

CROSS SMART SENSOR

FA7-OW: PAH or Oil-in-Water

Digital technology for optimized measures



FA-7 is a new generation of immersion sensors for measurement of oil or hydrocarbons in water based on the UV fluorescence principle. When excited by a light beam at a specific wavelength, some compounds re-emit light at a longer wavelength. Since there are very limited number of chemicals such as PAH that have fluorescence signatures, this method gives a highly selective measurement with much higher sensitivity than the conventionally used infrared-based technology. This makes it possible to determine even the slightest traces of PAH's. The FA7 sensor connects to a GDC enabling both stationary use (shafts, flows or piping) and mobile use. An optional clamp-on wiper for automatic cleaning of the optical window minimizes maintenance downtime.

The table below gives the relative intensity of some aromatic hydrocarbons:

Anthracene	42	Benzene	10
Biphenyl	20	Chlorobenzene	7
Fluorobenzene	10	Naphtalene	35
Phenanthrene	25	Phenol	18
Propybenzene	17	Styrene	10
Toluene	17	Xylene	22

FEATURES AND BENEFITS

- In-situ application
- Direct immersion or bypass flow-cell installations
- Complete measurement within 10 seconds
- No reagents
- Compact size
- High sensitivity and selectivity
- Compensating algorithm for light
- Low power consumption
- Low cost and ownership
- Optional Automatic cleaning wiper

TYPICAL APPLICATIONS:

Produced Water

In Oil & Gas industry, Produced Water quality monitoring is required because oil and grease must be measured by on-line sensor before discharge. A reliable and low maintenance measuring system of UV fluorescence achieves this goal.

Condensation or cooling water survey

The concentration of hydrocarbons in condensation or cooling water is a critical parameter on refineries and chemical plants.

Wastewater monitoring

The effluents of refineries and chemical plants have to stay below limits to meet the environmental regulations.

SPECIFICATIONS	
Measuring System	Light Source: Xenon flash lamp + filter(254nm) Detector: Photo diode + filter (360nm)
Principle	Fluorescence
Measuring Range	Oil: 0 to 1.5 ppm, 15 ppm, 150 ppm Typical; Up to 1000 ppm consult factory. PAH: 0 to 50 ppb, 500 ppb, 5000 ppb Typical.
Accuracy	±3%
Respond Time	T90 < 10s
Measuring Interval	5 s
Operate Pressure	3 bar, 1 bar in Flow cell 2 to 4 L/min
Operate Temp.	32 to 104 °F (0 to 40 °C)
Power	12 to 30VDC, Max. 3.5W
Interface	RS485 Modbus RTU
Output	4 to 20 mA
Housing	Material: 316L, titanium is Optional; >IP68 Submersible
Dimension	Dia. 2" (50.8 mm), Length 9" (229 mm)
Weight	4.6 lbs (2.1 kg) with 30" Cable

ORDER CODE

FA7-OW: PAH or Oil-in-Water		
	Measuring Range	
	-1 0 to 1.5 ppm, 15 ppm (OW); 0 to 50 ppb, 500ppb (PAH)	
	-2 0 to 150 ppm (OW); 0 to 5000ppb (PAH)	Other range contact factory
	Cable Length	
	-C10 10' (3 m) cable	
	-C20 20' (6 m) cable	Other length contact factory.
FA7-OW	-1	-C30

TERMINALS

<p>GDC-01/02 Terminal Single or dual-channels</p> 	<p>GDC-04/06/08 Controller Multi-channels up to eight</p> 	<p>GDC-Ex Terminal Single channel Ex-proof</p> 
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