

# INSTALLATION INSTRUCTIONS

Revision B1  
Rapid City, SD, USA, 04/2010

**Motorsaver**<sup>®</sup>  
ELECTRONIC MOTOR  
CONTROL & PROTECTION

**MODELS 201-100-SLD  
201-200-SLD**



II-201-SLD-B

## **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.**



**BE SURE POWER IS DISCONNECTED PRIOR TO INSTALLATION!  
FOLLOW NATIONAL, STATE AND LOCAL CODES.  
READ THESE INSTRUCTIONS ENTIRELY BEFORE INSTALLATION.**

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SymCom's MotorSaver<sup>®</sup> Model 201-XXX-SLD is a seal-leak detector used to sense seal failures on submersible pumps. It is used on 120V or 240V, 50/60 Hz motors to prevent or warn of possible motor damage due to seal leaks.

### **CONNECTIONS**

1. Locate a convenient location in or near the motor control panel. If the location is wet or dusty, the MotorSaver<sup>®</sup> should be mounted in a NEMA 4 or 12 enclosure.
2. Mount an 8-pin socket to the motor control back panel (SymCom P/N OT08-PC, sold separately, is required for UL rating).
3. Connect socket terminals 2 and 7 to 120VAC for Model 201-100-SLD or 240VAC for Model 201-200-SLD (see Figure 1).
4. Connect the output relay to the circuitry to be controlled. For alarm operation, connect the common and normally closed (NC) contacts (socket terminals 1 and 4) in series with the alarm circuit as in Figure 1.
5. Connect the sensor/probe to socket terminals 5 and 6.
6. Plug the MotorSaver<sup>®</sup> into the socket.

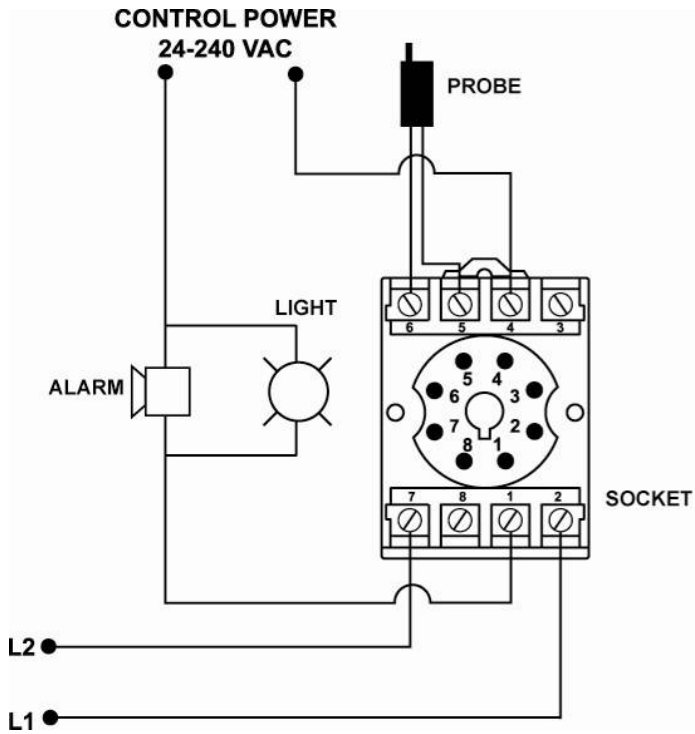


Figure 1: Typical Alarm Wiring Diagram

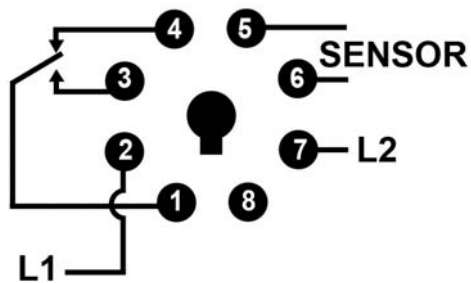


Figure 2: Pin-Out Diagram

## SETTINGS

Rotate the SENSITIVITY knob to the desired minimum resistance allowed before the unit trips.

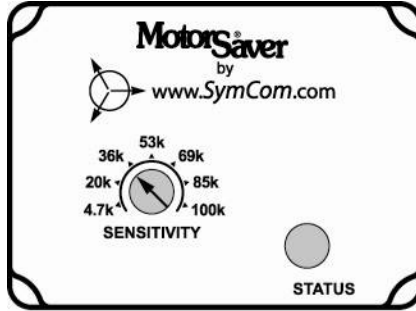


Figure 3: Top of Unit

## OPERATION

Under normal conditions, the green STATUS light will illuminate and the MotorSaver<sup>®</sup> will energize its output contacts (normally open contact closes, and normally closed contact opens).

As water leaks past the seal, the resistance measured by the probe will decrease. When the resistance drops below the sensitivity control level, the unit will trip (normally open contact opens, and normally closed contact closes) and the red STATUS light will illuminate.

If the contacts do not energize and the green STATUS light does not illuminate, see the TROUBLESHOOTING section.

