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Let's Solve Water

Turbidity Sensor 4112

The 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*
- *Maximum depth range 6000 meter*

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.

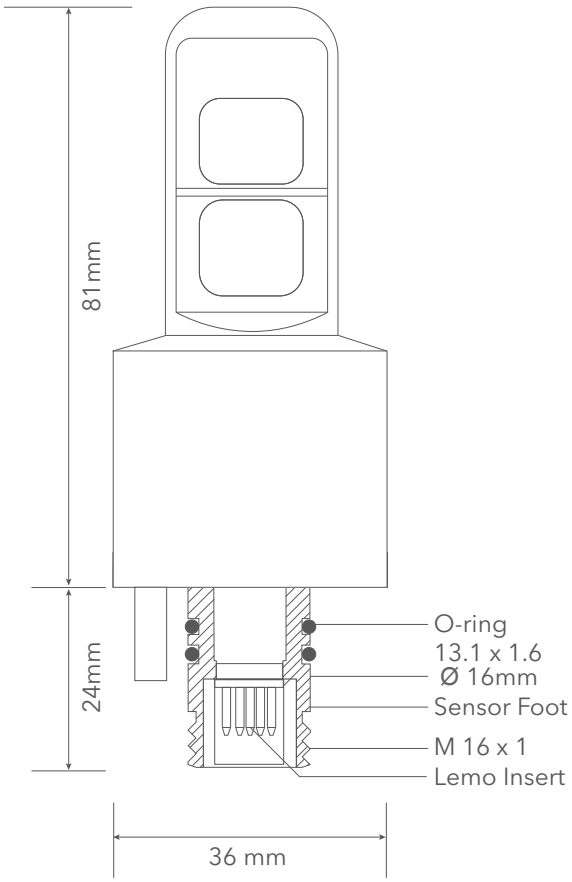
This measurement is known to have a good correlation to the amount of suspended matter in water and can be used to monitor e.g. sediment, algae or particle pollution. The sensor generates an output voltage proportional to the turbidity or suspended solids.

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, or on cable connected to SeaGuard or SmartGuard. The sensor output is analog, and output from SeaGuard is in engineering units (FTU).

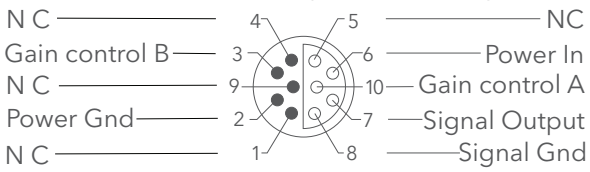
AANDERAA
a xylem brand

Specifications



PIN CONFIGURATION

Receptacle, exterior view; pin = • bushing = ◦



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
Current drain:	
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:	
Shallowater (SW):	0-300m (0-984.3ft)
Intermediate Water (IW):	0-3000m (0-9843 ft)
Deep Water (DW):	0-6000m (0-19690ft)
Weight (in air):	86g (3.0 oz)
Materials:	ABS plastic, Titanium
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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Aanderaa Data Instruments AS
Sanddalsringen 5b
P.O. Box 103 Midtun
5843 Bergen, Norway
Tel +47 55 60 48 00
Fax +47 55 60 48 01

 www.aanderaa.com