

# INSTALLATION INSTRUCTIONS

Revision C2  
Rapid City, SD, USA, 02/2010

**PumpSaver®**  
ELECTRONIC PUMP  
CONTROL & PROTECTION

## MODEL ALT-XXX-1-SW



II-ALT-XXX-1-SW-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.**

SymCom's PumpSaver® Model ALT-XXX-1-SW is designed to alternate between two loads. It is commonly used in duplex pumping applications to balance the run time of two pumps (loads). The voltage designation must be specified in the part number.

The ALT-XXX-1-SW gives the user the option to allow the unit to automatically select the load, to balance the run time of the two loads, or to manually select Load 1 or Load 2. This gives the user the option to force one load to be the lead at all times when one load has been removed for maintenance or repair.

An additional feature is the ability to output to two remote indicator lights.

### **CONNECTIONS**

1. The ALT-XXX-1-SW requires an 11-pin socket part number OT11 (sold separately).
2. Mount the PumpSaver® socket in a convenient location in or near the pump control panel. If the location is wet or dusty, it should be mounted in a NEMA 4 or 12 enclosure.

**NOTE:** The ALT-XXX-1-SW can be connected in many different ways using many different switching devices. The following is a typical configuration for alternating between two pumps and two indicator lights. See Figure 2 for a typical wiring diagram showing the following connections.

3. Connect one pump's magnetic contactor coils (M1) between socket terminal 11 and L2 of the power supply.
4. Connect the other pump's magnetic contactor coil (M2) between socket terminal 9 and L2 of the power supply.
5. Connect the indicator light for M1 (LT1) between socket terminal 3 and L2 of the power supply.
6. Connect the indicator light for M2 (LT2) between socket terminal 1 and L2 of the power supply.
7. Connect the power supply L2 to socket terminal 8 and power supply L1 to socket terminal 4.
8. Connect the control switch device between the power supply L1 and the socket terminals 10, 2, and 6.
9. Plug the Model ALT-XXX-1-SW into the socket.

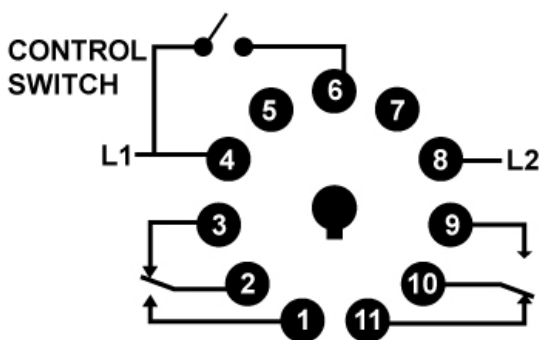


Figure 1: Pin-out Diagram

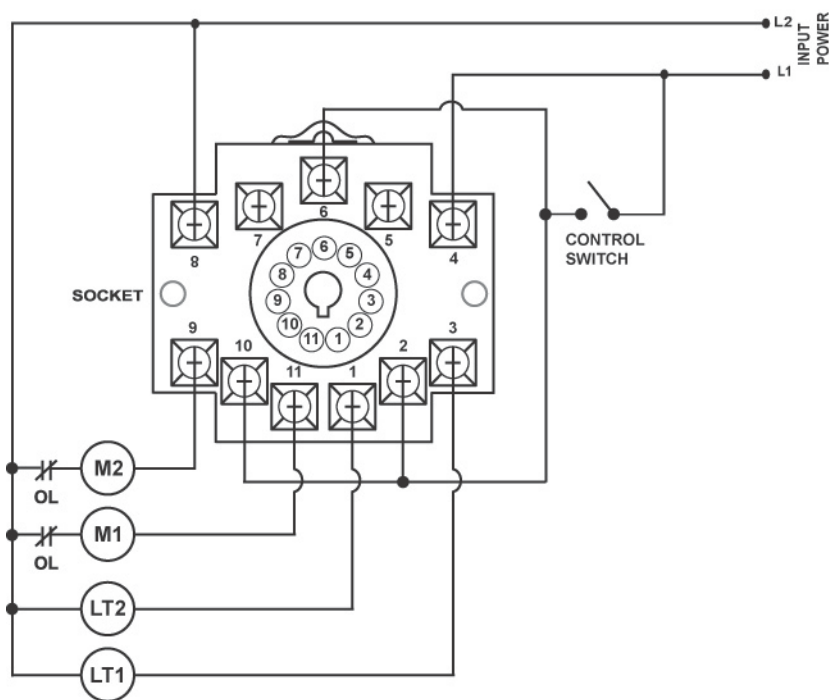
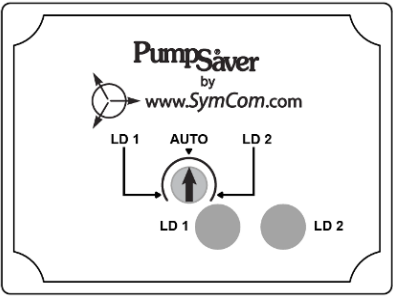


Figure 2: Typical Pump Control Wiring Diagram

**SETTINGS**



**Figure 3: User-Selectable Options**

The unit itself has one adjustable setting for load selection. Any additional configurations must be set by connections to user-selected external switches.

