

# INSTALLATION INSTRUCTIONS FOR SYMCOM'S MOTORSAVER® MODEL 202-200-SP

**BE SURE POWER IS DISCONNECTED PRIOR TO INSTALLATION!!  
FOLLOW NATIONAL, STATE AND LOCAL CODES!**

## DANGER!

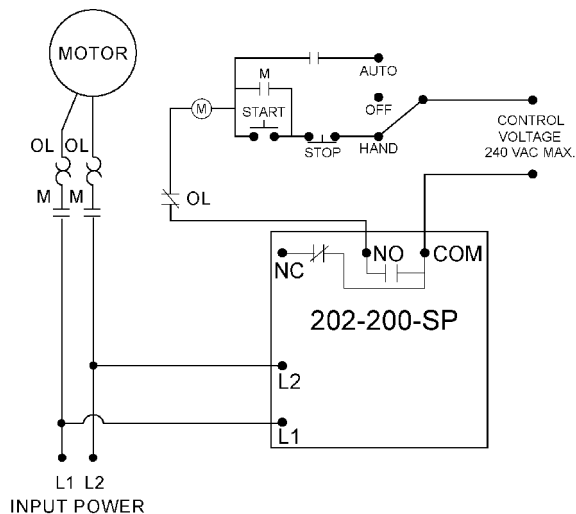


**HAZARDOUS VOLTAGES MAY BE PRESENT DURING INSTALLATION.**  
Electrical shock can cause death or serious injury.  
Installation should be done by qualified personnel following all national, state and local electrical codes.

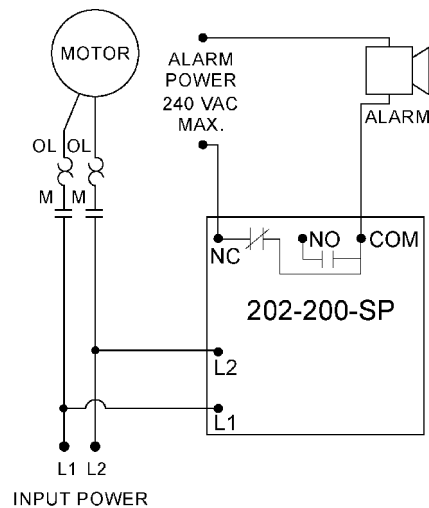


## CONNECTIONS

1. Mount the MotorSaver® in a convenient location in or near the motor control panel using a 1/4" socket head cap screw (customer supplied). If the location is wet or dusty, the MotorSaver® should be mounted in a NEMA 4 or 12 enclosure.
2. Connect the two lines of the motor's single-phase power supply to L1 and L2 using insulated 1/4" female, UL recognized quick connectors.
3. Connect the output relay to the circuitry to be controlled using insulated 1/4" female, UL recognized quick connectors.



(A) To control a motor: Connect the normally open contact in series with the magnetic coil of the motor starter as shown.



(B) To sound an alarm: Connect the normally closed contact in series with the alarm as shown.

**Figure 1: Typical Wiring Diagram**

## SETTINGS

1. **LINE VOLTAGE ADJUSTMENT:** Rotate the LINE VOLTAGE ADJUSTMENT to the nominal single-phase line voltage feeding the motor to be protected.
2. **TIME DELAY RESTART:** Rotate the RESTART DELAY to the desired position. The restart delay is the time between the MotorSaver® seeing acceptable power and the MotorSaver® closing its output contacts. For compressor applications, the restart delay should be set for the approximate time it takes for the head pressure to bleed off of the compressor. For other applications, the restart delay is typically set to 2 seconds. If the RESTART DELAY is in the manual (MAN) position, the unit will not automatically restart until it is turned out of the manual position. Setting multiple units at staggered restart delays will enable sequential starting after a complete power loss.

## POWER-UP

Turn on the power to the motor. During the restart delay the STATUS LIGHT will flash green. After the RESTART DELAY, the MotorSaver® will energize its output contacts and the STATUS LIGHT will turn solid green. If the contacts do not energize and the STATUS LIGHT does not turn solid green, then see the TROUBLESHOOTING section.

## TROUBLESHOOTING

If the output relay does not energize and the STATUS LIGHT does not turn solid green after waiting for the RESTART DELAY time:

1. If the STATUS LIGHT turns solid red, upon applying power, the 202 may be in the manual reset mode. Rotate the RESTART DELAY knob clockwise 1/8 turn, above "2." If the light does not flash green, proceed to step 2.
2. If the MotorSaver® still seems to be malfunctioning and the STATUS LIGHT is solid red, measure the single-phase voltage. If the voltage is 7% above or below the voltage adjust setpoint, the MotorSaver® is functioning properly, saving your motor from abnormal power conditions.
3. If the voltage is within  $\pm 7\%$ , contact SymCom at **1-800-843-8848 OR 1-605-348-5580** and we will be happy to help you.

