

### Oil Smart® Simplex System: 120/208/240VAC

The Oil Smart® OSSIM-30 System incorporates pump controls and alarm sensors that differentiate between oil and water, allowing companies to responsibly discharge the water without the risk of pumping oil. Installation of the OSSIM-30 keeps companies in compliance with Elevator Code ASME A17.1 and State/Federal regulations while reducing the risk of adverse publicity, fines, and expensive cleanup cost.

Model	FLA Range
OSSIM-30	(0.0-16.0 FLA)
OSSIM-30-CB	(0.0-16.0 FLA)

### Enclosure Mounting: NEMA 4X RATED

**Mounting Brackets** - A mounting bracket and screw pack are provided with the premium enclosures. To assemble, turn the enclosure upside down on a flat surface, place the mounting bracket over the square boss either horizontally or vertically, and fasten the mounting bracket with the 1/4"-20 x 0.5 SS, countersunk phillips drive screws or vertically, with the mounting brackets in any config., using any acceptable fastening technique.

**Covers/Doors** - Covers/doors have a gasket pre-assembled to seal against the base.

**Note:** The control panel should not be mounted in a location that may be subject to submersion.

### Panel Installation:

1. Caution: To maintain the NEMA 4X rating, make all wiring connections with seal tight cable grips or conduit connections.
2. Run pump cable and Oil Smart® cables through conduit. Make field connections as shown on wiring schematic.
3. Run power line conductor through conduit. Wire to terminals per enclosed schematic.
4. Branch circuit protection to be provided by installer.
5. Panel circuit breakers are closed
6. Mount Oil Smart® pump switch and Liquid Smart® alarm sensor with provided mounting hardware to pump discharge pipe. The 'OFF' sensor of the Oil Smart® pump switch shall be positioned at least 3" above the impeller of the pump.
7. Mounting of the Liquid Smart® Sensor is application driven and is to be placed where a high liquid is deemed necessary. The Liquid Smart® Sensor is typically mounted 3" - 6" above the Oil Smart® Pump Switch.
8. Connect service conductors 120/208/240VAC to proper location



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### Additional Panel Options:

#### 28 - Power on Dry Contact

- Normally open 60V AC/DC

#### DPR - Pump Run Dry Contact

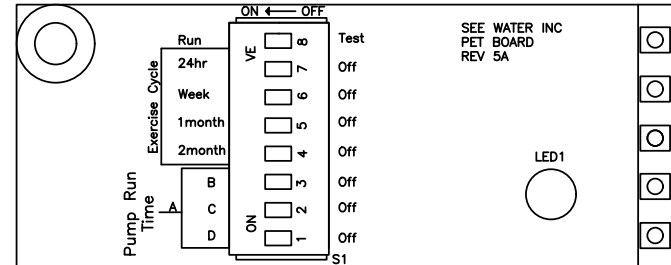
- Normally open 60V AC/DC

#### 24 - Pump Exerciser

- Auto cycles pumps daily, weekly or monthly.

#### Run Time Options:

- Position A: 50ms (DIP Switch 1,2, and 3)
- Position B: 100ms
- Position C: 4s
- Position D: 8s



### Remote Monitoring Dry Contacts:

1. Normally Open dry contacts for high oil, high water, and general high liquid alarm.

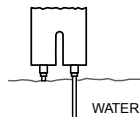


### Sequence of Operation:

#### Operation of Oil Smart®

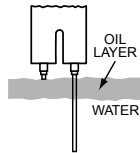
##### Normal Condition (Water Only)

When water comes in contact with the short (on) sensor, the pump will turn on. The pump will remain on until water clears the long (off) sensor.



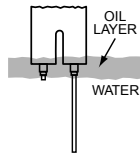
##### Oil Present Condition

If oil comes in contact with the (on) sensor, the pump will not turn on.



##### Water (Oil Present Condition)

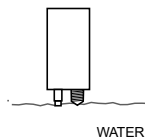
If the water level rises enough to contact the (on) sensor under the oil layer, the pump will turn on and remain on until the (off) sensor clears.



#### Operation of Liquid Smart®

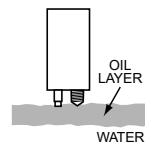
##### High Water Level

When water comes in contact with both sensors, the white water indicator on the front panel will illuminate. This condition will turn on the red beacon alarm light and sound the alarm buzzer.



##### High Oil Level

If oil comes in contact with both sensors, the yellow oil indicator on the front panel will illuminate. This condition will turn on the red beacon alarm light and sound the alarm buzzer.



### Testing:

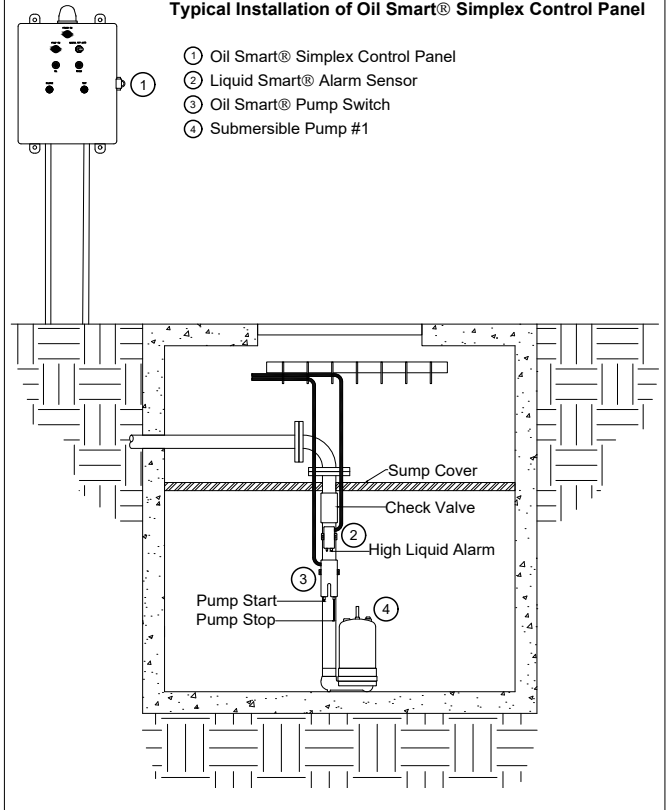
#### Oil Smart® Pump Switch Testing:

- Place your thumb on the short stainless steel sensor of the Oil Smart® Pump Switch, and the pump will turn on. While touching the short 'ON' sensor, touch the long 'OFF' sensor with your fingers; remove your thumb from the short 'ON' sensor and begin to move your fingers down the 'OFF' sensor simulating water being pumped down. Once fingers are removed from 'OFF' sensor, the pump will turn off.
- Optional: Fill the sump area with ground water, when water reaches the 'ON' sensor, the pump will turn on and remain on until water clears the 'OFF' sensor.

#### Liquid Smart® Alarm Testing:

- Submerge both sensors in oil and the yellow oil indicator on the front panel will illuminate. To test water sensor, submerge both sensor in ground water and the white water light will illuminate.
- Both test will illuminate the 360 degree visible beacon and sound an 85 decibel at 10' buzzer.

#### Typical Installation of Oil Smart® Simplex Control Panel



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