

EX-100/1000

SIDE STREAM OIL IN WATER ANALYZER



Ultrasonics



Fluorescence



Spectroscopy

The EX-100/1000 is a side stream Oil in Water analyzer that uses fluorescence to provide continuous accurate measurements of oil concentrations in water. Reliable real-time data enables operators to take accurate discharge measurements and to improve efficiency of separation processes enabling cost reductions.

In addition to the EX-100 features, the EX-1000 model offers spectral analysis.

FEATURES

- Patented ultrasonic cleaning
- Laser Induced Fluorescence (LIF)
- Periodic homogenisation of sample
- Sample point
- Configurable measurement ranges (0-10 ppm, 0-100 ppm [...] up to 0-20,000 ppm)
- Measurement repeatability $\pm 1\%$ of full scale
- Remote management and diagnostics
- Easy to install (no sample conditioning required)
- Multiple communications options - 4-20 mA, HART, Modbus, Extended Ethernet
- Optional integrated spectrometer
- Operates using Microsoft Windows 7
- Auto tuning functionality
- Viewing window of sample chamber
- Digital input & output

BENEFITS

- Robust and reliable
- Easy to use
- Low Cost Of Ownership (COO) with no routine maintenance required
- No degradation of signal or recalibration required
- Side stream format offers localized sample control
- Droplet size compensation with homogenized samples
- Sample point facilitates laboratory correlation
- Remote control and monitoring (suitable for un-manned locations and remote process monitoring)
- Instantaneous measurements



Measurement Performance		
Measurement principle	Laser Induced Fluorescence (LIF)	
Cleaning	Ultrasonic (automatic)	
Range	0-20,000 ppm*	
Repeatability	±1% of full scale range	
Response time	1 Second, continuous results	
Operating Conditions		
Process temperature	Up to 200°C	
Process pressure	Up to 100 barg	
Process flow	5-25 l/min	
Operational ambient temperature	-20°C to 55°C	
Spectrometer Specification (1000 models only)		
Emission wavelength range	400-1,100 nm	
Resolution	0.5 nm	
Utilities		
Power supply	110 or 230 VAC (Pre-configured)	
Power frequency	50 or 60 Hz	
Power consumption	60 W normal, 300 W peak	
Instrument air	5.5-7 barg (for pneumatic valve; electric valve option available) (air must be filtered to <= 5 µm)	
Certification		
Ingress protection	IP66	
Enclosure material	316L SS (Aluminium optional)	
Analyzer	ATEX / IECEx:	EXII 2G d/de IIB T3/T4 Gb
	Canada + USA:	Class 1 Division 1 Groups C & D T3/T4 Class 1 Division 2 Groups A, B, C, D, T3/ T4 Class 1 Zone 2 AEx d/de IIB T3/T4
	IMO	MEPC-107 (49)
Weight & Dimensions (for shipping)		
Weight (including stand, standard pneumatic Stainless Steel valve assembly, termination box and isolation switch)	200 kg	
Dimensions	L 92 cm x W 83 cm x H 148 cm	
Communications		
4-20 mA (1)	Passive, Configurable for measurement readings/temperature	
Digital Input (1) Digital Output (s)	Start/Stop cycle control Configurable as alarm contacts	
Remote access	Windows Remote Desktop	
Internal data storage	>10 years	
Security	2 level password protection	
Optional Communications		
Second 4-20mA	Passive, Configurable for measurement readings/temperature	
HART	Yes	
Modbus RTU	Implemented via HART to Modbus converter	
Extended Ethernet	2 wire connection, capable of 1.6 Km distance	
Additional Information		
Flange fitting	1" ANSI RF (optional flange, sizes available)	
Wetted parts	316L SS (other materials available on request)	
Manual sample take off point	Integral to analyzer	
Viewing window	Provided as standard	
Ultrasonic Homogenisation	Automatic oil droplet compensation	

* dependent on sample matrix & instrument configuration. User may select any desired measurement from 0-10 ppm, 0-100 ppm [...] up to 20,000 ppm