To let the unit automatically select the load to be activated next, set the dial to “AUTO”. Turn the dial to the selected load to allow only that specific load to be activated. This de-activates the other load if it is currently activated. This allows one pump to be taken out of the circuit for repair or replacement.

**DANGER!**



**Lock-out power to the ALT-XXX-1-SW before attempting to repair or replace wiring or loads**



**OPERATION**

Apply power to the system. Indicator lights on the unit will show which load is currently active. Output to the corresponding remote light will also be activated.

When set to “AUTO”, the active load will continue to run until the control switch is opened. Each time the control switch is opened, the output contacts will switch to activate the opposite load and light the next time the control switch closes.

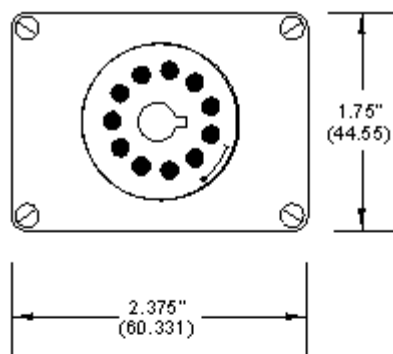
| INDICATOR LIGHTS | STATUS        |
|------------------|---------------|
| LD1 ON           | LOAD 1 ACTIVE |
| LD2 ON           | LOAD 2 ACTIVE |

**Table 1: Diagnostic Indicator Lights**

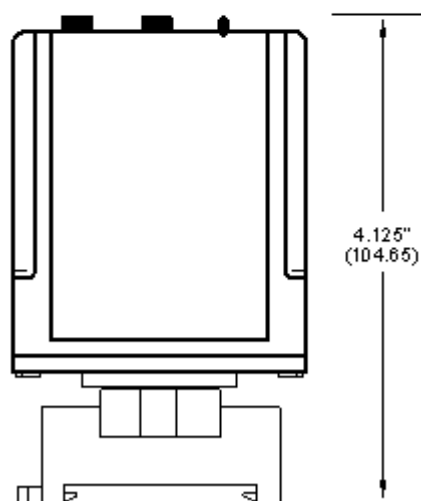
**TROUBLESHOOTING**

| SYMPTOM                                                                                             | LIGHT PATTERN       | SOLUTION                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Device is not functional                                                                            | <b>NO LIGHTS ON</b> | Measure the line voltage. If the voltage is below the minimum listed in the Specification Table, the PumpSaver® 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. |
| Only one load runs when the control switch closes. Device does not alternate between the two loads. | <b>ONE LIGHT ON</b> | Check the adjustment knob setting on the ALT-XXX-1-SW to make sure it is set to the AUTO position.                                                                                                                                                            |
| Neither load runs.                                                                                  | <b>ONE LIGHT ON</b> | Check the control switch to make sure it is closing properly. Check wiring between ALT-XXX-1-SW and motor controls.                                                                                                                                           |

## DIMENSIONS



**BOTTOM**



**SIDE  
WITH OT 11\* SOCKET**

\*Use of the OT11-PC or RB11-PC octal socket, manufactured by Custom Connector Corp., is required for the MotorSaver to qualify as a UL Listed device. The OT11-PC is 35mm DIN rail compatible.

**PUMPSAVER® ALT-XXX-1-SW SPECIFICATIONS**

|                                            |                                                                       |
|--------------------------------------------|-----------------------------------------------------------------------|
| <b>Functional Characteristics</b>          |                                                                       |
| Debounce Time Delay                        | 1 second                                                              |
| <b>Input Characteristics</b>               |                                                                       |
| Line Supply Voltage                        | 95-120VAC                                                             |
| ALT-100-1-SW                               | 190-240VAC                                                            |
| ALT-200-1-SW                               | 50/60Hz                                                               |
| Frequency                                  |                                                                       |
| <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 3, 3.5kV input power and controls                |
| Surge Immunity                             |                                                                       |
| IEC                                        | IEC 61000-4-5, Level 3, 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 (OT11 octal socket required)     | UL508 (File #E68520)                                                  |
| CE                                         | IEC 60947-6-2                                                         |
| Dimensions                                 | 2.330" H x 2.375" W x 4.125" D (with socket)                          |
| Weight                                     | 9 oz                                                                  |
| Enclosure                                  | Polycarbonate                                                         |
| Mounting Method                            | Plugs into OT11 Socket; can be mounted to DIN rail or surface mount   |
| Wire Gauge                                 | 12-22 AWG Solid or Stranded                                           |
| Terminal Torque for P/N OT11 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)*

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