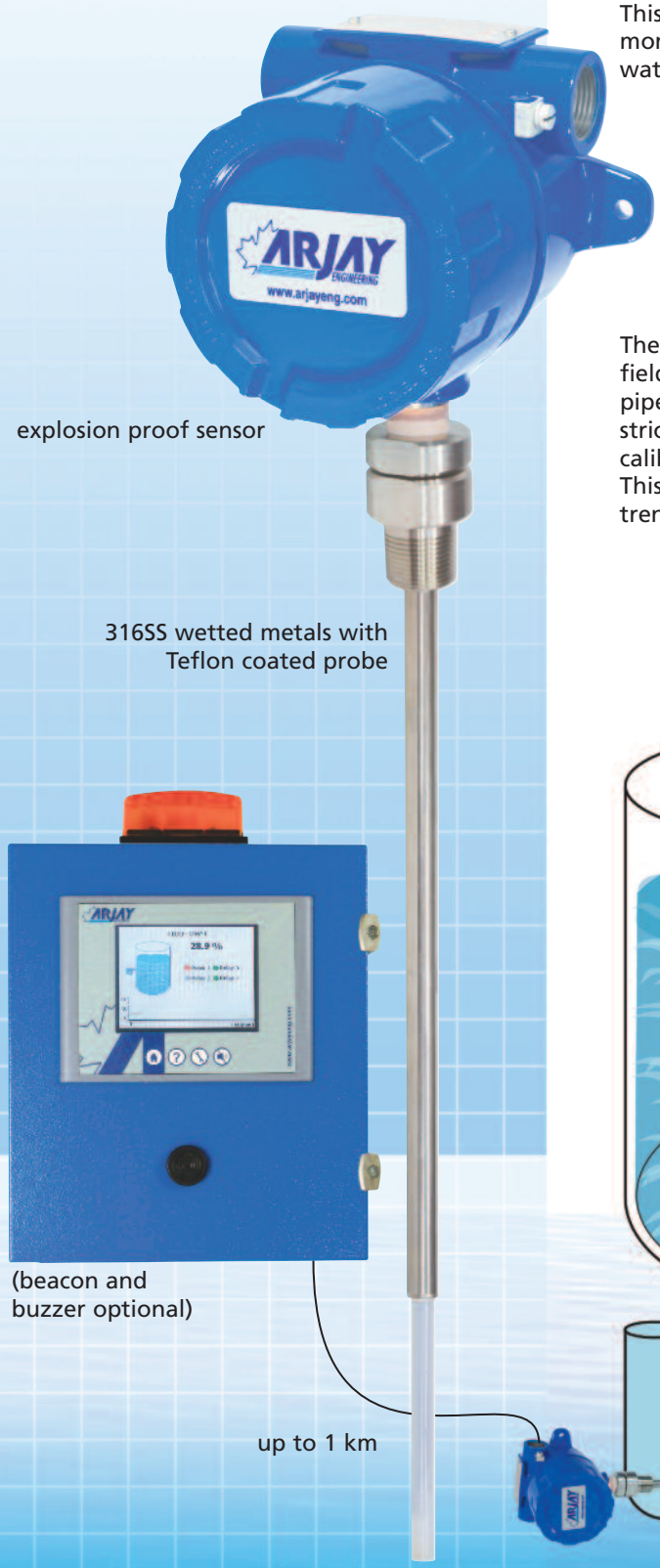
4100-**OWM**
% Water in Oil Monitor

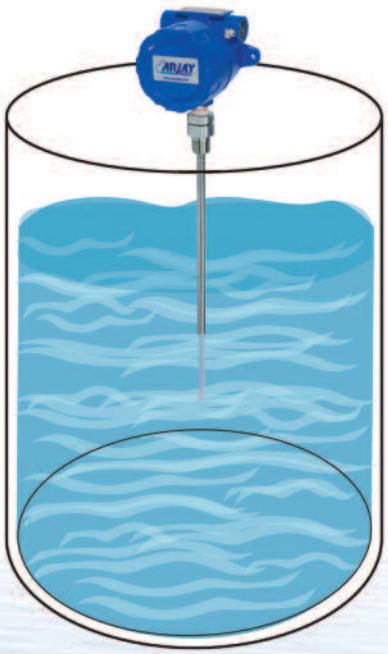
Continuous monitoring for % concentration of water in oil emulsions

Over 40 years of Arjay's field proven HF capacitance experience has been applied to the 4100-OWM monitor. This unique system provides complete flexibility for monitoring tanks and flows for % concentrations of water in oil.

