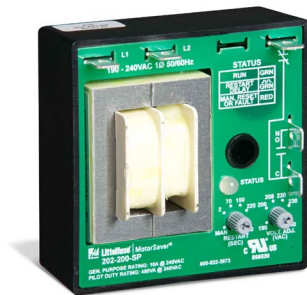


# Voltage Monitoring Relays

## 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
<b>Proprietary microcontroller-based circuitry</b>	Constant monitoring of voltage to detect harmful power line conditions, even before a motor starts
<b>Fixed trip delay 4 s</b>	Prevents nuisance tripping due to rapidly fluctuating power line conditions
<b>Adjustable restart delay (manual, 2–3 s)</b>	Allows staggered start-up of multiple motors after a fault to prevent a low-voltage condition
<b>Advanced LED indication</b>	Provides diagnostics that can be used for troubleshooting and to determine relay status
<b>One screw mounting and standard 1/4" quick-connect terminals</b>	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

# Voltage Monitoring Relays

## 202-200-SP Series

### 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)
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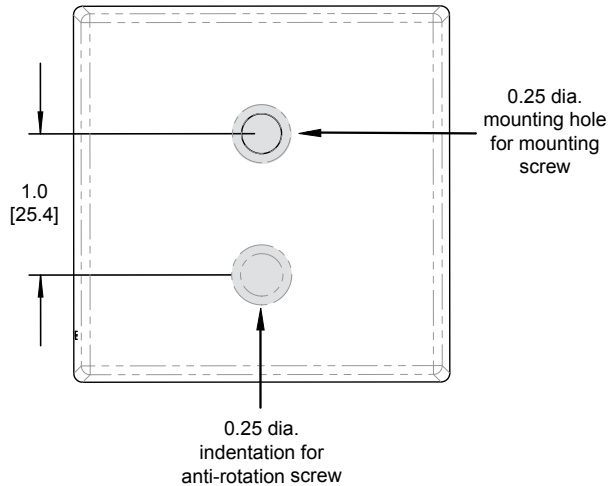
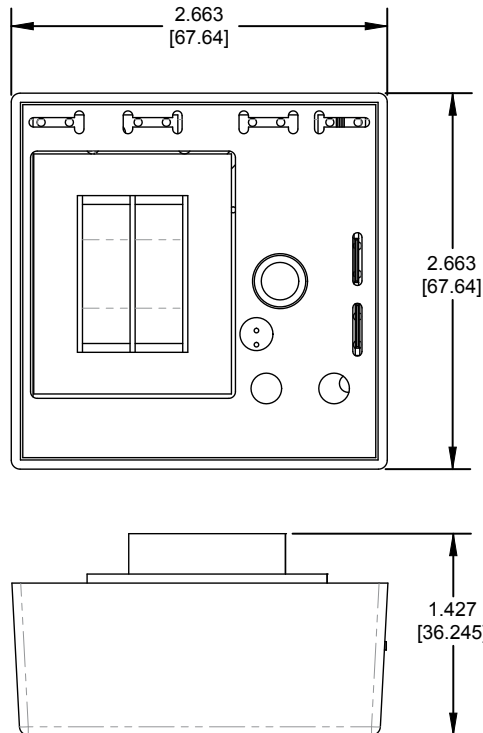
### Ordering Information

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

# Voltage Monitoring Relays

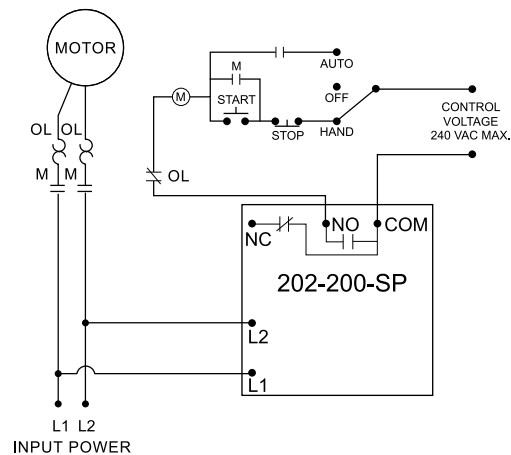
## 202-200-SP Series

### Dimensions Inches (mm)

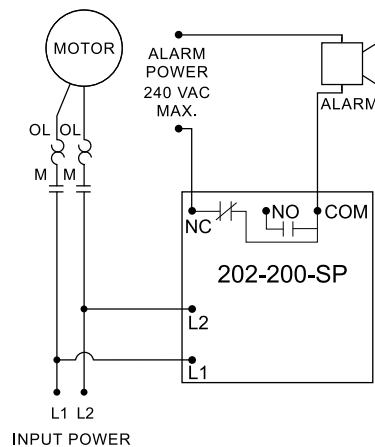


### Wiring Diagram

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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