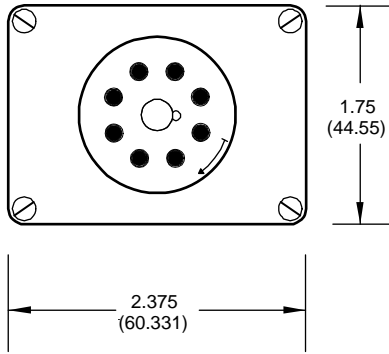
| INDICATOR LIGHT | STATUS  |
|-----------------|---|
| GREEN           | High resistance detected.<br>NO contact (pin 1 and 3) is closed<br>NC contact (pin 1 and 4) is open |
| RED             | Low resistance detected.<br>NO contact (pin 1 and 3) is open<br>NC contact (pin 1 and 4) is closed  |

Table 1: Diagnostic Indicator Lights

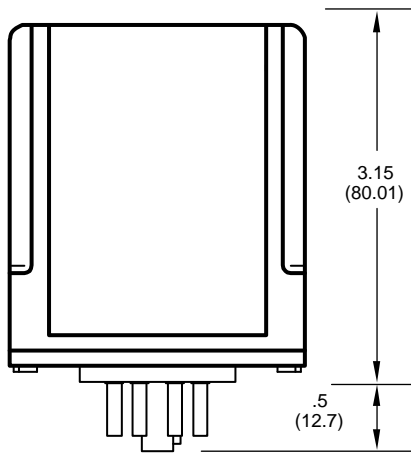
## TROUBLESHOOTING

| <b>SYMPTOM</b>                                    | <b>LIGHT PATTERN</b> | <b>SOLUTION</b>  |
|---|----------------------|--|
| No lights are on - the unit seems completely dead | <b>N/A</b>           | Measure the input voltage connected to terminals 2 & 7. If the voltage is below the specified operating voltage, the MotorSaver® does not have enough power to operate its internal electronics. If the voltages are correct, call SymCom at (800) 843-8848 or (605) 348-5580. |
| Red light is on steady                            | <b>RED</b>           | The resistance measured by the probe is lower than the setpoint. If there is no evidence of a seal failure, call SymCom at (800) 843-8848 or (605) 348-5580.   |
| Green light is on steady                          | <b>GREEN</b>         | The resistance measured by the probe is higher than the setpoint. The MotorSaver® is functioning properly. Faulty or corroded connections may cause the resistance to measure high. Check connections periodically to ensure there are no loose wires or broken connections.   |

## DIMENSIONS



**BOTTOM**



**SIDE**

**NOTE:** Use of the OT08-PC or RB08-PC octal socket, manufactured by Custom Connector Corp., is required for the MotorSaver<sup>®</sup> to qualify as a UL Listed device. The OT08-PC is 35mm DIN rail compatible.

**MOTORSAVER® 201-100-SLD, 201-200-SLD SPECIFICATIONS**

|  |   |
|--|---|
| <b>Functional Characteristics</b>          |   |
| Sensitivity                                | 4.7k-100kΩ  |
| Trip Delay                                 | 2 seconds   |
| <b>Input Characteristics</b>               |   |
| Line Supply Voltage                        |   |
| 201-100-SLD                                | 95-120VAC   |
| 201-200-SLD                                | 190-240VAC  |
| Frequency                                  | 50/60Hz   |
| <b>Output Characteristics</b>              |   |
| Output Contact Rating                      |   |
| Pilot Duty                                 | 480VA @ 240VAC  |
| General Purpose                            | 10A @ 240VAC  |
| <b>General Characteristics</b>             |   |
| Environmental                              |   |
| Ambient Operating Temperature <sup>1</sup> | -40° to 70°C (-40° to 158°F)  |
| Relative Humidity                          | 10-95%, non-condensing per IEC 68-2-3                                 |
| Maximum Input Power                        | 5 W   |
| Standards Passed                           |   |
| Electrostatic Discharge (ESD)              | IEC 61000-4-2, Level 3, 6kV contact, 8kV air                          |
| Radio Frequency Immunity, Radiated         | 150 MHz, 10V/m  |
| Fast Transient Burst                       | IEC 61000-4-4, Level 4, 4kV input power and controls                  |
| Surge Immunity                             |   |
| IEC  | IEC 61000-4-5, Level 4, 4kV line-to-line; Level 4, 4kV line-to-ground |
| ANSI/IEEE                                  | C62.41 Surge and Ring Wave Compliance to a level of 6kV line-to-line  |
| Hi-Potential Test                          | Meets UL508<br>(2 x rated V +1000 V for 1 minute)                     |
| Safety Marks                               |   |
| UL listed (OT08 octal socket required)     | UL508 (File #E68520)  |
| CE   | IEC 60947-6-2   |
| Dimensions                                 | 1.750" H x 2.375" W x 4.125" D (with socket)                          |
| Weight                                     | 9 oz.   |
| Enclosure                                  | Polycarbonate   |
| Mounting Method                            | Plugs into OT08 Socket  |
| Wire Gauge                                 | 12-22 AWG Solid or Stranded   |
| Terminal Torque for P/N OT08 Socket        | 12 in. - lb   |

<sup>1</sup> The ambient air temperature is the air temperature directly surrounding the product.

For warranty information, please see **Terms and Conditions** at  
[www.symcom.com](http://www.symcom.com)

*Visit us at [www.symcom.com](http://www.symcom.com) to see  
our complete product listing!*

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