

MODELS 9000 & 9500 OEM Turbidity sensors



Standard plastic version

ANALITE 9000 series probes are enhanced versions of the successful 190 & 195 devices; they offer better performance and greater ease of deployment, whilst maintaining the same mechanical package. Depth rating is now certified to 100m. Probes are available with a choice of cable gland (shown) or connector and case material, with composite plastic to 50m, or stainless steel to 100m. Cable length is specified at time of order.

The 9000 uses nephelometric 90° optical retro-scatter technology to ISO 7027 to measure turbidity levels up to 3,000 NTU. Standard ranges are 100, 400 and 1000 NTU with up to 3000 NTU to special order. A newly implemented differential measurement technique with sample and hold provides enhanced performance at low turbidity levels, and extremely low zero drift. All probes use a unique modulation technique that ensures almost total rejection of ambient light conditions

The 9000 turbidity probe is designed for applications that will not allow bio fouling to build up such as short monitoring deployment or placement in fast and cold running water. The 9500 however, with its integral lens wiper assembly, is designed where bio-fouling or sedimentation buildup is likely. The wiper is under operator/logger control.

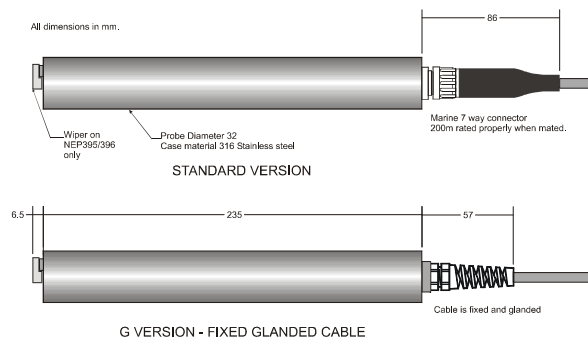
Standard output is now +/- 2.5v DC (0 NTU = -2.5v) with 0 – 1V and 0 – 2.5 volts and 4-20mA as an option, this makes interface to a wider range of data loggers simpler.

Applications:

- Stream & river monitoring for water quality
- Open ocean and lake stratification studies
- Waste water monitoring
- Ground & bore water analysis
- Sludge & dredge monitoring.
- Food & beverage processes



Lens wiper



Optional Stainless steel version

Specifications:

Parameter	NEP9001/9501	NEP9004/9504	NEP9010/9510	NEP90xx/95xx
Measurement				
Technique	ISO7027 - 90°			
Range	100NTU	400NTU	1,000NTU	Custom to 3,000NTU max.
Output	±2.5Volts where -2.5V = 0NTU 0 to +1V and 0 to +2.5V output available as an option.			
Response Time	Approx 1 second to 99%.			
Linearity	1%	1%	5%	5% max.
Zero Offset, 0 to 40°C	<±3mV max.			
Repeatability @ 25°C	±1%	±1%	±2%	<±2%
Temperature Coefficient (0 to 40°C)	< ±0.05%/°C			
Calibration using APS AEPA polymer solutions	3 point 0, 20, 100NTU	3 point 0, 100, 400NTU	3 point 0, 400, 1000NTU	3 point 0 and 2 other values.
Physical (Standard Version – see Physical Dimensions)				
Probe Diameter	32mm			
Probe only Length	181mm without wiper, 188mm with wiper.			
Overall Length (Tip to strain relief)	267mm without wiper 274mm with wiper			
Weight (probe only)	NEP90xxS Stainless 310gms NEP95xx S Stainless 380gms NEP90xxP Plastic 110gms NEP95xxP Plastic 180gms			
Cable	6 core + shield. 6mm dia. PUR sheathed.			
Connector	7 pin male waterproof to 100m when mated. Open face pressure of 50m			
Cable Length	Specify at time of order. 99m max.			
Environmental				
Static Depth Rating	50m (plastic) 100m (stainless steel)			
Operating Temp.	-5°C to +40°C			
Storage Temp.	-20°C to +50°C			
Wiper				
Wiper Arrangement NEP9500 series only	Disposable – Silicone Pad on PVC or Acetal arm. Field replaceable. Mounted on central shaft, fixed by hex set screw. (foam pads available at extra cost).			
Wiper Kit Part Number (4 in kit).	For NEP9500 series only. MCV-NEP-WIPE includes hex key.			
Actuation NEP9500 series only	TTL/CMOS active low or contacting the wiper actuation conductor (pin 5) to 0V (pin 3) or when applying normal power to the probe.			
Actuation Pulse Duration	On NEP9500 series only. >50mSec			
Actuation Pulse Current Sink	On NEP9500 series only. 1mA max.			
Wiping Time	On NEP9500 series only. 8 second nominal. Output held to approx 0NTU.			
Power				
Operating Supply	9.6 - 28V dc			
Probe Current Consumption	15mA max. not wiping.			
Power Settling Time	< 1 Sec			
Wiping Current	NEP9500 series only. Additional 25mA approx at less than 30m submersion.			

REF: NEP-9000 iss D March 2011