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>
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</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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<tr>
<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&quot; 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

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

<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>
</tr>
</tbody>
</table>
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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