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

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/substance 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: 12”x10”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
951.487.8073 • 888.733.9283
Email: info@seewaterinc.com
121 North Dillon Street • San Jacinto, CA 92583
P.O. Box 1269 • San Jacinto, CA 92581

⚠ WARNING

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 15 amps 120VAC for alarm and one 20 Amp maximum for motor 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:

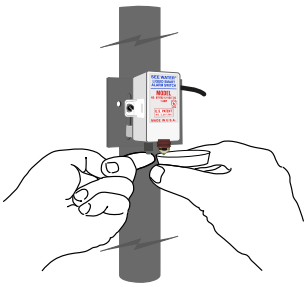
I. Remove any float switch that is currently in use or supplied by pump manufacturer. If pump has manual/auto option, switch pump to manual position.

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.

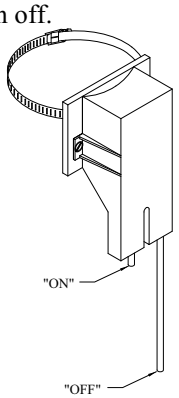
Oil Smart® Duplex Panel (Model #OSD1P-3)

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.

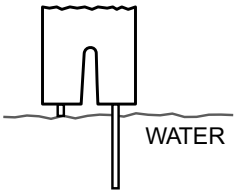
Oil Smart and Liquid Smart Maintenance:

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.

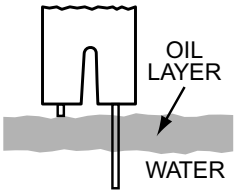
For 24 hour troubleshooting, call 888-733-9283.

Operation:

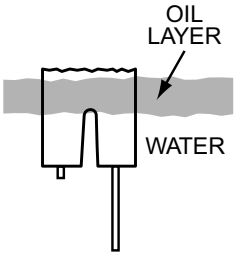
Normal Condition (Water Only)
The short sensor probe turns the pump "on" and the long sensor probe turns the pump "off". When the short sensor is in contact with water, the pump will continue to cycle "on and off" until the short sensor detects oil.

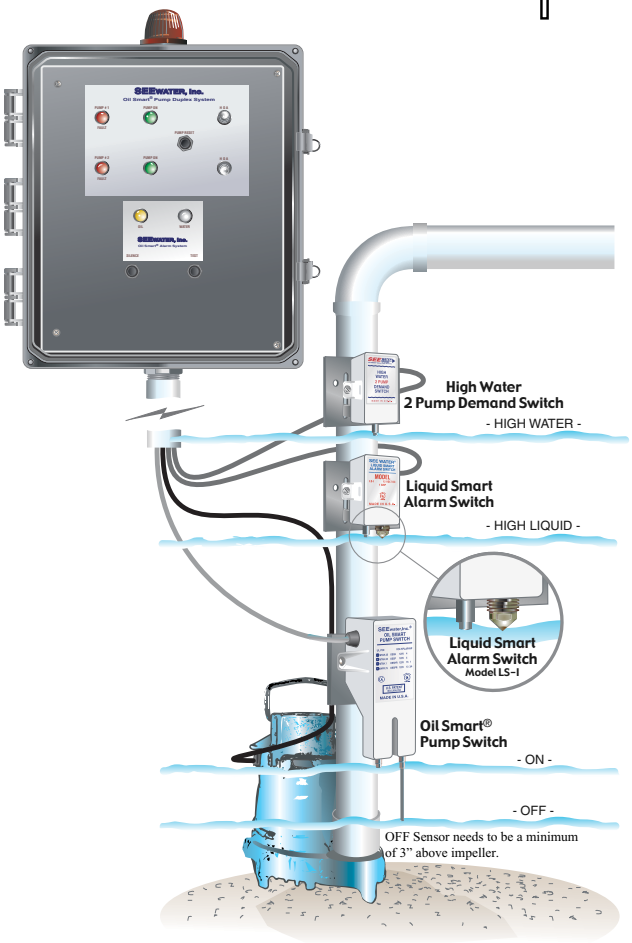


Oil Present Condition
The pump will not cycle if oil is in contact with the short sensor.



