



EIDO

The EIDO is a low cost, real-time sensing platform, specifically designed for the measurement of organic water quality parameters. The EIDO is available in two sizes, depending on the number of sensors required.

Following the success of the award-winning Proteus, the EIDO has been specifically designed as a low-cost option for the measurement of organic parameters. The EIDO has been designed for its ease of use, reliable data and economical operation even in the toughest applications. Available in two sizes, the EIDO 30 provides turbidity/TSS/temperature and two fluorometers whilst the 35 provides turbidity/TSS/temperature and up to four fluorometers.

Applications

BOD/COD/TOC Loading to Wastewater Treatment Works
 CSO Monitoring
 Coastal Water Monitoring
 Point Source Pollution Monitoring
 Total Coliform Monitoring (E. coli, total or faecal)
 Efficiencies of Wastewater Treatment Works
 Diffuse Pollution Monitoring
 Groundwater Water Quality Monitoring
 Survey tool combined with Bluetooth®
 SCADA, RTU and logger integration via RS232, SDI-12,
 Modbus® RTU

Parameters include:

(BOD, COD, TOC, DOC	Turbidity/TSS
Coliforms (faecal,	Blue Green Algae
E. coli, total)	(Freshwater &
Ammonium	Marine)
Nitrate	Chlorophyll A & B
Total Phosphate	Crude Oils
Ortho-Phosphate)*	Refined Oils
Tryptophan	Rhodamine
Refined Oils	Fluorescein
Optical Brighteners	
* after local calibration	



General Specifications	EIDO 30	EIDO 35
Diameter	76 mm (3.0")	89 mm (3.5")
Length	483 mm (19")	483 mm (19")
Material	Standard CPVC Model: CPVC body and sensor guard	
Typical Weight - with IBP	Standard CPVC Model: 2.27 kg (5.00 lbs)	Standard CPVC Model: 2.85 kg (6.28 lbs)
Number of sensors	Up to 4 (2 fluorometers)	Up to 6 (4 fluorometers)

General Specifications

External Power	5-15 vdc
Operating Temperature	0 to 50°C, non-freezing
Calibrated Range	0 to 30°C, non-freezing
Depth Rating	200 m
Communications	USB, RS232, Modbus® RS485, SDI-12 as standard. Bluetooth® optional.
Sample Rate	1 Hz
Data Memory	>1,000,000 logged readings
Logging Rates	1 second to 1 day
Warranty	2 years (All sensors)



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Sensor Specifications

Parameter		Range	Resolution	Accuracy	Comments
BOD	BOD mg/l	0 - 2000 mg/l	0.01 mg/l	±5 % of reading*	Local site calibration can improve accuracy.
Coliform Counts	CFU/100 ml	>1 count/100ml	1 count/100ml	±10 Coliforms*	Local site calibration can improve accuracy. Can be used for faecal coliforms, E. coli or total coliforms.
COD	COD mg/l	0 - 4000 mg/l	0.01 mg/l	±5 % of reading*	Local site calibration can improve accuracy.
DOC	DOC mg/l	0 - 3000 mg/l	0.01 mg/l	±5 % of reading*	Local site calibration can improve accuracy.
TOC	TOC mg/l	0 - 3000 mg/l	0.01 mg/l	±5 % of reading*	Local site calibration can improve accuracy.
Temperature	Water Temperature	-5 to 50°C	0.01	±0.1	Never needs calibration.
Turbidity	Total Suspended Solids (TSS)	0 to 500 mg/l	4 digits with maximum of two decimals	±2 % of reading or 0.2	Calculated using the correlation between turbidity and a sediment standard or sample. Local calibration can be applied.
	Turbidity	0 - 40 NTU	4 digits with maximum of two decimals	±2 % of reading or 0.2	Compensated for temperature; filtered for non-turbidity spikes; includes wiper to clean the optics.
		40 - 400 NTU		±2 % of reading or 0.2	
400 - 5000 NTU	±2 % of range				
Pressure	Depth	0 to 25 m	0.01	±0.05 m	Conductivity sensor fitted for Salinity.
		0 to 200 m		±0.4 m	
	Barometric pressure	400 to 900 mmHg	0.1 mmHg	±1.5 mmHg	Included with (non-vented) depth sensor.
Ammonium/Ammonia**	NH4/NH3	0-200 mg/l	0.01 mg/l	±0.1 mg/l 0 - 10 mg/l* ±0.5 mg/l 10 - 200 mg/l*	Environmental/river applications typically 0 - 2 mg/l Wastewater applications typically 0 - 50 mg/l
Ortho-Phosphate**	PO4	0 - 100 mg/l	0.01 mg/l	±0.1 mg/l 0 - 2 mg/l* ±0.5 mg/l 2 - 100 mg/l*	Environmental/river applications typically 0 - 1 mg/l Wastewater applications typically 0 - 50 mg/l
Fluorometers	CDOM/fDOM	0 to 2500 ppb	6 digits with maximum of two decimals	Linearity of 0.99R ² (temperature compensated 0-50°C) Accuracy ±0.5 ppb	Latest <i>proFluor</i> technology rated to 100m depth
	Chlorophyll a - blue	0 to 1000 ppb			
	Chlorophyll b - red	0 to 1000 ppb			
	Crude oil	0 to 1500 ppb			
	Fluorescein dye	0 to 1000 ppb			
	Optical brighteners	0 to 2500 ppb			
	Phycocyanin (freshwater BGA)	0 to 1000 ppb			
	Phycocerythrin (marine BGA)	0 to 1000 ppb			
	Refined oil	0 to 10,000 ppb			
	Rhodamine dye	0 to 1000 ppb			
Tryptophan	0 to 2500 ppb				

*after local calibration

** requires Proteus Telemetry System