

Oil Smart® Duplex Panel (Model # OSD1P-3)

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| BN | IM710 |
| REV | 1011 |

Oil Smart® System:

The Oil Smart® System includes the Oil Smart® Water Pump Control, High Water Two Pump Demand Switch, and the Oil Smart® High Liquid Alarm. The Oil Smart® Pump Controller, when combined with a manual pump, automatically pumps water from elevators, transformer containment barriers, underground vaults, substations, and other applications without the risk of pumping oil. While the Oil Smart® Alarm provides information to building management or maintenance personnel about leak or high liquid level conditions at any given location. The alarm will activate with the presence of any liquid and will identify if oil or water is present. Since 1995, the Original and Patented Oil Smart System has been the reliable choice for safely pumping water. Installation of the Oil Smart System allows you to comply with State and Federal regulations while reducing the risk of adverse publicity, fines and expensive cleanup costs.

Features:

- No Moving Parts. Patented Electronic Oil Smart®, High Water, and Liquid Smart® Controls
- Indoor/Outdoor NEMA 4X Heavy Duty Polycarbonate Enclosure: 16"x14"x6", UL-50 Type 6P Listing
- Voltage: 120/240VAC Single Phase 50/60Hz, 30 Amp Motor Start Relays
- CSA International Certified No. 229594
- External Mounting Feet: Quick Installation.
- High Liquid Alarm with Test and Silence Features, Red Beacon Alarm Light, White Light for Water Present, Yellow Light for Oil Present, High 84 Decibel Audible Alarm. Complete Dry Contacts for Each Alarm Condition.
- Oil Smart Pump Switch, High Water 2 Pump Switch and Liquid Smart Alarm Sensor with 20' cords and mounting brackets.
- HOA Switches and Green Lights for Pump Run
- Includes Pump Disconnect Circuit Breakers
- Total Pump Protection: No Load Lockout Protection, Pump Fault Signals and auxiliary contacts including Red Light pump lockout.

www.seewaterinc.com
or www.oilsmart.org

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121 North Dillon Street • San Jacinto, CA 92583
P.O. Box 1269 • San Jacinto, CA 92581



1. All installations must be in accordance with the National Electrical Code, and any other applicable state and local electrical requirements.

Panel Installation:

- Caution: To maintain the NEMA 4X rating, make all wiring connections with seal tight cable grips or conduit connections to be supplied by end user.
 - I. Determine hole location on panel for liquid-tight or conduit connectors. Drill proper sized holes for conduit connections
 - II. Determine mounting location for control panel. Mount panel using mounting feet supplied
 - III. Attach connectors and conduits.
 - IV. Run pump cable, Liquid Smart® cable, High Water 2 Pump cable, and Oil Smart® cable through conduit. Make field connections as shown on wiring diagram (See Page 3)
 - V. Run two separate power line conductors through conduit. (One for vj g alarm and one for "vj g motor l r wo r load). Wire to terminals per enclosed schematic. It is important that the alarm circuit is independent of the pump to assure that the alarm will activate if pump circuit fails.

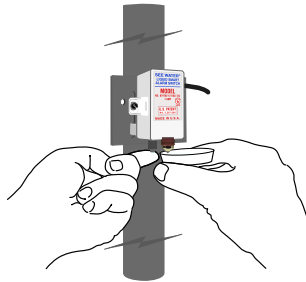
Components Installation:

- I. Remove any float switch that is currently in use or supplied by pump manufacturer. If pump has manual/auto option, switch pump to manual position.
- II. Mount switches using mounting brackets provided. Do not attach to metal discharge pipe. If required, wrap insulated tape in between switch and pipe. Mount pump switch at least 3" above pump impellor to prevent from pumping oil. Mount Liquid Smart® Alarm Switch at desired location to receive high liquid notification.

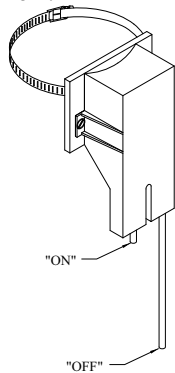
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Testing:

- Liquid Smart® Alarm Sensor: Fill small cup supplied with oil. Submerge only the plastic lens (optic sensor) into oil, the alarm will activate showing oil present (yellow light). Now touch finger to the exposed stainless steel sensor, the alarm will show water present (white light) will turn on.



