

FP 360 sc OIL-IN-WATER CONTINUOUS ONLINE MONITORING SENSOR

Applications

- Industrial water
- Power
- Wastewater
- Drinking water



Continuous oil-in-water monitoring for the right price.

The FP 360 sc is the only online oil-in-water instrument that delivers the highest sensitivity and selectivity with the lowest total cost of ownership.

The right technology for the right price

Due to its unique combination of submersible probe design and UV fluorescence sensing technology, the FP 360 sc delivers the best technology to detect oil in water and is priced below competitive UV fluorescent instruments.

Minimal maintenance

The FP 360 sc has no tubes, pumps, or valves that can foul or require constant maintenance interventions. Maintenance is limited to occasional wiping of the sensor's measurement window, calibration once every two years, and Xenon lamp replacement every four years.

Reduced laboratory testing

While laboratory testing is the ultimate method of measuring oil in water, it is a long and complex process that requires special equipment and trained lab personnel. The FP 360 sc provides a cost-effective, continuous online monitoring solution to maintain process control and avoid oil contamination with minimal laboratory testing.

High sensitivity and selectivity

The FP 360 sc can detect and measure polycyclic aromatic hydrocarbons (PAHs) from 1.2 ppb to up to 5000 ppb ($\mu\text{g/L}$). This is approximately equivalent to a concentration of mineral oil between 0.1 to 150 ppm (mg/L). Furthermore, the FP 360 sc method of detection makes it impervious to interferences by turbid water or natural organic and biological matter that impact online light scattering, UV absorbance, and VIS fluorescence instruments.

One to eight sensors

The HACH LANGE Digital Controller Family can receive data from up to eight HACH LANGE digital sensors, including oil-in-water, suspended solids, turbidity, pH/ORP, dissolved oxygen, conductivity, ammonium, phosphate, SAC, and nitrate in any combination.

There's no complicated wiring or set up procedures with the family of controllers. Just plug the sensor to any HACH LANGE digital controller and it's ready to use because it's "plug and play."

Technical Data*

Measurement method	UV fluorescence method for polycyclic aromatic hydrocarbons (PAH)	Resolution	0.1 ppb ($\mu\text{g/L}$) (PAH) in the lowest measuring range
Light Source	Miniature xenon flashlamp with interference filter	Reproducibility	2.5 % of measured value at constant temperature (PAH)
Detector	UV photodiode with interference filter; Compensation of daylight and flashlamp intensity fluctuations	Response time	10 s (T90)
Excitation	Wavelength 254 nm	Calibration	Factory calibrated with UV fluorescence standard or process calibration with results of a grab sample analysis.
Wavelength	Measurement: 360 nm	pH value(s)	≥ 4
Measuring range	Low Range: 0 - 50 ppb ($\mu\text{g/L}$) and 0 - 500 ppb ($\mu\text{g/L}$) (PAH)** 0.1 - 1.5 ppm (mg/L) and 0.1 - 15 ppm (mg/L) (oil)** High Range: 0 - 500 ppb ($\mu\text{g/L}$) and 0 - 5,000 ppb ($\mu\text{g/L}$) (PAH)** 0.1 - 15 ppm (mg/L) and 0.1 - 150 ppm (mg/L) (oil)**	Sample temperature	1 - 40 °C
		Pressure range	Max. 30 bar
		Material	Housing: stainless steel 316Ti (1.4571) or titanium
		Dimensions (W x H x D)	68 x 306 mm (D x L; without connector and suspension pin)
		Weight	Stainless steel: 2.8 kg Titanium: 1.8 kg
		Warranty	2 years

*Subject to change without notice.

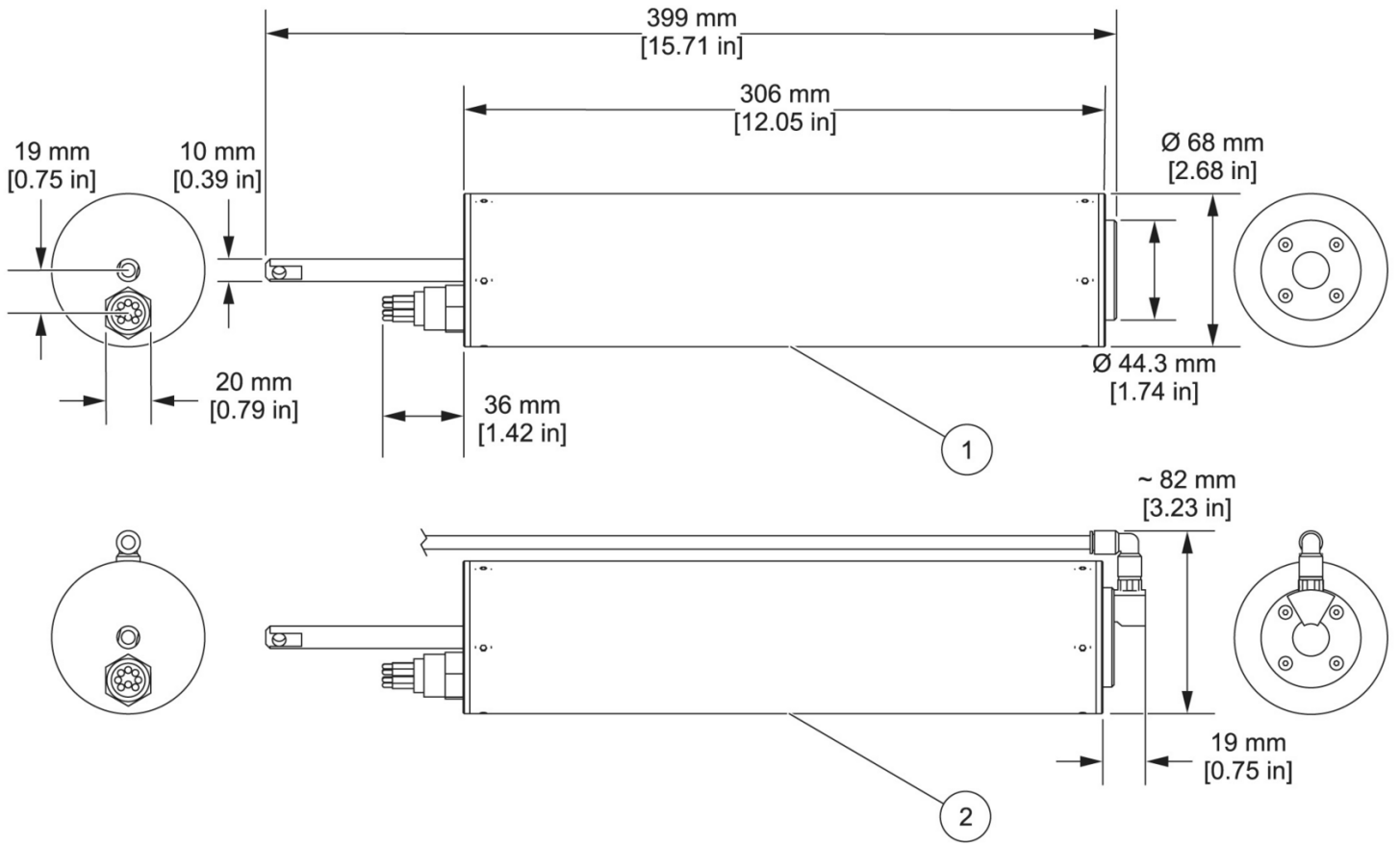
**With calibration standard.

