



ANALITE NEP9000 SERIES TURBIDITY PROBES for Field Deployment Applications



Model NEP9501GPI shown

***With automatic wipe feature and output hold during wipe.
Optional stainless steel housing available for high pressure environments.
Microprocessor controlled.***

The ANALITE NEP9000 and NEP9500 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 and 1,000NTU, but custom ranges up to 3,000NTU are available. Digital outputs (SDI-12 and/or RS232) are available from our range of NEP390 series turbidity probes.

Specifically the ANALITE NEP9000 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 NEP9500 probes however, with their integral wiper assembly, are designed for operation where bio-fouling or sedimentation buildup is likely. The standard ANALITE NEP9000 and NEP9500 series of probes with its acetal housing may be submerged to a depth of 50 meters (165 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 (330 feet).

The ANALITE NEP9000 and NEP9500 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.

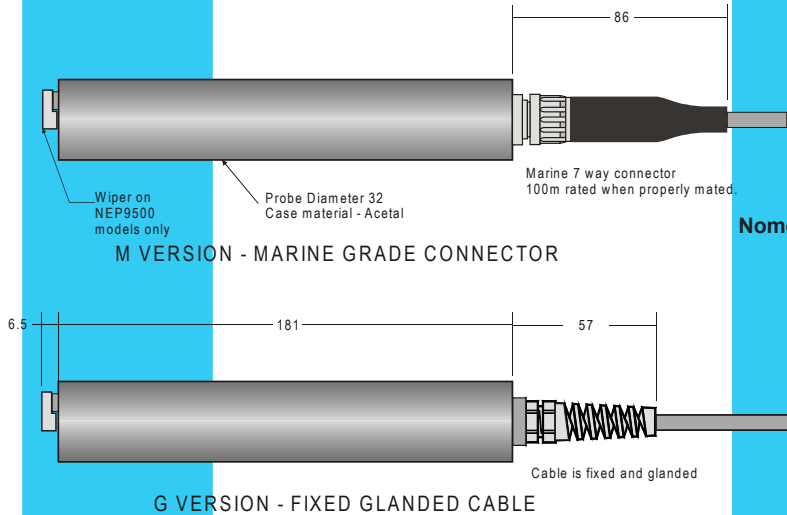
The applications suited to the ANALITE NEP9000 and NEP9500 probes are so extensive and too numerous to elaborate on but generally they include:

- 1) Monitoring of streams and rivers.
- 2) Monitoring of water storage bodies including stratification studies.
- 3) Intermediate and final effluent treatment monitoring.
- 4) Hydrological run off studies.
- 5) Ground and bore water analysis.
- 6) Drinking and recycled water filtration efficiency.
- 7) Industrial process monitoring.
- 8) Sludge and dredge monitoring.

Which model (and option) is best used is dependent on the application, the measuring environment, the logging equipment and the monitoring period (deployment times) required.

Specifications:

| | | | |
|--------------------------|---|-------------------|--------------------|
| Technique | 90° modulated infra-red (ISO7027). | | |
| Ranges | 100, 400 and 1,000NTU – range selected at time of order. Other range values available at additional cost - up to 3,000NTU. | | |
| Resolution | Range | Resolution | Designation |
| | 100NTU | ±0.2NTU | NEP9x01 |
| | 400NTU | ±1.0NTU | NEP9x04 |
| | 1,000NTU | ±3.0NTU | NEP9x10 |
| | where x = 0 (no wiping) or 5 (wiping). | | |
| 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. | | |
| Temp. Coefficient | Better than ±0.05%/°C. | | |
| Outputs | ±2.5V over range. 4 - 20mA, 0 - +2.5V and 0 - +1V 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 NEP9500 models only (at 30m submersion). | | |
| Settling Time | < 5 second after application of power to 99%. | | |
| Wiping | For NEP9500 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 and 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. | | |
| Probe Dimensions | See drawing below. | | |



All dimensions in mm.
G version is standard configuration.
M version at additional cost.

Weight

NEP9000 models - 120gms – probe only, 100gms marine connector plus 70gms per meter of cable.
NEP9500 models - 180gms – probe only, 100gms marine connector plus 70 gms per meter of cable.

Add 200 grams for optional stainless steel casing.

Construction

Acetal casing (suffix P added to part number) with composite optic face and cable/connector end piece. Cable is glanded directly from the rear of the probe via an integrated plastic strain relief (add suffix G to part number) or cable connection via 7-way waterproof connector (add suffix M to part number)

A 316 stainless steel casing option (add suffix S to part number) is available at addition cost to give a pressure rating of 100m (330ft).

Cable

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

Cable Length

To order - 99m (330ft) maximum

Depth Rating

50m (165ft).
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 NEP9500 models only as well as NEP195, NEP395 and NEP495 probes.

NEP19SHRD - Protective stainless steel shroud to suit the NEP9000 and NEP9500 models as well as the NEP190 and NEP195 probes.

NEP-CBL-xx - Cable only xx meters, maximum 99m. Required for G version probes.

NEP390-CA-xx - Connector and cable assembly required for M version. Cable length xx to be determined at time of order, maximum 99m.

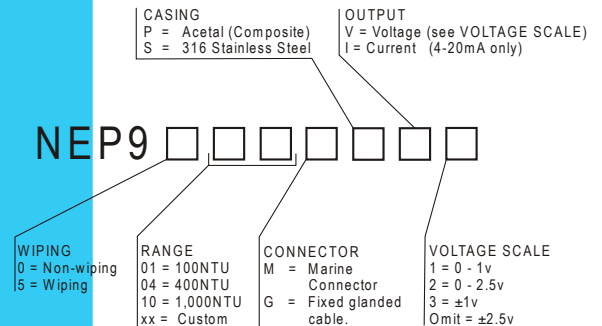
Options

Stainless steel (316) casing. Add suffix S to part number. For environments that require greater depth rating. Depth rating increased to 100 meters.

Marine Connector cable termination. Add suffix M to part number and refer to NEP390-CA-xx above.

Nomenclature

When ordering please refer to the chart below for product code nomenclature.



Specifications subject to change without notice.
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