

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% $\pm$ 1%
Reset	93% $\pm$ 1%
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)
Trip & Reset Accuracy	$\pm$ 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

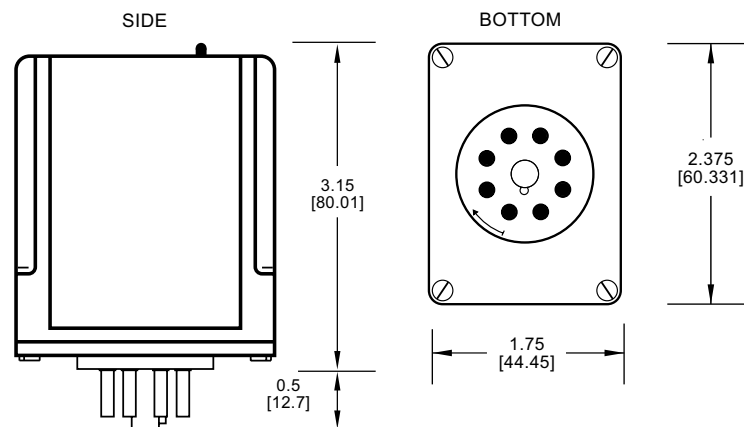
OT08PC Octal 8-pin Socket

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

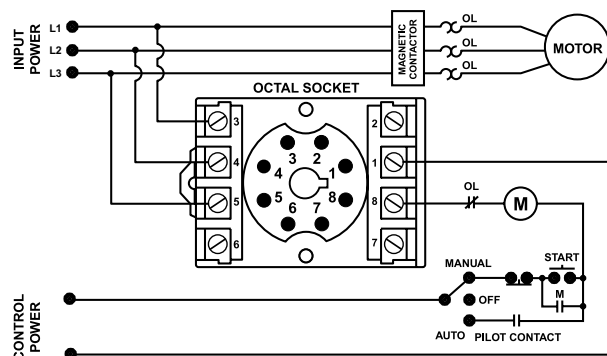
MODEL	LINE VOLTAGE	DESCRIPTION
201A-AU	190–480 V ac	DIN-rail or surface mountable
201575-AU	475–600 V ac	DIN-rail or surface mountable
201A-AU-OT	190–480 V ac	Sold with OT08PC socket
201-575-AU-OT	475–600 V ac	Sold with OT08PC socket

Dimensions Inches (mm)

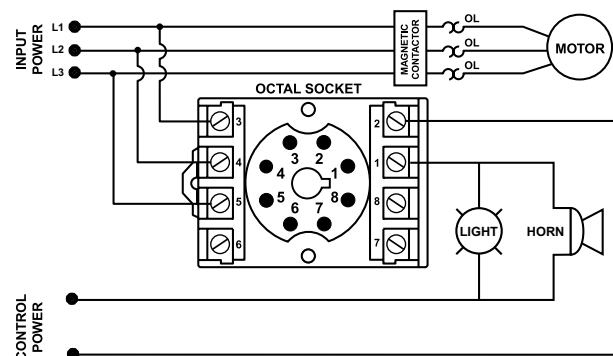


Wiring Diagram

201A-AU WITH MOTOR CONTROL



201A-AU WITH ALARM CONTROL



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