

# 4100-OWS Oil/Water Separator Level Monitor



## Continuous interface monitoring of static level oil/water separators



explosion  
proof probe

2" npt 316SS  
process connection  
or flanges available

Over 40 years of Arjay's field proven HF capacitance experience has been applied to the 4100-OWS series monitors. This unique oil level system provides complete flexibility for monitoring oil water separators in one complete package.

- unique capacitance approach eliminates routine cleaning
- no moving parts
- control and interface panel mounts safely away from the process

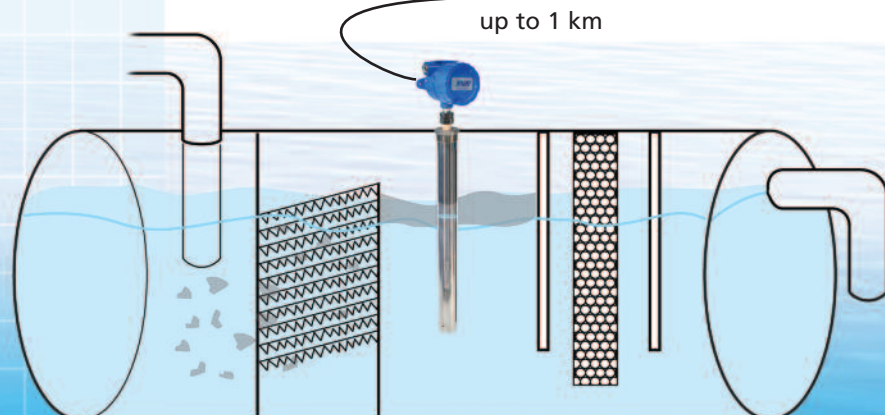
The 4100-OWS sensing probe monitors the capacitance field between the probe and the concentric shield. As the oil accumulates and displaces the water, the probe capacitance changes. This interface signal is used to provide outputs, displays and relay control.



(beacon and buzzer optional)



316SS shield  
for accuracy and  
Auto Calibration



# 4100-OWS

## Features and Benefits

- no moving parts
- remote electronics via standard twisted pair
- all set-up, calibration and diagnostics is done at the control panel
- all control wiring and interface is done at the control panel
- HF capacitance technology does not require routine cleaning
- touch screen interface for easy set-up and user interface
- tank view display for ease of reading
- trend display of hour, day or month increments
- single point calibration
- relays for valve control, alarms and pump run-time

## Optional Interfaces

Analog Output 4-20 mA non-isolated  
Communication RS-485 Modbus

## Technical Specifications - Control Panel

Operating Temp.	0°C to +55°C
Resolution	.007% (.07 pF at 1,000 pF)
Accuracy	0.2% of full scale pF
Power Input	24 vdc or 80-240 vac +/-10%, 1P, 50-60 HZ
Display	touch screen full colour tank view graphics, % and engineering units of oil trend line selectable hours, days or none
Relay Output	four SPDT, 10 amp @ 240 vac, dry Pump relay has a discrete run time with level re-set
Enclosure	Type 4 metal painted blue / IP 66 optional Type 4X SS or polycarbonate

## Technical Specifications - Probe

Process Temp.	-60°C to +200°C
Ambient Temp.	-40°C to +55°C
Pressure	103 bar/10342 kPA/1500psi at stable temperature
Process Connection	available 2" npt threaded or flanged
Wetted Parts	316SS and Teflon

### Certifications (certificates available on website)

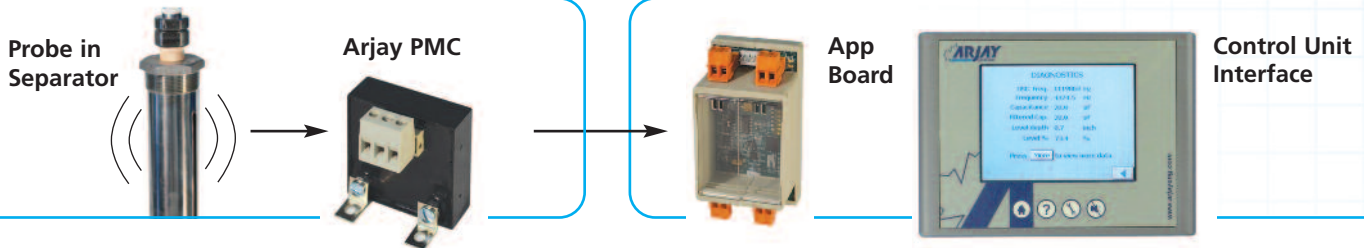
**Included Standard on Control Unit and Probe - Ordinary Location Use**  
UL/CSA/IEC 61010-1  
CAN/CSA 22.2  
CE

**Included Standard on Probe - Hazardous Location Use - Explosion Proof**  
USA/Canada CSA Zone 1,2; AEx db IIC T5 Gb  
IECEX/ATEX Zone 1,2; Ex db IIC T5 Gb

### Optional on Probe - Hazardous Location Use - Intrinsically Safe

UL/CSA/IEC 60079  
ANSI/UL 913-2013  
Class I; Division 1,2; Groups A,B,C,D; T4  
Class II; Division 1,2; Groups E,F,G  
Class III; Division 1,2  
Class 1, Zone 0,1,2; Ex ia IIC T4 Ga

**Included Standard on Probe**  
CRN # 0F07450.2 (all provinces)  
NACE MR-0175 Compliant where applicable



## Probe Assembly

The Arjay PMC (pulse module circuit) installed at the probe converts the separator signals to a frequency pulse. This allows the controller to be safely mounted up to 1 km away from the separator with virtually no loss to signal stability. No operator interface is required at the probe using this unique Arjay PMC design.

## Control Panel

All calibration, control interface and power wiring is done at the main control unit. The touch screen provides a simple menu-driven operator interface and display.

The Arjay App board is the heart of the 4100-OWS. This board monitors and controls the signals from the separator probe, applies the appropriate calibration algorithms and interfaces this information to the touch screen and PLC hardware.



Arjay Engineering Ltd. 2851 Brighton Road Oakville, Ontario Canada L6H 6C9

<http://www.arjayeng.com> telephone: +1 905-829-2418 N. America toll free: 1-800-387-9487 fax: +1 905-829-4701

