage | -40° to 80 °C (-40° to 176 °F) |
| Trip & Reset Accuracy | ±1% |
| Maximum Input Power | 5 W |
| Relative Humidity | 10–95%, non-condensing per IEC 68-2-3 |
| Terminal Torque | 12 in.-lbs. (for OT08-PC socket) |
| Wire Gauge | 12–22 AWG solid or stranded |
| Standards Passed | |
| Electrostatic Discharge | (ESD) IEC 61000-4-2, Level 3, 6 kV contact, 8 kV air |
| Radio Frequency Immunity, Radiated | 150 MHz, 10 V/m |
| Fast Transient Burst | IEC 61000-4-4, Level 3, 3.5 kV input power and controls |
| Surge | |
| IEC | IEC 61000-4-5, Level 3, 4 kV line-to-line; Level 4, 4 kV line-to-ground |
| ANSI/IEEE | C62.41 Surge and Ring Wave Compliance to a level of 6 kV line-to-line |
| Hi-potential Test | Meets UL 508 (2 x rated V +1000 V for 1 min.) |
| Enclosure | Polycarbonate |
| Dimensions | H 44.45 mm (1.75"); W 60.325 mm (2.375"); D 104.775 mm (4.125") (with socket) |
| Weight | 0.7 lb. (11.2 oz., 317.51 g) |
| Mounting Method | DIN-rail or surface mount (plug in to OT08PC socket) |
| Socket Available | OT08PC (UL Rating 600 V) |

The 600 V socket can be surface mounted or installed on DIN Rail.

Note: Manufacturer's recommended screw terminal torque for the OT Series Octal Sockets is 12 in.-lbs..

Must use Model OT08PC socket for UL Rating!

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Certification & Compliance

UL

UL 508 (File #E68520)

Accessories

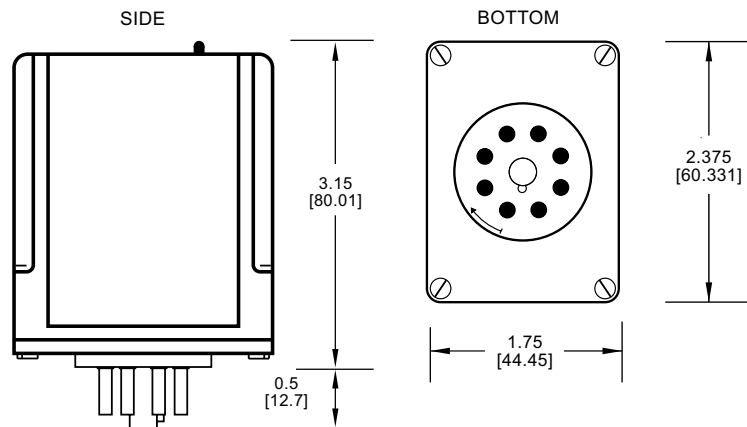
OT08PC Octal 8-pin Socket

8-pin 35 mm DIN-rail or surface mount. Rated at 10A @ 600 V ac. Surface mounted with two #6 screws or snaps onto a 35 mm DIN rail.

Ordering Information

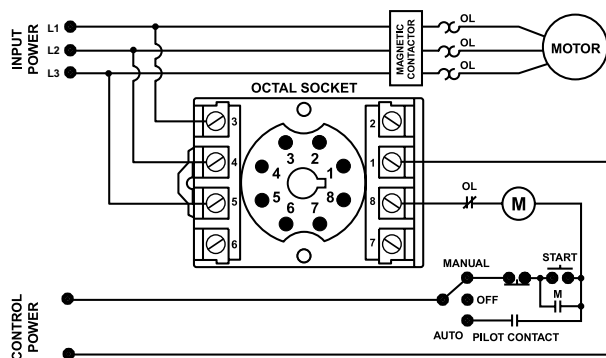
| MODEL | LINE VOLTAGE | DESCRIPTION |
|---------------|--------------|-------------------------------|
| 201A-AU | 190–480 V ac | DIN-rail or surface mountable |
| 201575-AU | 475–600 V ac | DIN-rail or surface mountable |
| 201A-AU-OT | 190–480 V ac | Sold with OT08PC socket |
| 201-575-AU-OT | 475–600 V ac | Sold with OT08PC socket |

Dimensions Inches (mm)

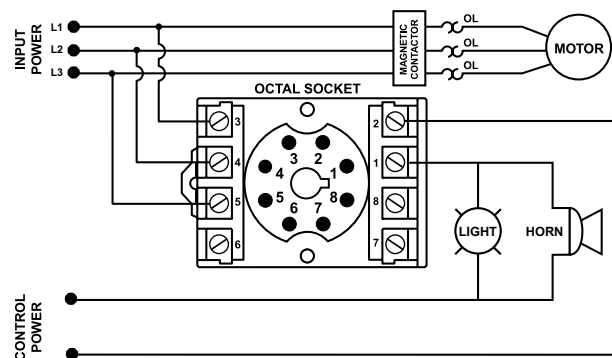


Wiring Diagram

201A-AU WITH MOTOR CONTROL



201A-AU WITH ALARM CONTROL



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