

MODEL C6100IW

ONLINE OIL-IN-WATER ANALYZER

Continuous UV Fluorescence Monitoring
for Industrial Water Applications

The Blue Dragon Model C6100IW provides continuous ppm-level monitoring of oil contamination in produced water, refinery wastewater, petrochemical wastewater, industrial wastewater and environmental monitoring applications. The complete system combines a self-wiping UV fluorescence sensor with an intelligent controller for real-time display, alarm functions, 4–20 mA output and RS485 Modbus RTU communication.





UV Fluorescence
Detection

365 nm Excitation
465 nm Emission



Self-Wiping Optical
Sensor

Automatic cleaning cycle
Adjustable every
10–60 minutes



Industrial Plant
Integration

4–20 mA,RS485
Modbus RTU
Two relay outputs

WHY CHOOSE THE MODEL C6100IW?



Continuous
Online Monitoring

Real-time oil
concentration trends
and contamination
alerts



0-150 ppm Range

Designed for ppm-level
monitoring of
industrial water
streams



Fast Response

T90 response time
<50 seconds



Self-Wiping Sensor

Reduces optical
fouling and routine
manual cleaning



Flexible Installation

Suitable for
immersion or
optional flow-through
installation



Easy Plant
Integration

Local display, analog
output, alarms and
digital communications

INDUSTRIES & APPLICATIONS



Oil & Gas

- Produced Water
- Separator performance
- Reinjection or discharge monitoring



Refineries

- Oily wastewater
- API separator outlets
- Treatment process monitoring



Petrochemicals

- Process effluent
- Hydrocarbon contamination
- Wastewater treatment



Industrial Wastewater

- Oil contamination alerts
- Treatment performance
- Final discharge monitoring



Power & Utilities

- Cooling Water
- Oily Drains
- Plant Wastewater



Marine & Offshore

- Produced water
- Process-water monitoring
- Contamination alerts



Water Treatment

- Influent and effluent
- Pretreatment monitoring
- Process optimization



Environmental Monitoring

- Industrial outfalls
- Surface-water trends
- Contamination events

HOW IT WORKS

1



Sample Exposure

Sensor installed directly by immersion or inside an overflow flow-through tank

2



UV Excitation

The optical system illuminates the water sample at 365 nm

3



Fluorescence Emission

fluorescent oil molecules emit a response at approximately 465 nm.

4



Optical Detection

The detector measures fluorescence intensity from the oil-containing sample.

5



Site Calibration

Representative process samples align the reading with the site's actual oil and water matrix.

6



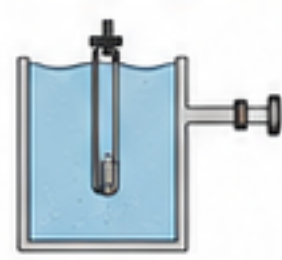
Real-Time Output

Oil concentration is displayed in ppm and transmitted through 4–20 mA, Modbus and relay outputs.

TECHNICAL SPECIFICATIONS

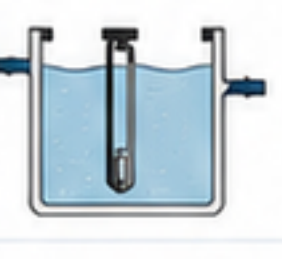
Analyzer type	Online oil-in-water analyzer
Measurement principle	Ultraviolet fluorescence
Measurement range	0-150 ppm
Excitation wavelength	365 nm
Emission wavelength	465 nm
Accuracy	±5% of reading in quinine sulfate reference solution
Resolution	0.01 ppm
Linearity	R2 > 0.999 under reference conditions
Response time	T90 <50 seconds
Calibration	Zero-point, one-point or two-point
Sensor body	316L stainless steel
High-salinity option	Custom titanium-alloy housing
Sensor protection	IP68
Controller protection	ABS enclosure, IP55
Sensor temperature	0-50 °C
Controller temperature	0-55 °C
Maximum immersion depth	30 m
Sensor pressure rating	Up to 4 bar
Standard cable	10 m; customizable
Analog output	4-20 mA
Digital communication	RS485, Modbus RTU
Relay outputs	Two
Controller power	110-220 VAC
Controller dimensions	144 x 144 x 115 mm
Sensor dimensions	Ø45 x 190.8 mm
Mounting	Wall/panel controller; immersion or flow-through sensor

INSTALLATION OPTIONS



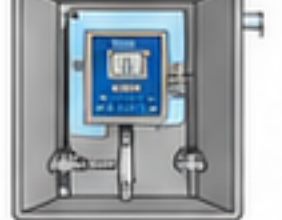
Immersion Installation

Direct sensor installation into a tank, channels or water body



Flow-Through Tank

Overflow chamber for controlled bypass-sample measurement



Instrument Box

Controller and flow-through components installed in a protected industrial enclosure

APPLICATION GUIDANCE



Site calibration recommended

Calibrate with a representative process sample for the best site-specific correlation



Turbidity consideration

Very high turbidity, approximately above 500 NTU, is not recommended



Avoid Optical Interference

Bubbles, foam, unstable oil-water mixtures, heavy fouling and contaminated optical surfaces may influence readings



Safe-area instrument

The standard system is non-explosion-proof and intended for installation in a safe area

Factory test report supplied. The C6100IW is an online monitoring and process-control instrument and is not a certified laboratory reference method.



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