Principle of Operation

The FP 360 sc measures intensity of fluorescence light at a wavelength of 360 nm emitted by polycyclic aromatic hydrocarbons (PAH) after UV irradiation of the sample at 254 nm. Since PAHs are components of most mineral oils, the FP 360 sc can detect the presence of oil contamination in surface, process, or industrial waters. In addition, since the intensity of the emitted light is proportional to the PAHs concentration, the FP 360 sc can be calibrated to measure oil concentration in stable matrices.

Dimensions

Figure 1 shows the sensor without the cleaning unit. Figure 2 shows the sensor with the cleaning unit.



Order Information

Sensors

LXV441.99.11101	FP 360 sc PAH/Oil Fluorescence probe, 0-500 ppb, stainless steel body, 10 m cable, w/o cleaning
LXV441.99.11201	FP 360 sc PAH/Oil Fluorescence probe, 0-500 ppb, stainless steel body, 10 m cable, with cleaning
LXV441.99.11301	FP 360 sc PAH/Oil Fluorescence probe, 0-500 ppb, stainless steel body, 1.5 m cable, w/o cleaning
LXV441.99.12101	FP 360 sc PAH/Oil Fluorescence probe, 0-500 ppb, titanium body, 10 m cable, w/o cleaning
LXV441.99.12201	FP 360 sc PAH/Oil Fluorescence probe, 0-500 ppb, titanium body, 10 m cable, with cleaning
LXV441.99.12301	FP 360 sc PAH/Oil Fluorescence probe, 0-500 ppb, titanium body, 1.5 m cable, w/o cleaning
LXV441.99.21101	FP 360 sc PAH/Oil Fluorescence probe, 0-5000 ppb, stainless steel body, 10 m cable, w/o cleaning
LXV441.99.21201	FP 360 sc PAH/Oil Fluorescence probe, 0-5000 ppb, stainless steel body, 10 m cable, with cleaning
LXV441.99.21301	FP 360 sc PAH/Oil Fluorescence probe, 0-5000 ppb, stainless steel body, 1.5 m cable, w/o cleaning
LXV441.99.22101	FP 360 sc PAH/Oil Fluorescence probe, 0-5000 ppb, titanium body, 10 m cable, w/o cleaning
LXV441.99.22201	FP 360 sc PAH/Oil Fluorescence probe, 0-5000 ppb, titanium body, 10 m cable, with cleaning
LXV441.99.22301	FP 360 sc PAH/Oil Fluorescence probe, 0-5000 ppb, titanium body, 1.5 m cable, w/o cleaning

Accessories

LZX914.99.11110	Stainless steel chain mounting set
LZY669	Flow cell with mounting panel for FP 360 sc

Controllers

SC 200	The SC 200 Universal Controller is the most versatile controller on the market. It allows the use of digital and analogue sensors, either alone or in combination, to provide compatibility with the broadest range of sensors.
SC 1000	Get the same great features as the SC 200 Controller above - "plug and play", all digital operation and communication - but with the SC 1000 Controller, up to eight HACH LANGE sensors can be used with one controller in any combination. The SC 1000 Controller is also expandable and upgradeable to easily adapt to your needs.

Service Packages

TSE-COM-FP360SC	Commissioning for FP 360 sc. Includes first level training.
TSE-BC-FP360SC	Basic maintenance contract for FP 360 sc. Includes one onsite visit and final reporting.
TSE-CC-FP360SC	Comfort maintenance contract for Oil-in-water sensor FP 360 sc. Includes one onsite visit and final reporting. Extended warranty up to 60 months.
TSE-MC-FP360SC	Onsite one-off inspection for Oil-in-water sensor FP 360 sc. Includes one onsite visit on demand and final reporting.