- Oil Smart® Switch: Place the HOA switch on control panel in the automatic position. Place your thumb on the short sensor of Oil Smart® Pump Switch and the pump will turn on. While touching the short sensor, touch the long sensor “off” with your fingers. Remove your thumb from on sensor and begin to move your fingers down the off sensor. Remove your fingers from off sensor and the pump will turn off.



- High Water 2 Pump Demand Switch: While touching “on” sensor of Oil Smart® Switch, touch finger to the sensor of High Water 2 Pump Demand Switch, both pumps will turn on. Repeat process of moving fingers down “off” sensor of Oil Smart® Switch.

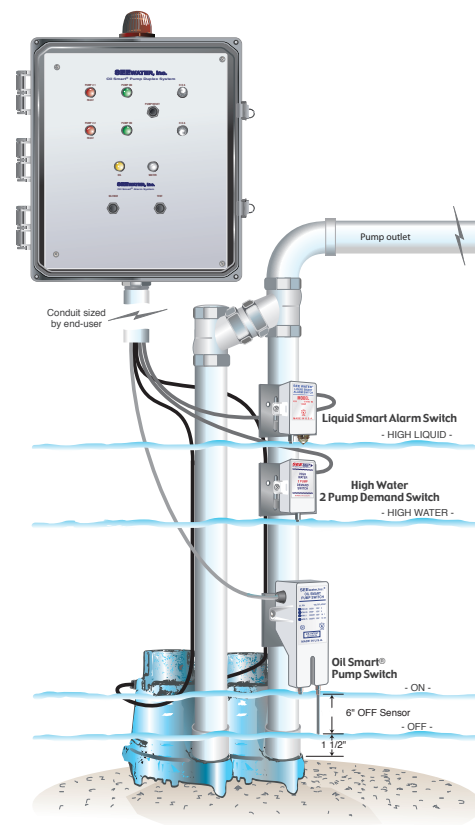
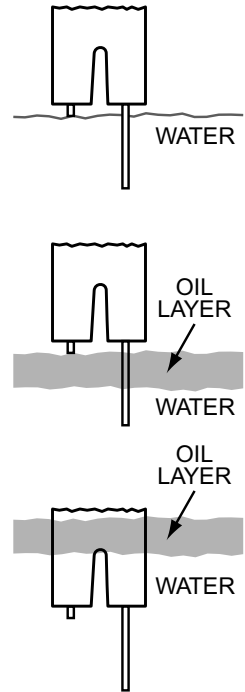
Oil Smart® and Liquid Smart® Maintenance:

The Oil Smart® Switch is designed for sump environments and tested to withstand the normal environment of a pump switch. The Liquid Smart® Alarm Switch is designed to be used as a High Liquid or Lead Detection alarm switch.

For 24 hour troubleshooting, call 888-733-9283.

Operation:

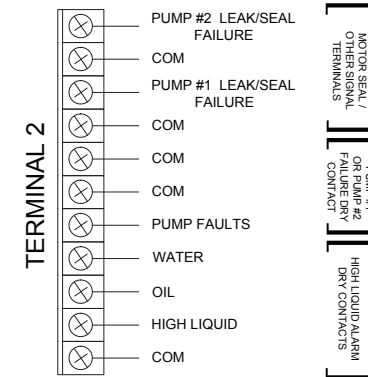
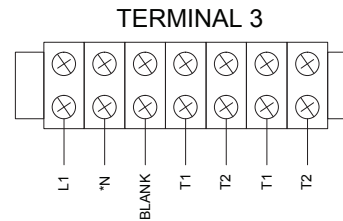
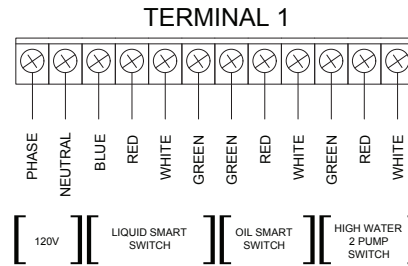
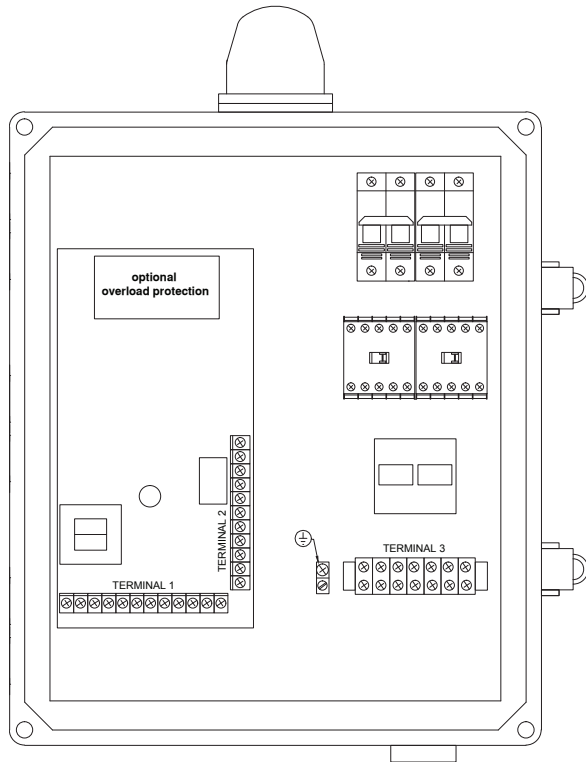
When water comes in contact with the short (on) sensor, the pump will turn on. The pump will remain on until water clear the long (off) sensor. If oil comes in contact with the on sensor, the pump will not turn on; however the pump switch will activate and pump water from under the oil. Oil does not harm the system in anyway. The sensors can oscillate through oil and see water.



