

EX-500

SIDE-STREAM OIL IN WATER ANALYSER



Ultronics



Fluorescence

The EX-500 is a side stream Oil in Water analyser that uses Deep UV Fluorescence to provide continuous accurate measurements of oil concentrations in water.

The analyser detects a wide range of oils/oil components to include fuel oils, base oils, lubricating oils, gear oils, BTEX and crude oils. Reliable real-time data enables operators to take accurate discharge measurements and to improve efficiency of separation processes, enabling cost reductions.

Applications range from marine exhaust scrubbers, heat exchangers, steam condensate, cooling water and boiler feed amongst others.




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

FEATURES

- Patented ultrasonic cleaning
- Deep UV fluorescence
- Periodic homogenisation of sample
- Optional sample point
- Configurable measurement ranges (0-10 ppm, 0-100 ppm [...] up to 0-100,000 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
- Adaptive ultrasonic cleaning
- Viewing window of sample chamber
- Digital input & output



Measurement Performance	
Measurement principle	Deep UV Fluorescence
Cleaning	Ultrasonic (automatic)
Range	0-100,000 ppm*
Accuracy	±1% of full scale range**
Response time	1 Second, continuous results
Operating Conditions	
Process temperature	Up to 180°C
Process pressure (MAWP)	Up to 100 bar _g
Process flow	5-25 l/m***
Operational ambient temperature	-20°C to +55°C
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 bar _g (for pneumatic valve; electric valve option available) (air must be filtered to ≤ 5µm)
Certification	
Ingress protection	IP66
Enclosure material	316L SS
Analyser	<div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> ATEX / IECEx:  II 2G  </div> <div> Ex db [op is IIC T4 Gb] IIB T4 Gb Max. liquid temperature +100°C Ta = -20°C to +55°C Or Ex db [op is IIC T4 Gb] IIB T3 Gb Max. liquid temperature +180°C Ta = -20°C to +55°C </div> </div>
CE Compliant	
Weight & Dimensions (for shipping)	
Weight (including stand, standard pneumatic Stainless Steel valve assembly, termination box and isolation switch)	200kg
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	
Additional 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 1.3km 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 analyser
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 100,000 ppm.

** Under ideal conditions, with a homogenised sample.

***Flow rate through the analyser measurement chamber. Flow control may be implemented external to the analyser to manage higher flow rates.