



Turbidity Sensor 4112

is an 0-5V analog sensor designed for SeaGuard applications. The sensor fits directly onto the SeaGuard Top end Plate using one of the four analog channels.

Features:

- Optically confined sensing volume
- Insensitive to ambient light when under water
- Linear output over more than 5 decades
- 4 selectable ranges
- Optic feedback compensated for temperature drift and aging of optical components
- Very low offset voltage does not require adjustment
- Very low power requirements

Application Areas:

- Pollution monitoring
- Water and waste water quality
- Sediment transport
- Ocean profiling
- River and stream monitoring

The Turbidity Sensor 4112 is based on the Seapoint Turbidity Meter. The sensor detects light scattered by particles suspended in water.

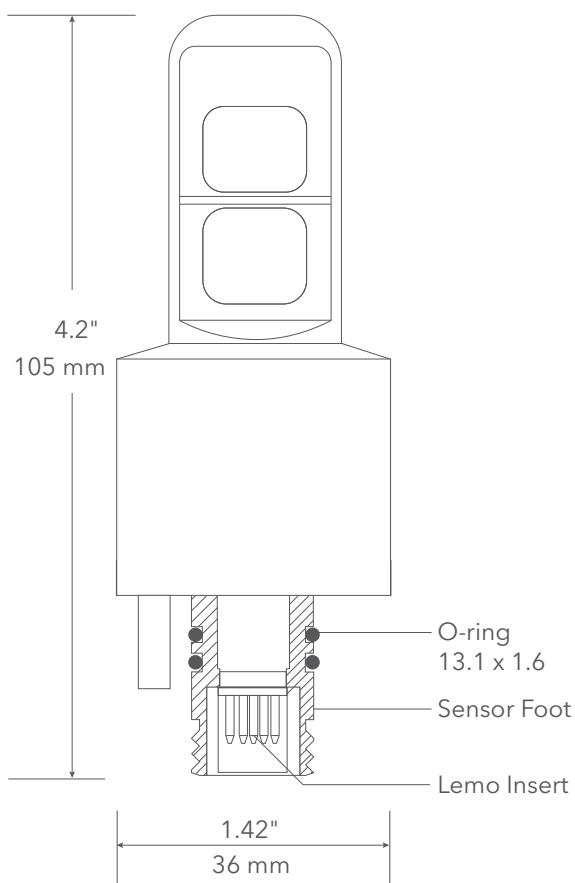
This measurement is known to have a good correlation to the amount of suspended matter in water and can be used to monitor e.g. sediment, algae or particle pollution. The sensor generates an output voltage proportional to the turbidity or suspended solids.

The low power consumption makes it ideal for applications where battery drain is a concern.

The sensor offset voltage is within 1mV of zero and requires no adjustment across gains.

The unique optical design confines the sensing volume to within 5cm of the sensor allowing near-bottom measurements and minimizing errant reflections in restricted spaces.

Turbidity Sensor 4112 can be mounted directly on the top-end plate of the Aanderaa SeaGuard. The sensor output is analog, and output from SeaGuard is in engineering units (FTU).



PIN CONFIGURATION

Receptacle, exterior view; pin = • bushing = °	
NC	4 NC
Gain control B	3
NC	6
Power Gnd	9
NC	10
	Gain control A
	7
Power Gnd	2
NC	8
	Signal Output
	Signal Gnd

Operating Range:

Model:	Range: (FTU)	Sensitivity: (mV/FTU)	Gain:
4112	0 - 25	200	100x
4112A	0 - 125	40	20x
4112B	0 - 500	10	5x
4112C	0 - 2500*	2	1x

(* the sensor output is non-linear above 750FTU)

Operating Temperature: 0°C to 65°C (32°F to 149°F)

Output Signal: 0-5.0 Vdc

Output Time Constant: 0.1 sec

Power Requirements: 7-20Vdc

Average: 3.5mA

Peak: 6mA

RMS Noise: < 1mV

Power-up Transient Period: < 1 sec

Light Source Wave length: 880 nm

Sensing Distance: < 5cm (approx.) from windows

Linearity¹⁾: < 2 % deviation 0-750 FTU

Temperature Coefficients: < 0.05% per degree Celcius

Depth Capability: 2000m (6561 ft)

Weight (in air): 86g (3.0 oz)

Materials: ABS plastic, Epoxy, Stainless Steel 316

Electrical Connection: 10-pin receptacle mating plug

¹⁾The sensor is delivered adjusted for linearity in the range 0-750 FTU. To obtain an absolute calibration, referred to a laboratory reference instrument, please order calibration for the selected range.

Specifications subject to change without prior notice.



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