## STATUS LIGHT

| CONDITION             | LIGHT OPERATION |
|-----------------------|-----------------|
| Run                   | Solid Green     |
| Restart Delay         | Flashing Green  |
| Manual Reset or Fault | Solid Red       |

II-202-SP-B



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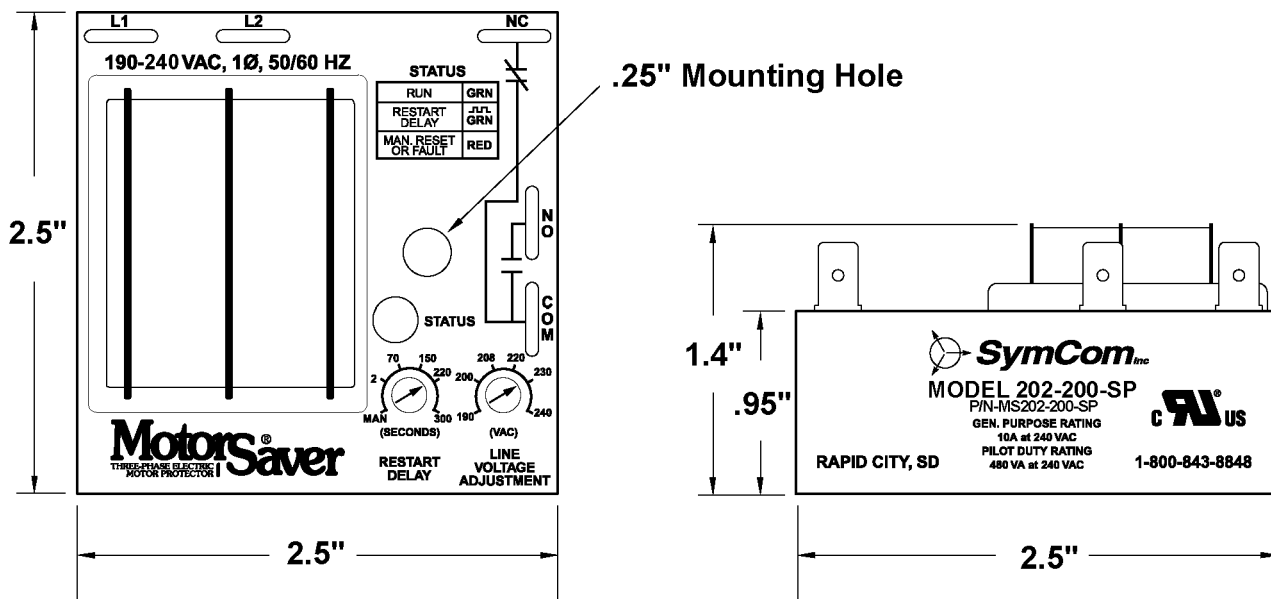
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| MODEL 202-200-SP SPECIFICATIONS      |                                                           |
|--------------------------------------|-----------------------------------------------------------|
| Single-Phase Line Voltage            | 190-240VAC $\pm 10\%$                                     |
| Frequency                            | *50/60Hz                                                  |
| Nominal Voltage Setpoints            | 190, 200, 208, 220, 230, 240                              |
| Low Voltage (% of setpoint)          |                                                           |
| Trip                                 | 90%                                                       |
| Reset                                | 93%                                                       |
| High Voltage (% of setpoint)         |                                                           |
| 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 Contact Rating                |                                                           |
| SPDT                                 | 480VA @ 240VAC Pilot Duty<br>10A @ 240VAC General Purpose |
| Transient Protection                 | IEC 1000-4-5, $\pm 4$ kV                                  |
| Power Consumption                    | 5 Watts (max.)                                            |
| Weight                               | 8 oz.                                                     |
| Trip & Reset Accuracy                | 1%                                                        |
| Repeatability                        | 0.5%                                                      |
| Input to Output Dielectric           | 1960 Vrms (min.)                                          |
| Termination                          | 0.25" Male Quick Connect                                  |
| Humidity                             | 95% Relative Non-Condensing                               |
| Operating Temperature                | -40 to 70°C                                               |
| CE Pending                           |                                                           |
| UL Recognized                        | File #E68520                                              |

\*50Hz will increase all delay timers by 20%

## DIMENSIONS FOR MODEL 202-200-SP



## WARRANTY

Seller warrants to the buyer that products furnished will be free from defects in material and workmanship, exclusive of corrosion, for a period of five years from the date of shipment from its factory, provided said products have been installed, maintained and operated in conformance with any applicable specifications and recommendations of the Seller. The Seller's liability under this warranty shall be limited to the replacement within the aforesaid time of any defective work or material limited at the Seller's factory and shall not be liable for any labor or other repair costs made outside the Seller's factory without the written consent of the Seller. The Seller shall be liable for no other damages or losses. The warranty described in this paragraph shall be IN LIEU OF ANY OTHER WARRANTY EXPRESSED OR IMPLIED INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.