ANALITE NEP-9500 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 RS232 as well as ModBUS) 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 ISO7027. All probes use a unique modulation technique that ensures almost total rejection of ambient light conditions as well as a unique microprocessor controlled differential sample and hold 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 50 meters (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 100 meters.

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 buildup is likely.

- 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

Observator Instruments, 8-10 Keith Campbell Court, PO Box 9039, Scoresby, VIC 3179 AUSTRALIA
Tel: +61 3 8706 5000 - Email: info.au@observator.com - Web: www.observator.com

TURBIDITY SPECIFICATIONS

Technique 90° modulated infra-red (ISO7027)

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)

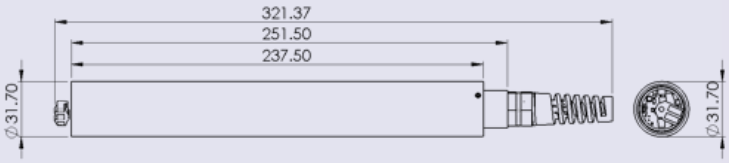
Calibration Factory calibrated using non-toxic AEPA polymer solutions

Power 9.6-28V DC, 15mA on.
40mA when wiping for NEP-9500 models only

Settling Time <5 second after application of power to 99%

Wiping For NEP-9500 models only.
Initiated by momentarily (>50msecs and <500msecs) 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 8 seconds nominal.



MECHANICALS

Weight. NEP-9500: 180gms – probe only, 100gms connector plus 70 gms per meter of cable.

Add 200 grams for optional stainless steel casing.

Cable 5 core + shield, 6mm nominal dia. PUR sheath.
Conductor resistance 45 ohms per km. Weight - 70 grams per meter.

Cable Length Cable length to be specified at time of order. Cable cost is additional (Part NEP-CBL).

Depth Rating 50m (150ft).
100m (330ft) for optional stainless steel casing.

Operating Temp. -10°C to 40°C.

Storage Temp. -20°C to 50°C.

ACCESSORIES

NEP-WIPE Wiper replacement kit comprising of 4 silicon wipers and a hex fastening key. For use on the NEP-9500 models as well as NEP-395 and NEP-495 probes.

NEP-19SHRD Protective stainless steel 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 100 meters and casing diameter 32mm.

Observator Instruments, 8-10 Keith Campbell Court, PO Box 9039, Scoresby, VIC 3179 AUSTRALIA
Tel: +61 3 8706 5000 - Email: info.au@observator.com - Web: www.observator.com