

# 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 ( $\text{mg/L}$ ). 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 Digital Controller Family can receive data from up to eight Hach 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 Hach family of controllers. Just plug the sensor to any Hach digital controller and it's ready to use because it's "plug and play."



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## Technical Data\*

<b>Measurement Method</b>	UV fluorescence method for polycyclic aromatic hydrocarbons (PAH)
<b>Light Source</b>	Miniature xenon flashlamp with interference filter
<b>Detector</b>	UV photodiode with interference filter; Compensation of daylight and flashlamp intensity fluctuations
<b>Excitation Wavelength</b>	Wavelength 254 nm
<b>Range</b>	<p>Low Range:</p> <p>0 - 50 ppb (µg/L) and 0 - 500 ppb (µg/L) (PAH)**</p> <p>0.1 - 1.5 ppm (mg/L) and 0.1 - 15 ppm (mg/L) (oil)**</p> <p>High Range:</p> <p>0 - 500 ppb (µg/L) and 0 - 5,000 ppb (µg/L) (PAH)**</p> <p>0.1 - 15 ppm (mg/L) and 0.1 - 150 ppm (mg/L) (oil)**</p>

<b>Resolution</b>	0.1 ppb (µg/L) (PAH) in the lowest measuring range
<b>Reproducibility</b>	2.5 % of measured value at constant temperature (PAH)
<b>Response Time T90</b>	10 s
<b>Calibration</b>	Factory calibrated with UV fluorescence standard or process calibration with results of a grab sample analysis.
<b>pH Value(s)</b>	≥ 4
<b>Sample Temperature</b>	1 to 40 °C (33.8 to 104 °F)
<b>Pressure Range</b>	Max. 30 bar or 435 psi (measurement probe)
<b>Material</b>	Housing: stainless steel 316Ti (1.4571) or titanium
<b>Dimensions</b>	
<b>Weight</b>	Stainless steel: 6.17 lbs. (2.8 kg) Titanium: 4 lbs (1.8 kg)
<b>Warranty</b>	1 year

\*Subject to change without notice.

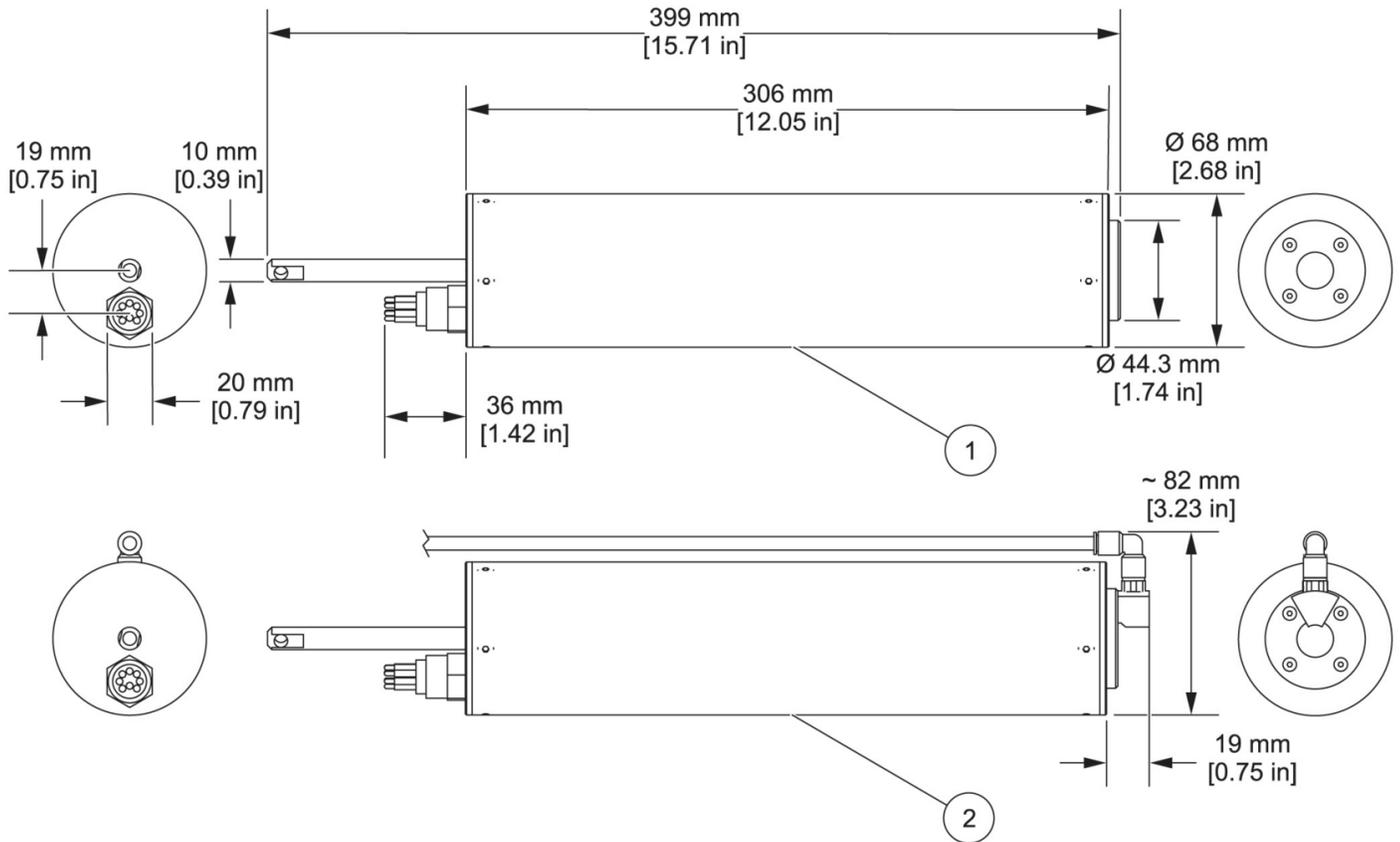
\*\*With calibration standard.

