

Turbidity/Temperature Sensor 3712

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TURBIDITY/TEMPERATURE SENSOR 3712

A rugged sensor for measuring the turbidity of the water based on scattered infra-red light and temperature by means of a thermistor.

Features:

- 2000 meter depth capacity
- Optically confined sensing volume
- Insensitive to ambient light
- 3 standard ranges available.
- Output: Turbidity and Temperature
- Absolute calibration referred to laboratory meter

Application Areas:

- Pollution monitoring.
- Water and wastewater quality.
- Sediment transport
- Ocean profiling

The Turbidity Sensor 3712 measures scattered light. This measurement is known to have a good correlation to the amount of suspended matter in water and can be used to monitor sediment, algae, or particle pollution. It is designed for use together with the Aanderaa Dataloggers or Display Units.

The sensor head is cylindrically shaped, molded in Durotong and installed on top of an adapter. The sensor is furnished with a 10-pin receptacle for connection to the sensor cable. Two light emitting diodes and one photo diode are pointing towards a common center at an angle of 15°. The photodiode is furnished with a daylight filter. The electronic circuitry is molded in the sensor housing.

When a measurement is taken the IR light emitting diode is switched on for half a second and sends a light beam into the water. If the

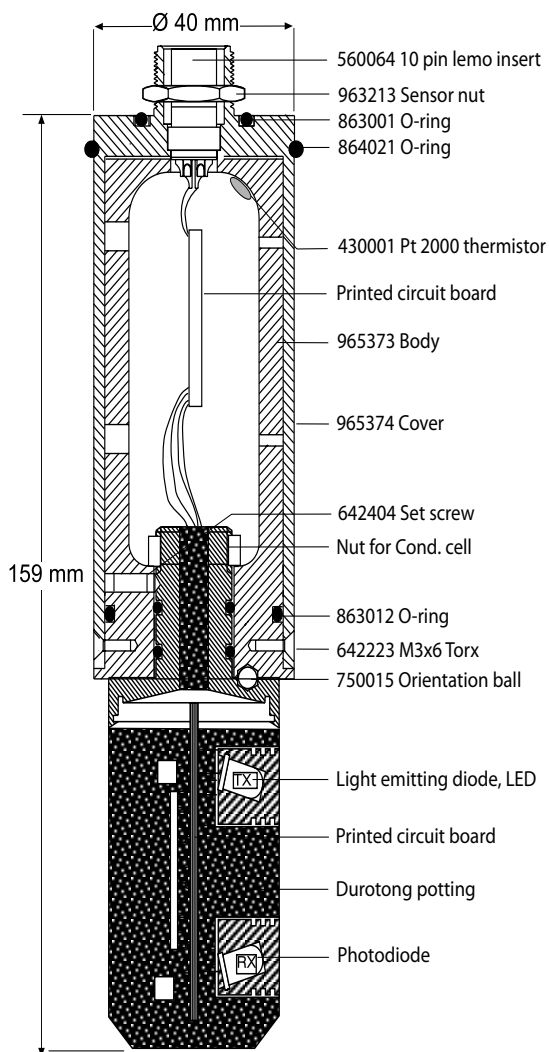
surrounding water is clean and clear the photodiode will not detect this light. On the other hand, if the water is contaminated, scattered light from particles in the water will be sensed by the photodiode and a photocurrent will flow in the diode. This current gives a signal that signifies the amount of light that has been scattered. The signal is independent of the ambient light intensity.

The output is in the standard Aanderaa SR-10 format. The adapter also has a temperature probe measuring the exact water temperature and the output is in the standard Aanderaa VR22 format.

The sensor is designed to avoid marine fouling. In any case, it is important to keep the plastic surfaces, covering the IR-LED and the photodiode, clean to ensure accurate measurements. When exposed to air, the sensor should read 0.1 NTU.

Specifications

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TURBIDITY: Output 1
Range: 3712: 0 - 20 NTU
 3712A.. 0 - 100 NTU
 3712B:. 0 - 500 NTU
 3712S:.....NTU

(NTU=Nephelometric Turbidity Unit)

Accuracy: 2% of full scale.
Resolution: 0.1 % of full scale
Wavelength: 880nm
Angle of measured diffused radiation: 30°
Output type: SR10

TEMPERATURE: Output 2
Range: -7.5 to 41°C
Accuracy: ±0.1°C
Resolution: 0.05°C
Output type: VR22
Time constant(63%): 30 seconds

Depth capability: 2000 meters
Current consumption: 150µA average when read every 10 minutes

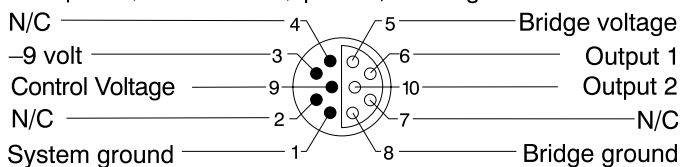
Weight: 919g (in air). 411g (in water)
Packing: Cardboard box
Gross weight: 978 grams
Materials: Durotong, Acrylic, Stainless steel 316L

Electrical connection: 10-pin plug

Specifications subject to change without prior notice.

PIN CONFIGURATION

Receptacle, exterior view; pin = ●; bushing = ○



N/C = Not Connected

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Representative's Stamp

