

4100-HCF

# Floating Oil Thickness Monitor

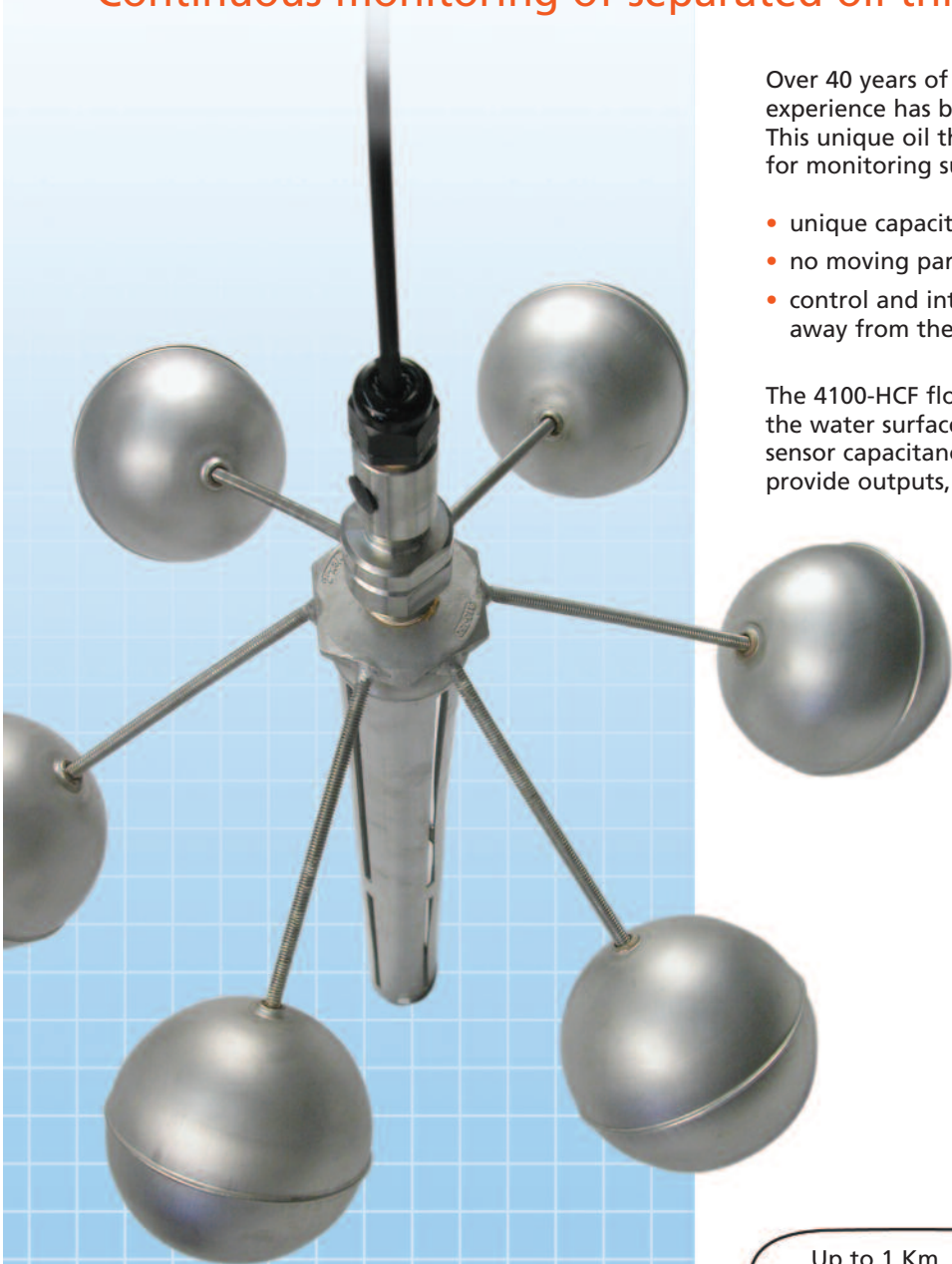


## Continuous monitoring of separated oil thickness on a water surface

Over 40 years of Arjay's field proven HF capacitance experience has been applied to the 4100-HCF series monitors. This unique oil thickness system provides complete flexibility for monitoring surface oil 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-HCF float sensor monitors the capacitance field of the water surface. As the oil accumulates on the surface, the sensor capacitance changes. This interface signal is used to provide outputs, displays and relay control.



Up to 1 Km

(beacon and buzzer optional)

Splitter boxes are acceptable for longer length cabling

30m potted cable included



Shown with Float #A00525  
.1-300mm range



# 4100-HCF

## Features and Benefits

- no moving parts
- remote electronics via standard twisted pair
- all set-up, calibration and diagnostics is at the control panel
- all control wiring and interface is at the control panel
- HF capacitance technology does not require routine cleaning
- touch screen interface for easy set-up and user interface
- sump 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 sump view graphics, % and engineering units of oil selectable trend line view or none  
Relay Outputs 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

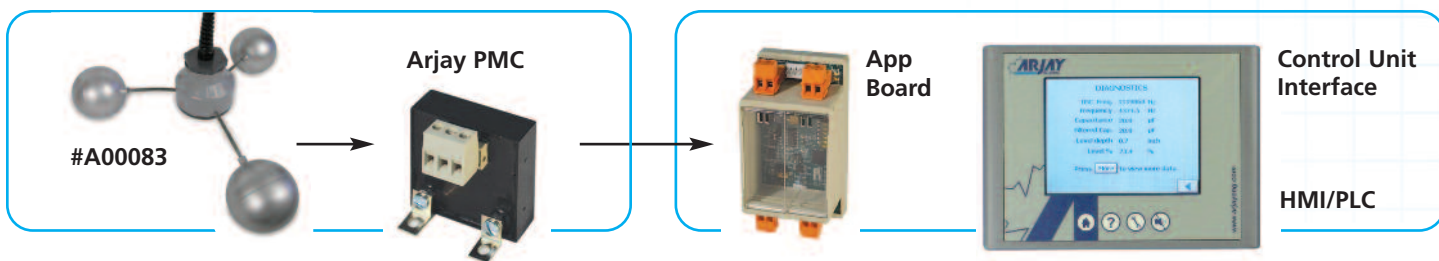
## Technical Specifications - Float Sensor

Style #A00083 2 to 25 mm (.1-1") oil thickness range  
Style #A00525 2 to 304mm (.1-12") oil thickness range  
Process Temp. 0°C to +55°C  
Ambient Temp. -60°C to +55°C  
Wetted Parts 316SS, PVC and Teflon  
Optional probe materials are eligible for NACE MR-0175 Compliance

### Certifications (certificates available on website)

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

**Optional on Sensor for Hazardous Location Use (Intrinsic Safety Barrier must be ordered in control unit)**  
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



## Float Assembly

The Arjay PMC (pulse module circuit) installed near the float sensor converts the oil/water signals to a frequency pulse. This allows the controller to be safely mounted up to 1 km away from the sensor with virtually no loss to signal stability. No operator interface is required at the sensor 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-HCF. 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