## 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

<b>LXV441.99.11102</b>	FP 360 sc Oil-in-Water Sensor, 500 ppb, stainless steel body, 10 m (32.8 ft) cable, w/o cleaning unit
<b>LXV441.99.11202</b>	FP 360 sc Oil-in-Water Sensor, 500 ppb, stainless steel body, 10 m (32.8 ft) cable, with cleaning unit
<b>LXV441.99.11302</b>	FP 360 sc Oil-in-Water Sensor, 500 ppb, stainless steel body, 1.5 m (5 ft) cable, w/o cleaning unit
<b>LXV441.99.12102</b>	FP 360 sc Oil-in-Water Sensor, 500 ppb, titanium body, 10 m (32.8 ft) cable, w/o cleaning unit
<b>LXV441.99.12202</b>	FP 360 sc Oil-in-Water Sensor, 500 ppb, titanium body, 10 m (32.8 ft) cable, with cleaning unit
<b>LXV441.99.12302</b>	FP 360 sc Oil-in-Water Sensor, 500 ppb, titanium body, 1.5 m (5 ft) cable, w/o cleaning unit
<b>LXV441.99.21102</b>	FP 360 sc Oil-in-Water Sensor, 5,000 ppb, stainless steel body, 10 m (32.8 ft) cable, w/o cleaning unit
<b>LXV441.99.21202</b>	FP 360 sc Oil-in-Water Sensor, 5,000 ppb, stainless steel body, 10 m (32.8 ft) cable, with cleaning unit
<b>LXV441.99.21302</b>	FP 360 sc Oil-in-Water Sensor, 5,000 ppb, stainless steel body, 1.5 m (5 ft) cable, w/o cleaning unit
<b>LXV441.99.22102</b>	FP 360 sc Oil-in-Water Sensor, 5,000 ppb, titanium body, 10 m (32.8 ft) cable, w/o cleaning unit
<b>LXV441.99.22202</b>	FP 360 sc Oil-in-Water Sensor, 5,000 ppb, titanium body, 10 m (32.8 ft) cable, with cleaning unit
<b>LXV441.99.22302</b>	FP 360 sc Oil-in-Water Sensor, 5,000 ppb, titanium body, 1.5 m (5 ft) cable, w/o cleaning unit

### Accessories

<b>LZX914.99.11110</b>	Stainless steel chain mount kit for FP 360 sc
<b>LZY669</b>	FP 360 sc Oil-in-Water flow cell with mounting panel

### Controllers

#### sc200

The sc200 Universal Controller is the most versatile controller on the market. The new sc200 controller is the only controller that allows the use of digital and analog sensors, either alone or in combination, to provide compatibility with the broadest range of sensors. It replaces the Hach sc100 digital and GLI53 analog controllers with advanced features for easier operator use.

#### sc1000

Get the same great features as the sc200 Controller above - "plug and play", all digital operation and communication - but with the Hach sc1000 Controller, up to eight Hach sensors can be used with one controller in any combination. The sc1000 Controller is also expandable and upgradeable to easily adapt to your needs.

### Service Options

<b>WRTUPGFP360SC</b>	FP 360 sc Probe WarrantyPlus Instrument Protection and Service
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