

Fluorescence Oil Contamination Monitor **ATE5110**

Features

- um precision: Detects oil films >1 μm.
- High accuracy.
- 24/7 fluorescence monitoring.
- In-situ remote sensing.
- Pollution-resistant nanocoating.
- Ultra-sensitive sensor.
- High SNR.
- Good linearity.
- 0-30 m monitoring height.
- Customizable distance.
- Oil spectra library.
- IP68 rating.
- Aluminum or stainless steel housing.
- RS485 output.

Application

- Oil & Petrochemical: Extraction, refining, production, storage, transport, pipelines.
- Offshore: Platforms, rigs, ship docks, loading, transfer buoys.
- Water Quality: Drinking water treatment, wastewater treatment, water protection.
- Transport: Ports, docks, shipyards.
- Environmental Monitoring: Stormwater management, public beaches.
- Agriculture: Farm equipment, fuel storage, aquaculture.
- Manufacturing: Steel and aluminum, pulp and paper, cooking oil.
- Power Generation & Distribution: Carbon-based, renewable energy—hydropower

Description

The Fluorescence Oil Contamination Monitor by Optosky leverages state-of-the-art high-frequency modulation laser-induced fluorescence technology for precise water quality assessment. This cutting-edge device is engineered for real-time monitoring of oil spills without the need for water sampling or chemical reagents, ensuring minimal environmental impact. Ideal for various applications including ports, oil extraction platforms, and industrial facilities, it provides continuous, accurate detection of surface oil contamination.

Fluorescence Oil Contamination Monitors are critical in industries focused on environmental protection, including maritime, petrochemical, and manufacturing sectors. These devices use advanced spectral analysis to identify oil spills quickly, reducing false alarms caused by other floating materials. As the industry evolves, the integration of AI and machine learning in these monitors is enhancing predictive capabilities and accuracy.

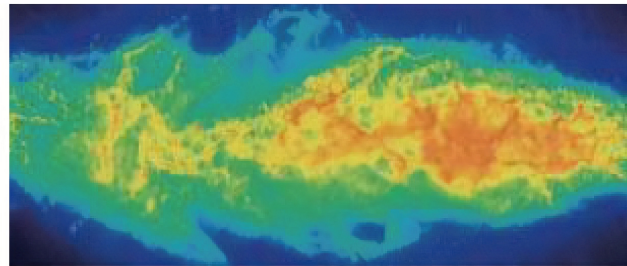
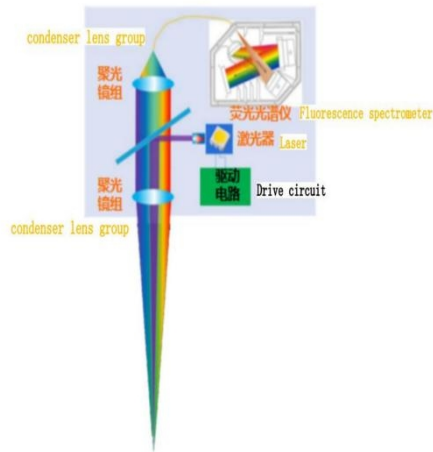
For effective water pollution control, the Fluorescence Oil Contamination Monitor is essential for regulatory compliance and emergency response, offering valuable data for managing oil spill incidents and maintaining high water quality standards.



1	Stainless Steel Handle
2	Monitoring Device
3	Optional Clean Motor

1. Working principle

The ATE5110 Fluorescence Spectroscopy Oil Contamination Monitor utilizes cutting-edge high-frequency modulation laser-induced fluorescence technology. It irradiates water surfaces with UV light at specific wavelengths, exciting polycyclic aromatic hydrocarbons in oil. These hydrocarbons emit fluorescence proportional to the excitation light intensity and oil concentration, allowing for effective detection of surface oil contamination. This method is particularly effective for mineral oils and heavier components, such as petroleum.



2. Parameter

Specification	Details
Measurement Principle	Laser-Induced Fluorescence (LIF)
Light Source	UV Laser
Light Source Lifetime	3 years (standard operation mode)
Detection Interval	1–600 minutes (configurable)

Detectable Oils	Petroleum, engine oil, diesel, gasoline, kerosene, etc.
Sensitivity	Sub-micron precision
Operation Time	All-weather detection
Detection Distance	0-30 meters (customizable)
Power Consumption	≤2W
Power Supply Voltage	DC 12-24V
Communication	RS485
Protection Rating	IP68
Housing Material	Aluminum alloy or stainless steel (customizable)
Dimensions	Φ80mm × 450mm (provisional)
Weight	Aluminum alloy (2kg) or stainless steel (5kg)
Operating Temperature	-20°C to +60°C
Storage Temperature	-20°C to +60°C
Flow Speed Requirement	0-5 m/s

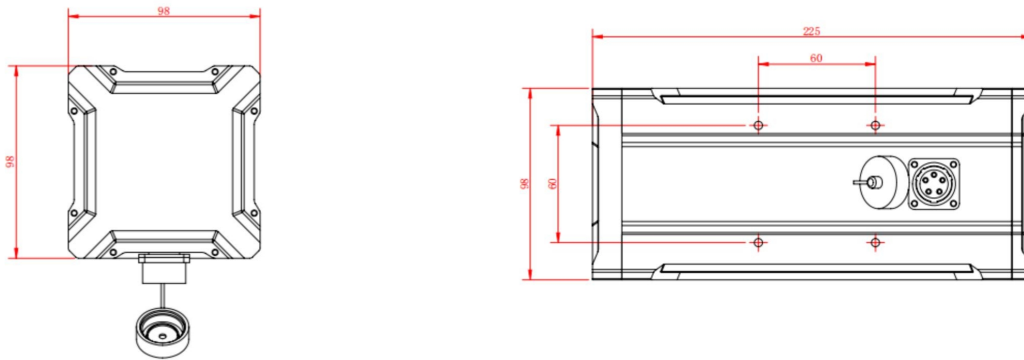
3. Order Guide

Model	Features
ATE5110	Aluminum alloy, lightweight, suitable for rivers, lakes, and similar settings
ATE5110-ST	Stainless steel, ideal for complex environments like oceans and wastewater plants

4. Interface Definition

Pin	Color	Description	Remarks
1	Red	VCC	12-24VDC Power Supply
2	Yellow-Green	PE	Ground
3	Black	GND	Power Ground
4	Brown	RS485-A	RS485 Communication A
5	Gray	RS485-B	RS485 Communication B

5. Installation Dimensions



6. Configuration List

SN.	Items	Quantity	Optional/Standard Configuration
1	ATE5110/ATE5110-ST Monitor	1 piece	Standard Configuration
2	Mounting Bracket	1 piece	Standard Configuration
3	User Manual	1 set	Standard Configuration
4	Certificate of Conformity	1 piece	Standard Configuration
5	Warranty Card	1 piece	Standard Configuration
6	Communication Cable	15 meters	Standard Configuration