## **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)

**High Voltage (% of setpoint)** 

 Trip
  $110\% \pm 1\%$  

 Reset
  $107\% \pm 1\%$ 

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)

**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 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.

 ${\it Must use Model OT08PC socket for UL Rating!}$ 



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## **Certification & Compliance**

**UL** 508 (File #E68520)

#### **Accessories**

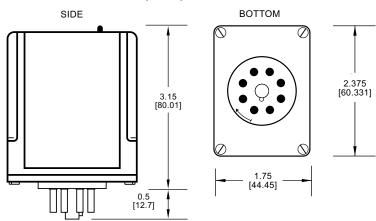
## OT08PC Octal 8-pin Socket

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**

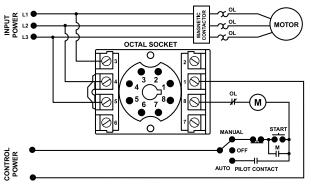
MODEL	LINE VOLTAGE	DESCRIPTION
201A-AU	190-480 V ac	DIN-rail or surface mountable
201575-AU	475-600 V ac	DIN-rail or surface mountable
201A-AU-0T	190-480 V ac	Sold with OT08PC socket
201-575-AU-OT	475–600 V ac	Sold with OT08PC socket

#### **Dimensions Inches (mm)**

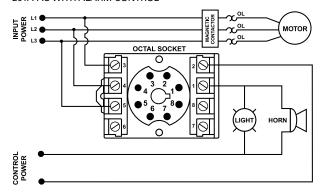


#### **Wiring Diagram**





#### 201A-AU WITH ALARM CONTROL



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