

EX-100/1000

Side Stream Oil in Water Analyzer



Ultrasonics



Fluorescence



Spectroscopy

The EX-100 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)
- Side stream format
- Periodic homogenisation of sample
- Sample point
- Various measurement ranges configurable (0-10ppm, 0-100ppm [...] up to 0-20,000ppm)
- Measurement repeatability $\pm 1\%$ of full scale
- Remote management and diagnostics
- Easy to install (no sample conditioning required)
- Multiple communications options - 4-20mA, HART, Modbus, Extended Ethernet
- Optional integrated spectrometer

Benefits

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



Measurement Performance	
Measurement principle	Laser Induced Fluorescence (LIF)
Range	0-20,000ppm*
* dependent on sample matrix & instrument configuration	
Repeatability	±1% of full scale range
Response time	1 Second, continuous results
Operating Conditions	
Process temperature	Up to 200°C
Process pressure	Up to 35 barg
Process flow	5-25 l/m
Operational ambient temperature	-20°C to 55°C
Cleaning	Ultrasonic (automatic)
Spectrometer Specification (1000 models only)	
Emission wavelength range	400-1,100nm
Resolution	0.5nm
Utilities	
Power supply	110 or 230 VAC (pre configured)
Power frequency	50 or 60 Hz
Power consumption	60W normal, 300W peak
Instrument air	5.5-7 barg (for pneumatic valve; electric valve option available)
Certification	
Ingress protection	IP66
Enclosure material	Aluminium (316L SS optional)
Analyzer	CE compliant, ATEX, IECEx, INMETRO (for SS enclosure only), Class 1 Division 1 (groups C&D; T3&T4), Class 1 Division 2 (groups A, B, C, D; T4), Class 1 Zone 1 (T3&T4), IMO resolution MEPC. 107 (49)
Weight & Dimensions	
Weight (including stand, standard pneumatic Stainless Steel valve assembly, termination box and isolation switch)	Aluminium Enclosure: 93.55Kg Stainless Steel Enclosure: 141Kg
Dimensions	670W x 640D X 1112H mm 1120H mm for Stainless Steel enclosure
Clear space	500mm front and rear
Communications	
4-20 Ma (1)	Standard
Ethernet	Standard
HART, Modbus, Extended Ethernet	Optional**
Digital Input (1), Digital Output (1)	Standard
Remote access	Standard
Internal data storage	>10 years
Security	Multiple level password protection
Additional Information	
Flange fitting	1" ANSI RF standard (optional flange, sizes available)
Wetted parts	316L SS (other materials available on request)
Sample take off point	Standard – integral to analyzer
Viewing window	Standard
Sample Conditioning	
Homogenisation	Ultrasonic
Automatic Oil Droplet Size Compensation	Standard

** HART - PPM internal temperature, flow status - START cycle and STOP cycle functionality only
MODBUS RTU only; implemented via HART to MODBUS converter