Voltage Monitoring Relays
202-200-SP Series

Single-phase voltage monitor



Description

The 202-200-SP series voltage monitor is designed to protect single-phase motors regardless of their size. It can be used with 190–240 V ac, 50*/60 Hz motors to prevent damage caused by incoming power problems. A unique microcontroller-based, voltage-sensing circuit constantly monitors the voltage to detect harmful power line conditions. The MotorSaver® deactivates its output relay after a specified trip delay whenever harmful conditions are detected. The output relay reactivates after power line conditions return to an acceptable level and a specified amount of time has elapsed (restart delay). The trip delay prevents nuisance tripping due to rapidly fluctuating power line conditions.

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

Features & Benefits

FEATURES	BENEFITS
Proprietary microcontroller-based circuitry	Constant monitoring of voltage to detect harmful power line conditions, even before a motor starts
Fixed trip delay 4 s	Prevents nuisance tripping due to rapidly fluctuating power line conditions
Adjustable restart delay (manual, 2–3 s)	Allows staggered start-up of multiple motors after a fault to prevent a low-voltage condition
Advanced LED indication	Provides diagnostics that can be used for troubleshooting and to determine relay status
One screw mounting and standard ¼" quick-connect terminals	Fast installation and compact size are perfect for panel assembly or OEM applications

Applications

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

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Specifications

Functional Characteristics

Line Voltage	190–240 V ac
Frequency	50*/60 Hz

Functional Characteristics

Low Voltage (% of setpoint)	
Trip	90%
Reset	93%
High Voltage (% of setpoint) (not available on -NHV model)	
Trip	110%
Reset	107%
Trip Delay Time	
High and Low Voltage	4 seconds
Restart Delay Time	
After a Fault or Complete Power Loss	Manual, 2–300 seconds adjustable

Output Characteristics

Output Contact Rating (SPDT)	
Pilot Duty	480 VA @ 240 V ac
General Purpose	10 A @ 240 V ac

General Characteristics

Temperature Range	-40° to 70 °C (-40° to 158 °F)
Trip & Reset Accuracy	±1%
Repeatability	±0.5%
Input to Output Dielectric	1480 Vrms (min.)
Termination	0.25" male quick connect
Maximum Input Power	5 W
Relative Humidity	95%, non-condensing
Transient Protection	IEC 61000-4-5, ±4 kV
Dimensions	**H** 63.5 mm (2.5"); **W** 63.5 mm (2.5"); **D** 35.56 mm (1.4")
Weight	0.5 lb. (8 oz., 226.8 g)
Mounting Method	1/4" socket head cap screw (customer supplied)

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

Certification & Compliance

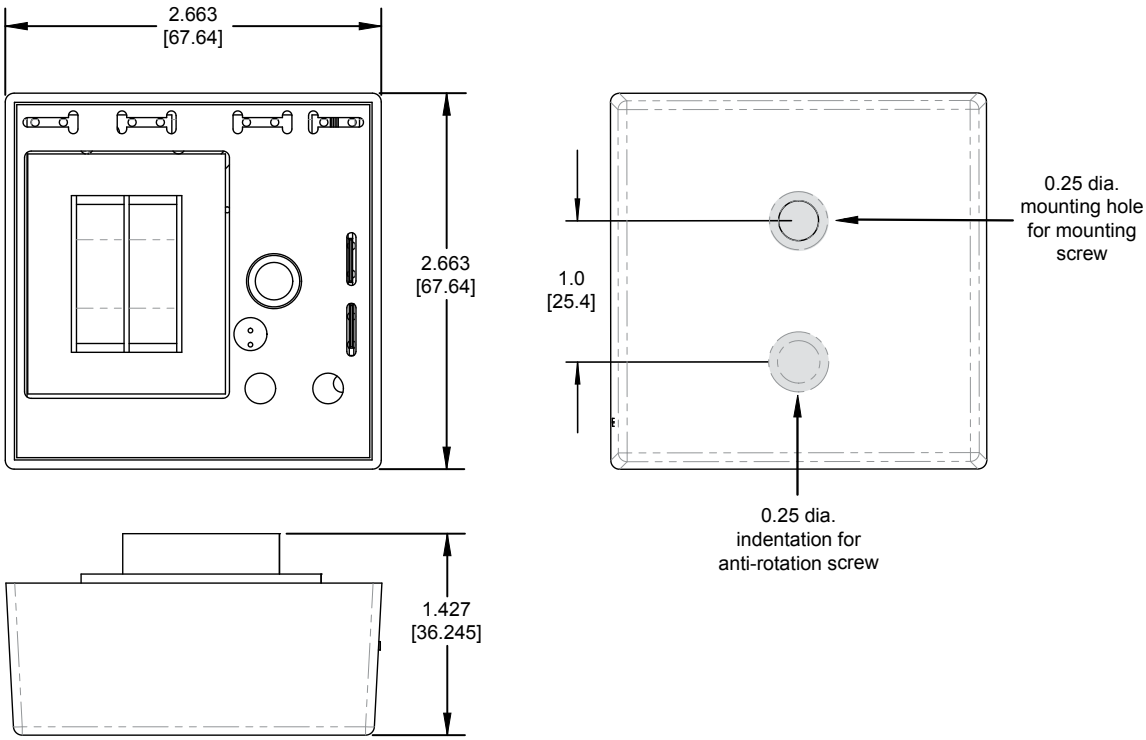
UL	UL508 (File #E68520)

Ordering Information

MODEL	LINE VOLTAGE	DESCRIPTION
202-200-SP	190–240 V ac	SPDT, high and low voltage protection
202-200-SP-NHV	190–240 V ac	SPDT, low voltage protection only

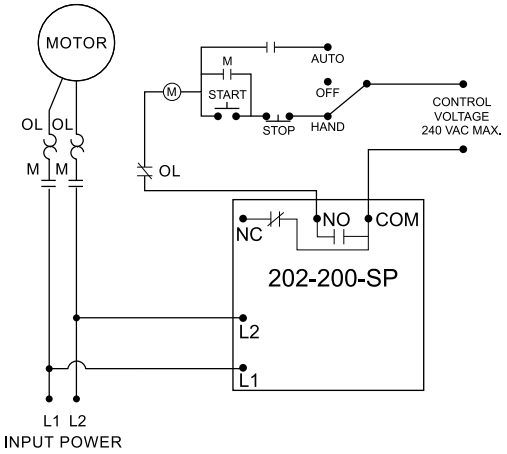
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Dimensions Inches (mm)

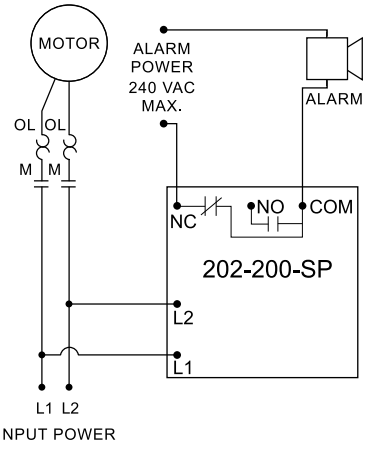


Wiring Diagram

TYPICAL WIRING DIAGRAM FOR MODEL 202-200-SP
WITH MOTOR CONTROL



TYPICAL WIRING DIAGRAM FOR MODEL 202-200-SP
WITH ALARM CONTROL



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