Turbidity Sensor 4112



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:

- 6000m Depth Capability.
- Optically Confined Sensing Volume.
- · Insensitive to Ambient Light when under water
- Linear Output over more than 5 Decades.
- 4 Range/Sensitivity Options.
- Optic Feedback compensated for Temperature Coefficients and aging of Optical Components .
- Very Low Offset Voltage does not require adjustment.
- Very Low Power Requirements.
- Rugged, Corrosion-free materials.

Application Areas:

- Pollution Monitoring.
- Water and Wastewater 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 generats 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 AADI SEAGUARD[®] Platform; the sensor output is analog, and output from SEAGUARD[®] Platform is in engineering units (FTU).



Specifications



PIN CONFIGURATION

Receptacle, exterior v	iew;	pin = •	bushing = °
N C	4~	5	———— R F U
RFU	3-	6	Power In
N C 9	9-(∎●	(0) 10	N C
Power Gnd ———	2-2-2	QX-7	— Signal Output
N C	1-/ -	-8	——— Signal Gnd

N C: not connected.

R F U: reserved future use.

Operating Range:

Model:	Range:	Sensitivity:	Gain:		
	(FTU)	(mV/FTU)			
4112	0 - 25	200	100x		
4112A	0 - 125	40	20x		
4112B	0 - 500	10	5x		
4112C	Special*	•			
(* the sensor outp	out is non-	linear above 750FT	U)		
Operating Temp	erature:	0°C to 65°C (32°	F to 149°F)		
Output Signal:		0-5.0 VDC			
Output Time Constant:		0.1 sec			
Power Requirements:		7-20 VDC			
Average:		3.5 mA			
Peak:		6 mA			
RMS Noise:		< 1 mV			
Power-up Transie	nt Period	$1 \le 1 \sec \theta$			
Light Source Wavelength: 880 nm					
Sensing Distance	e:	< 5 cm (approx.) from windows			
Linearity:		< 2 % deviation 0-750 FTU			
Temperature Coefficients: < 0.05% per degree Celcius					
Depth Capabilit	y:	6000 m (19.685 ft)			
Weight (in air):		86 g (3.0 oz)			
Materials:		ABS plastic, Epoxy, Titanium			
Electrical Conne plug	ection:	10-pin receptacle	e mating		

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