INOV8™
Customer Inspired Innovation

EXS-M Oil in Water Analyser

Side Stream - Microscopy & Fluoresence

Customer inspired innovation

Leveraging decades of innovation experience for the Oil & Gas industry, Inov8 Systems introduce the next generation of products for an evolving market with dynamic demands.

The EXS-M combines high-speed CCD imaging microscopy and fluorescent spectroscopy to deliver precise oil and particulate-in-water analysis. Featuring automatic RapidWave™ ultrasonic cleaning to eliminate manual maintenance , this side-stream analyser provides reliable, real-time concentration and dimensional data across demanding process conditions.

Features

- Dual Microscopy & Fluorescence Technology
- Automatic **RapidWave**™ Ultrasonics
- Side-Stream / On-Line Installation
- Extended Logfile Storage
- 316L Stainless Steel Enclosure
- Flexible Power Supply Options

Benefits

- Comprehensive Particulate & Oil Detection
- Eliminates Manual Maintenance
- Real-Time In-Flow Monitoring
- Long-Term Data Tracking
- High Durability in Harsh Environments
- Versatile Field Integration

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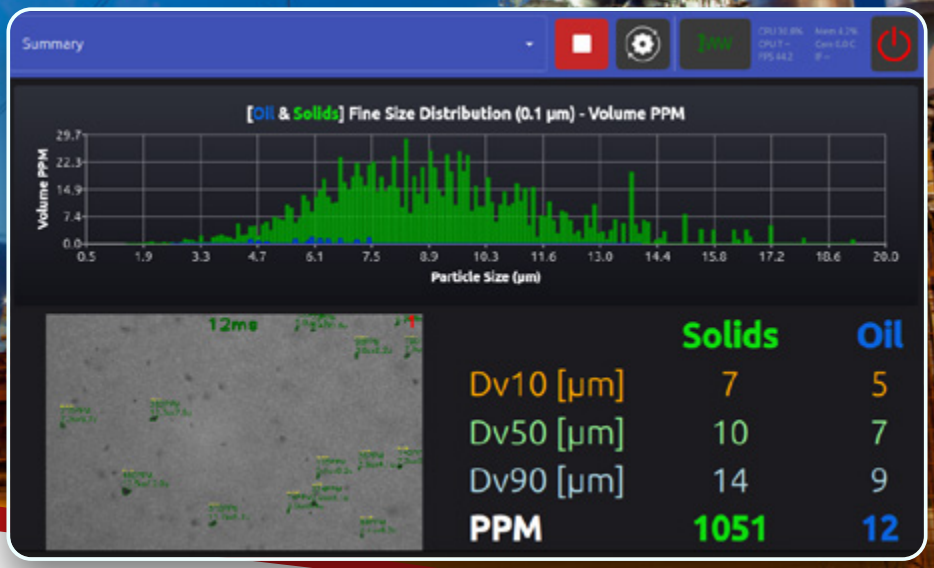

Technical Specifications

SPECIFICATION

Microscopy Illumination & Measurement Principle - Oil concentration	Synchronised Strobed Light Source & Fluorescent Spectroscopy
Installation	Side-stream / on-line in flow

CONCENTRATION MEASUREMENT

Oil Range	0-5000 PPM
Calibration	Calibrated with controlled samples of known dimensions and concentrations
Microscopy Repeatability	+/- 5% of calibrated range
Fluorescence Repeatability	+/- 2% Calibrated Range
Units of measure	PPM and Mg/l

SIZE RANGE

Dimensional range	1um-250um
Repeatability	+/- 4% of full scale
Calibration	Utilising known bead sizes and known made up concentrations

ADDITIONAL INFORMATION

Fittings	3/4 inch NPT
Wetted parts	Standard 316L SS, others available on request
Enclosure Material	316L SS

COMMUNICATIONS

4-20 mA	2, Passive / Loop-Powered
Digital Input	3
Digital Output(s) (dry contact)	2
Remote access	Yes
System data storage	Logfiles >5 years

OPTIONAL COMMUNICATIONS

Modbus TCP/IP	Yes
Remote Access	TBC-TeamViewer (End User account needed)

CERTIFICATION

Ingress protection	IP66
Analyser Certification	CE

OPERATING CONDITIONS

Process temperature	0-50°C
Process pressure (MAWP)	2 Bar process and 5 Bar design pressure (process pressure can be controlled)
Process flow	0.5-10 l/m
Operational ambient temperature	0-50°C
Cleaning	Automatic **RapidWave**™ ultrasonics

WEIGHT & DIMENSIONS (SHIPPING)

Weight (including stand, termination box and isolation switch)	28Kg
Dimensions (On a stand)	1210x450x450 mm
Dimensions (Stand alone)	950x400x150 mm

UTILITIES

Power supply	110/240VAC or 24 VDC 10A
Power frequency	50-60Hz
Power consumption	190W Max. Nominal 70W

COMPLIANCE

Directives:	
2014/68/EU Pressure Equipment Directive, module A1 2014/34/EU ATEX Directive Exd IIG Class 1 Division 1, Zone 1	
Standards:	
FM3600	Electric Equipment for use in Hazardous Locations General requirements
FM3615	Explosion Proof Electrical Equipment General Requirements
FM3810	Electrical Equipment For Measurement, Control and Laboratory Use
ANSI/IEC 60529	Degrees of Protection Provided By Enclosures (IP code)
CSA-C22.2 No. 30	Explosion Proof Enclosures For Use In Class 1 Hazardous Locations.
CSA-C22.2 No. 142	Process Control Equipment
CSA-C22.2 No. 60529	Degrees of Protection Provided By Enclosures
IECEx EN 60079-0	Explosive atmospheres Part 0: Equipment General Requirements
IECEx EN 60079-1	Explosive atmospheres Part 1: Equipment protected by flameproof enclosures “d”
IMO107(49)	Marine 15 ppm regulations
DNVGL-CP-0485	Clean Design 5 ppm regulations

Patent number 2580699 (UK)
Patent number 2600454 (UK)
Patent number 2614934 (UK)
Patent Number 3127511 (CA)
Patent Number 11994461 (US)
Patent number 3914898 (EU)
Patent Number 2798310 (RU)