Pyxis®

HM-500 Series

Inline Oil in Water UV Fluorometric Sensors

Product Description

The HM-500 Series of inline fluorometer sensors measure the concentration of oil in water read as ppm Marine Crude-Offshore Oil. The sensors utilize an LED sourced UV-fluorescence methodology at 365nm wavelength & 410/470nm excitation. The Pyxis Lab® HM-500 Series sensors are uniquely designed with extra photo-electric components that also monitor color & turbidity of the sample water. This proprietary feature enables the HM-500 Series to automatically compensate for color & turbidity in the water sample eliminating interferences commonly associated with real-world waters, up to 150NTU.

The Pyxis Lab® HM-500 Series inline sensors have a short fluidic channel & can be easily cleaned. The fluidic & optical arrangement of the HM-500 series are designed to overcome shortcomings associated with other fluorometers that have a distal sensor surface or a long, narrow fluidic cell. Traditional inline fluorometers are susceptible to color/turbidity interference & fouling and can be very difficult to clean. These unique features provide HM-500 Series with a level of accuracy far greater than conventional inline oil in water sensors & enable users to conduct wireless inline sensor cleanliness diagnostics as a predictive measure via the uPyxis® mobile & desktop app.

Contact Us at *info@pyxis-lab.com* for More Information...

Key Features

• HM-500 Series provided with ST-001 Inline Tee Assembly 3/4inch FNPT/CPVC

• HM-500SS Series offers 304 Stainless Steel 3/4inch FNPT for Harsh Applications

• Submersion Adapter Kit (MA-102S) Available for CPVC Submersed Applications

• Unique Design with Extra Photo-Electric Components

• Automatically **Compensates for Color & Turbidity** Contamination

• Flexible/Advanced Communication 4–20mA Output & RS-485 Output

• Connectible to ANY Conventional Microprocessor Controller, PLC or DCS

• Bluetooth® Enabled when used with MA-WB or PowerPACK Series Adapters

• Bluetooth® Wireless Interface via uPyxis® app on all Mobile & Desktop Devices

• uPyxis® app allows users to Write Calibration to Sensor for Variety of Oils as ppm

• uPyxis® app allows for Sensor **Cleanliness Diagnostics, Calibration & Configuration**

• Lower Cost & Higher Accuracy vs. Conventional UV Fluorometers for Oil in Water

Typical Applications

• Heat Exchanger Leakage Detection

• Oil Tank Leakage Detection

• Intake Water Monitoring (UF & RO Feedwater)

• Reinjection Water Monitoring

• Industrial Wastewater Monitoring

• Marine Discharge Monitoring

• Plant Runoff Water Monitoring

• Stormwater Monitoring

Specifications

Item	HM-500	HM-500SS	HM-510	HM-510SS	HM-520	HM-520SS
Part Number	52101	52114	52102	52125	52106	5216
Power Supply	52101	52114	52102	52125	52106	5216
Data Storage	CPVC	304SS	CPVC	304SS	CPVC	304SS
Output	100psi	290psi	100psi	290psi	100psi	290psi
Submersion Cable Length	6.8"x1.4"	8.5"x2.2"	6.8"x1.4"	8.5"x2.2"	6.8"x1.4"	8.5"x2.2"
Range	.37lb	2.5lb	.37lb	2.5lb	.37lb	2.5lb
Resolution	10ppm		1,000ppm		100ppm	
Accuracy	0.1ppm		0.5ppm		0.5ppm	
Stability	0.1ppm or ≤3%					
Measurement Interval	UV-Fluorescence					
Installation	365nm LED					
Weight	410/470nm					
Enclosure Material	24 (±2) VDC, 65mA					
Transducer Material	4-20mA & RS-485 Modbus RTU					
Cable Material	-7–60 °C (20–140 °F)					
Temperature	4–40 °C (40–104 °F)					
Enclosure Rating	1P67, Fully Dustproof & Waterproof					
Transducer Rating	CE					
Regulation	5ft with IP67 Adapter \ 24" Flying Lead with IP67 Adapter					

Pyxis Lab® Oil In Water Secondary Standard for Easy Calibration

Pyxis Lab® has developed OIW-500, a 500ppm synthetic Oil in Water Secondary Standard Solution (as Marine-Offshore Oil) as a more stable & easier method of recurring HM-500 Series sensor calibration. This low cost & highly stable standard may be used as an alternative to preparing actual oil in water standard for sensor calibration.

Item	OIW-500 Secondary Standard Solution
Product	OIW-LR
P/N	21058
Range*	500ppm *as Marine-Offshore Oil*
Shelf Life	6 Months
Container	16oz/500mL Nalgene Amber Narrow Sample Bottle
Volume & Weight (net)	510 ±10mL / 510g ±10g

Cleaning & Calibration

The uPyxis® app manages all Pyxis Lab® portable meters & inline sensors on mobile & desktop devices. When connected to the Pyxis Lab® HM-500 Series Inline Oil in Water Sensor, the uPyxis® app enables users conduct a wireless probe cleanliness diagnostics check. This unique feature conducts an internal assessment of the sensor cleanliness condition within 5-seconds allowing the user to determine if the probe is in need of cleaning prior to calibration. Once cleaned, the user can proceed to conducting a wireless 2-point calibration of the HM-500 Series sensor via uPyxis®. The uPyxis® direct diagnsis & calibration of the sensor itself eliminates unnecessary time wasted with calibrating the probe through the receiving controller & ensures the highest degree of accuracy. When connected in RS-485 modbus format, Pyxis Lab® can provide the user with Cleanliness Diagnostics register data enabling users to utilize this unique sensor function within their own controller.

NOTE

For wireless access to all Pyxis Lab® devices via uPyxis®, users will require the inline Bluetooth® adapter (MA-WB) or PowerPACK Series Auxiliary Box.

Calibration & Diagnostics
made easy with *uPyxis® App*

www.pyxis-lab.com/upyxis-app

Order Information

	Part Number
HM-500 Oil in Water Sensor *(0-10ppm / CPVC)*	52101
HM-510 Oil in Water Sensor *(0-1,000ppm / CPVC)*	52102
HM-520 Oil in Water Sensor *(0-100ppm / CPVC)*	52106
HM-500SS Oil in Water Sensor *(0-10ppm / 304SS)*	52114
HM-510SS Oil in Water Sensor *(0-1,000ppm / 304SS)*	52125
HM-520SS Oil in Water Sensor *(0-100ppm / 304SS)*	52126

Optional Accessories

	Part Number
HM-900 Oil in Water Analyzer	52201
MA-WB Bluetooth® Adapter *(Enables uPyxis®)*	MA-WB
PowerPACK1 *(Single Channel Power Supply + Bluetooth®)*	MA-BLE-1
PowerPACK4 *(Four Channel Power Supply + Bluetooth®)*	MA-BLE-4
OIW-500 *(500ppm/500mL Secondary Standard Solution)*	21038
MA-C10 *(10' Extension Cable)*	50738
MA-C25 *(25' Extension Cable)*	50740
MA-C50 *(50' Extension Cable)*	50705
MA-C100 *(100' Extension Cable)*	50706
MA-CIP *(ByPass Clean-In-Place Panel for HM-Series)*	MA-CIP-1