Suitable for monitoring water quality – food processing – waste treatment – dredging operations

Datasheet

Analite NEP-9500-PLUS
Analogue output turbidity sensor

The Analite NEP-9500 series of analogue output turbidity probes are designed for monitoring and process applications where turbidity levels of up to 3,000NTU may be encountered. Standard ranges are 100NTU, 400NTU, 1,000NTU, and 3,000NTU and custom ranges are available. Digital outputs (SDI-12 and/or RS-232) are also available in other versions of Analite turbidity probes.

The Analite NEP-9500 probes use 90° optics and employs infrared light in accordance with ISO 7027. All probes use a unique modulation technique that ensures almost total rejection of ambient light conditions as well as a unique microprocessor that controls differential sample and hold the circuit for enhanced performance, particularly at low turbidity levels.

The standard Analite NEP-9500 series of probes, with its Acetal housing, may be submerged to a depth of 50m (approx. 150 feet). An optional stainless steel housing is available for applications where a greater depth rating is required but not recommended for deployment in salty or acidic water where crevice corrosion may occur. Its depth rating is 100m.

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Field, process & lab application

Specifically, the Analite NEP-9500 non-wiping probes are designed for applications where bio-fouling will not build up to obscure the optics such as in short monitoring deployment or placement in fast and cold running water. The Analite NEP-9500 probes however, with their integral wiper assembly, are designed for operation where bio-fouling or sedimentation build up is likely.

Applications

- Monitoring of streams and rivers
- Monitoring of water storage bodies including stratification studies
- Intermediate and final effluent treatment monitoring
- Hydrological run off studies
- Ground and bore water analysis
- Drinking water filtration efficiency
- Industrial process monitoring
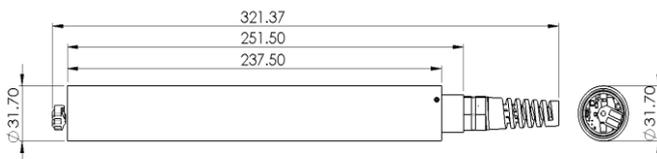- Sludge and dredge monitoring

Turbidity specifications

Technique	90° modulated infra-red (ISO 7027)		
Ranges	100, 400, 1,000NTU and 3,000NTU		
Resolution	Range	Resolution	Designation
	100NTU	±0.2NTU	NEP9x01
	400NTU	±1.0NTU	NEP9x04
	1,000NTU	±3.0NTU	NEP9x10
	3,000NTU	±10NTU	NEP9x30
Repeatability	±1% at 25°C for 100NTU and 400NTU ±2% at 25°C for 1,000NTU		
Linearity	Better than 1% for 100NTU and 400NTU Better than 5% for 1,000NTU and better than 7% for 3,000NTU		
Temperature	Better than ±0.05%/°C		
Outputs	±2.5V over Range 4-20mA and 0 to +2.5V ranges also available to order		
Zero offset	Less than ±3mV (0 to 40°C, ±2.5V output)		
Calibration	Factory calibrated using non-toxic AEPA polymer solutions		
Power	9.6-28VDC, 15mA on 40mA when wiping for NEP-9500 models only		
Settling time	<5s after application of power to 99%		
Wiping	For NEP-9500 models only. Initiated by momentarily (>50ms and <500ms) bringing the wiper actuation conductor to the 0V conductor. By permanently terminating the wiper actuation conductor to 0V will initiate a wipe every 2 hours on power-up. During a wipe, the output remains within ±1% full scale of the turbidity value just prior to the wipe.		
Wipe time	8s nominal		

Mechanics

Weight	180g probe only, 100gms connector Add 70g per meter of cable Add 200g for optional stainless steel casing
Cable	5 core + shield, 6mm nominal dia. PUR sheath Conductor resistance 45 ohms per km
Cable length	Cable length to be specified at time of order Cable cost is additional (NEP-CBL)
Depth Rating	50m (150ft) 100m (330ft) for optional stainless steel casing
Operating temperature	-10°C to 40°C
Storage temperature	-20°C to 50°C

Accessories

NEP-WIPER-KIT	Wiper replacement kit comprising of 4 silicon wipers and a hex fastening key.
NEP-SHROUD-D	Protective shroud to suit the NEP-9500 models
NEP-CBL	Probe cable in meters
OPTIONS	Stainless steel (316) casing Add suffix S to part number For environments that require greater depth rating. Depth rating increased to 100m and casing diameter 32mm.

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Originating from the Netherlands, Observator has grown into an internationally oriented company with a worldwide distribution network and offices in Australia, Germany, the Netherlands, Singapore and the United Kingdom.

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