High Water (Oil Present Condition)
If additional water enters the basin, it will cause the oil layer to rise above the short sensor, resulting in the pump cycling.

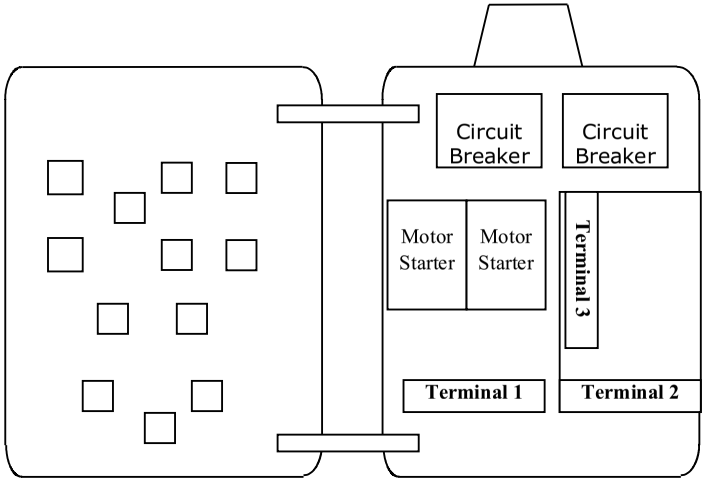




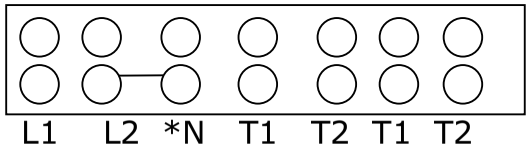
Data:

- Pollution degree 2
- Installation category II
- Altitude 2000m
- Humidity up to 5% to 95%

Duplex Control Wiring Diagram



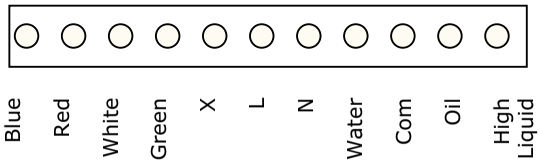
Terminal 1 (Pumps)



120V *(For 240V, Remove Jumper)

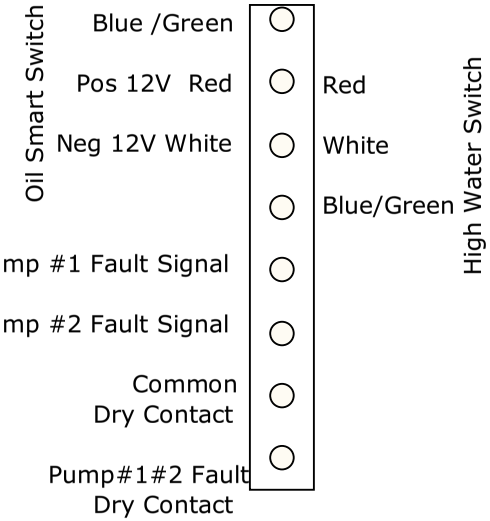
PUMP 1 Pump 2

Terminal 2 (Alarm)



Liquid Smart 120V Dry Contacts

Terminal 3 (Pump Controls)



For pump #1 fault/seal signal, wire direct to position Five (5) (Signal) and position Three (3) (Negative). For Pump #2 fault/seal signal, wire direct to position Six (6) (Signal) and position Three (3) (Negative).

For Pump # 1 or Pump #2 Pump Fault dry/auxiliary contact, wire direct to position seven (7)-common and eight (8)-pump(s) fault signal.

Dry Contacts/Auxiliary Contacts are good for 60V AC Or DC, 1 AMP maximum. All contacts are separate contacts for different conditions, with a common neutral (terminal Two (2), position Nine (9)).