

EX-500P

INLINE OIL IN WATER ANALYSER



Ultrasonics



Fluorescence

The EX-500P is an inline probe Oil in Water analyser that uses Deep UV Fluorescence to provide continuous accurate measurements of oil concentration. The analyser detects a wide range of oils/oil components such as fuel oils, condensates, lubricating oils, gear oils, BTEX, PAHs which are typically difficult with standard techniques as well as crude oils. Reliable real-time data enables operators to take accurate measurements and to improve efficiency, enabling cost reductions.

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






BENEFITS

- No user required maintenance
- Consistent accurate performance
- No sample conditioning system required. Inserted directly in process pipe
- Can detect BTEX components
- Low Cost Of Ownership (COO) with no routine maintenance required
- During process shut down, the analyser can be turned to standby mode through remote digital input. All signals are accessible remotely through Modbus / Ethernet connectivity and 4-20mA
- With double block and bleed valve, probe can be inserted/ removed without process shut down

FEATURES

- Patented ultrasonic cleaning
- Deep UV fluorescence
- 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
- For the option of hot insertion/extraction, an extraction tool and gear box is recommended for pressures in the range 3-5 bar. For pressures above 6 bar a gear box is essential for hot insertion/ extraction



Measurement Performance		
Measurement principle	Deep UV Fluorescence	
Cleaning	Ultrasonic (automatic)	
Range	0-100,000ppm*	
Accuracy	±1% of full-scale range**	
Response time	1 Second, continuous results	
Operating Conditions		
Process temperature	Up to 200°C	
Process pressure (MAWP)	Up to 100 bar _g	
Process flow	Nominal 10m/s	
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	
Certification		
Ingress Protection Probe	IP66**/ IP68 for wetted portion of probe	
Ingress Protection Enclosure	IP66 NEMA 4X	
Analyser	 II 2G	Ex db [op is IIC T4 Gb] IIB T4 Gb Ta = -20°C to +55°C
		
	 II 2G	II 2G EXdb op is IIB T5 Gb Ta= -20°C to +55°C Max. liquid temperature 100°C Or Ex db op is IIB T3 Gb Ta= -20°C to +55°C Max. liquid temperature 200°C
		
CE Compliant		
Weight & Dimensions (for shipping)		
Weight (including stand, termination box and isolation switch)	200kg	
Dimensions	L 92 cm x W 83 cm x H 148 cm (except 980mm probes) L 92cm x W 83 cm x H 176 cm (with 980mm probes)	
Communications		
4-20 mA (1)	Passive, Configurable for measurement readings/temperature	
Digital Input (1)	Start/Stop cycle control	
Digital Output (s)	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		
Hot insertion/extraction	Optional using single or double block and bleed valves	
Flange fitting	2" ANSI RF	
Wetted parts	316L SS (other materials available upon request)	
Conduit length	Up to 20m	

* Dependent on sample matrix & instrument configuration. Our experienced technical team will work with customers to confirm customer sample detection range. 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.