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

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

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

Functional Characteristics

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

Low Voltage (% of setpoint)
- Trip: 90%
- Reset: 93%

High Voltage (% of setpoint)
- (not available on -NHV model)
  - Trip: 110%
  - Reset: 107%

Trip Delay Time
- 4 seconds

Restart Delay Time
- 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

<table>
<thead>
<tr>
<th>MODEL</th>
<th>LINE VOLTAGE</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>202-200-SP</td>
<td>190–240 V ac</td>
<td>SPDT, high and low voltage protection</td>
</tr>
<tr>
<td>202-200-SP-NHV</td>
<td>190–240 V ac</td>
<td>SPDT, low voltage protection only</td>
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</tbody>
</table>

Littelfuse.com/202-200-SP

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Specifications are subject to change without notice.
Revised: 07/27/2023
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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