Drawing 1059

Wiring Diagram

Model # OSD1P-3



Use Copper Conductors Only
 Temperature ratings of conductors is to be 60°C (167°F)
 Branch circuit protection shall be provided by the installer:
 Must be sized according to pump/motor manufacturing specifications.

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Oil Smart® Technology since 1995.

"OIL SMART" Water Pump Switches

Oil Smart Control Panel Troubleshooting Guide

| Problem | Possible Cause | Solution |
|--|---|--|
| Pump Control does not activate the pump. Pump does not run. | The Oil Smart Switch will not function with incorrect polarity. | Make sure phase and neutral are not reversed. |
| | Loose connection in control panel or electrical system. | Confirm all connections are tight and secure. |
| | Non-Conductive Water (Highly Filtered Water) | Test pump switch with fingers per the instructions (See Page 2) |
| | Defective Control | Replace Control |
| Pump Control is not operating properly; not consistent or staying on. | Problem with electrical system | Check electrical circuits for common neutrals; may cause switch to not function correctly. |
| | Control Panel Wiring Problems | Do not run DC conductors through same conduit as AC conductors. Circulating current can cause problems. |
| | Control is not clean of conductive material. | White plastic case must be kept clean. Clean with alcohol or an oil base product: kerosene, solvent. |
| | Control is mounted to metallic pipe | Keep control (1" to 2") clear of any metallic material. Mount to pvc pipe or wrap electrical tape between pipe and switch. |
| | Float switch attached to pump | Float switch must be removed, secured in manual operation, or replaced with correct pump. |
| | Defective Control and/or Pump(s) | Replace Control and/or Pump(s) |
| Alarm will not activate | Power supply failure | Confirm separate 120V power to circuit board. Can be jumpered from incoming power on pump terminal if 120v is available. |
| | Defective Alarm Sensor | Replace Alarm Sensor |
| | Loose connection in control panel or electrical system. | Confirm all connections are tight and secure. |
| Pump will not turn on or pump is not functioning properly. | Incorrect match on control panel and pump. | Confirm correct pump voltage and wires matched to correct control panel |
| | Loose connection in control panel or electrical system. | Confirm all connections are tight and secure. |
| | Defective Pump(s) | Replace Pump(s) |
| Any technical questions on this product should be directed to See Water, Inc at 888-733-9283. | | |

Warranty:

See Water® Inc. warrants that the See Water Control Panel will be free from defects in material and workmanship for a period beginning as of the date of purchase for (5) years. Replacement of the panel and/or components is only at the sole discretion of See Water Inc. This warranty is valid only when the product is installed in strict compliance with the manufacturer's installation instructions. See Water, Inc. will in no way be responsible for the reliability of any pump that is connected to or operates with See Water, Inc. products. See Water, Inc. will replace the panel when it is returned to See Water's factory, postage prepaid with proof of original purchase included. It is imperative that in no way, can any components/parts be removed from the control panel during installation. Any alterations/additions/changes to the panel will result in a void warranty. Failure to properly install and test this product can result in personal injury or equipment malfunction.