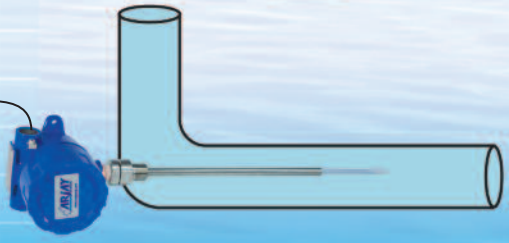
- unique capacitance approach eliminates routine cleaning
- no moving parts
- control and interface panel mounts safely away from the process
- tank or pipe installation

The 4100-OWM sensing probe monitors the capacitance field around the probe within a concentric shield, tank or pipe. The emulsion characteristics of water to oil is not strictly linear and the Arjay controller allows for a 5 point calibration to enhance accuracy over an extended range. This instrument is ideal for general monitoring and trending of process conditions.





In Tank Solutions



In Pipe Solutions

4100-OWM

Features and Benefits

- no moving parts
- remote electronics via standard twisted pair
- all set-up, calibration and diagnostics are accessed at the control panel
- multi-point calibration curve
- 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
- trend display of hour, day or month increments

Technical Specifications - Probe

Process Temp.	-60˚C to +260˚C
Ambient Temp.	-60˚C to +55˚C
Pressure	103 bar/10342 kPA/1500psi at stable temperature
Process Connection	available threaded or flanged
Explosion Proof	CSA Div 1, Class 1, Groups C,D
Intrinsic Safety	Approved Intrinsically Safe when ordered with Approved Barrier in Control Unit CAN/CSA E60079-11: Class I, Groups A,B,C,D; Class II, Groups E,F,G; Class III, Encl.Type 4
CRN	ABSA-CRN #OF07450.2
Wetted Parts	316SS and Teflon

Probe materials are eligible for NACE MR-0175 Compliance

Technical Specifications - Control Panel

Operating Temp.	0˚C to +55˚C
Resolution	.007% (.07 pF at 1,000 pF)
Accuracy	.04% 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 trend line selectable hours, days or none
Relay Outputs	four SPDT, 10 amp @ 240 vac, dry
Enclosure	Type 4 metal painted blue / IP 66 optional Type 4X SS or polycarbonate
Approvals to	UL / CSA / CE IEC 61010

Optional Interfaces

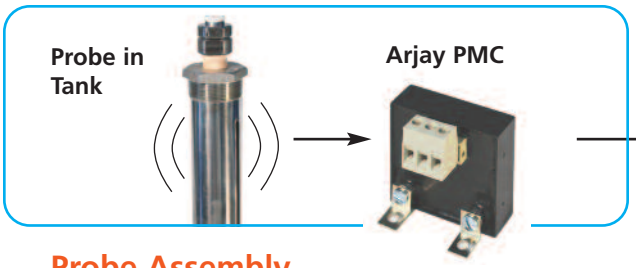
Analog Output	4-20 mA non-isolated
Communication	RS-485 Modbus

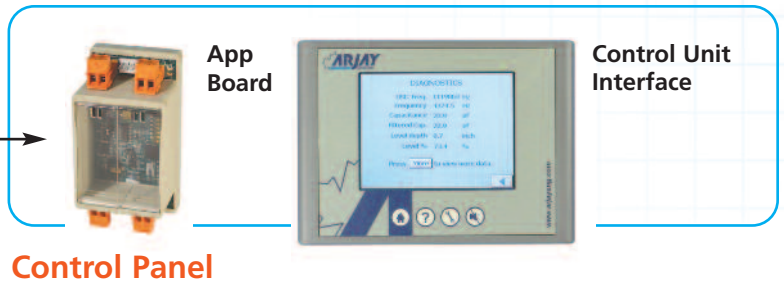
Accuracy Note: Reading accuracy is dependent on many variables such as fluid dielectric stability, temperature, blending dynamics, etc. This monitor is designed for general monitoring and trending of process conditions. A 5-point calibration curve can be entered to enhance accuracy within your desired range.

Minimum Calibration Range:	0-5% water in oil
Maximum Calibration Range:	0-40% water in oil

Expected Accuracies in stable conditions:

<1%:	not recommended
1-25% water in oil:	+/- 5% of reading
25-40% water in oil:	+/- 10% of reading





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 tank 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-OWM. This board monitors and controls the signals from the probe, applies the appropriate calibration algorithms and interfaces this information to the touch screen and PLC hardware.

ARJAY ENGINEERING

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