

MODEL NEP 495-P Recording turbidity sensor with temperature

The ANALITE NEP495P turbidity probes can monitor and log turbidity and temperature in a sturdy self-contained package that is easy to set up and easy to selectively download the data collected. The NEP495P is designed for deployment in natural underwater environments including those where metal based probes may corrode.

The ANALITE NEP495P microprocessor based turbidity probe is designed for monitoring and logging applications where turbidity levels of up to 1,000NTU may be encountered. Available ranges are 40NTU, 100NTU, 400NTU and 1,000NTU, which can be set by the user (other ranges up to 5,000NTU to order). The ANALITE NEP495P probe, with its integral wiper assembly, is designed to operate over an extended period of time where bio-fouling or sedimentation build-up is likely. The ANALITE NEP495P turbidity probes may be submerged to a depth rating of 100 meters (approx. 330 feet).

The ANALITE NEP495P probe use 90° optics and employs infrared light in accordance with ISO7027 and use a unique modulation technique that ensures almost total rejection of ambient light conditions. The salient features of the ANALITE NEP495P probes are tabled below.

The user may calibrate the probe at any time as well as allowing later versions of firmware to be uploaded by the user via the RS232 interface cable supplied.

The ANALITE NEP495P probes are similar to the ANALITE NEP395P probe but with the inclusion of temperature measurement and a flexible self contained logging function. As normally supplied, the ANALITE NEP495P can store over 30,000 data sets with each data set consisting of turbidity, temperature, time and date. Logging intervals can be set from less than 1 second to over 18 hours. Data is stored in non-volatile memory.

The ANALITE NEP495P is self-contained requiring no external power or commands once logging has commenced. The internal batteries have a life expectancy of over 30,000 data sets or about 60 days - whichever comes first and assuming a wipe prior to each reading.



Features:

- Turbidity logging
- Temperature logging
- RS232 Interface
- Integral and auto wiping
- 30,000 data sets
- User range select
- User calibrate
- Firmware upgradeable

Applications:

- Stream & river monitoring for water quality
- Open ocean and lake stratification studies
- Waste water monitoring
- Ground & bore water analysis
- Hydrological run off studies
- Sludge & dredge monitoring
- Intermediate & final effluent treatment monitoring
- Food & beverage processes

Specifications:

Technique	90° Modulated Infra-Red (ISO7027).	
Range	40, 100, 400 and 1,000NTU – set by user, factory default setting is 100NTU. Custom ranges to order at additional cost.	
Resolution	Range	Resolution
	40NTU	±0.01NTU
	100NTU	±0.02NTU
	400NTU	±0.1NTU
	1,000NTU	±0.2NTU
	Other range up to 5,000NTU to order	
Repeatability	±1% at 25°C.	
Linearity	Better than 1% for 40NTU, 100NTU and 400NTU (using 2 point calibration), 3% for 1,000NTU (using 3 point calibration).	
Temperature	-5°C to 50°C with ±0.1°C resolution and ±0.5°C accuracy. Time constant in water - 50 seconds.	
Output	RS232 – 1200, 2400, 4800 or 9600BPS, 7 data bits, even parity, one stop bit. The factory default setting is 9600BPS.	

RS232 Realtime Measurements.

Latest turbidity measurement.
 Mean and Sample Variance.
 Median.
 Minimum.
 Maximum.
 Probe battery voltage.
 External (water) temperature.

RS232 Logging

Each logging point generates a data set containing:
 Turbidity in NTU
 Water Temperature in °C
 Time the data set was recorded.
 Date the data set was recorded.

Logging Interval	1 second to over 18 hours in 1 second increments. Factory set to 900 seconds (15 mins).	
Data Capacity	32,000 data sets minimum but depends on memory capacity installed in the probe. Memory technology is FlashRAM. Logging stops when memory is full.	
Calibration	Turbidity - 2 or 3 point calibration for each range. May be set by the user only through the RS232 interface and for the range selected. Can revert back to factory calibration settings after user calibration. Temperature – factory calibration only.	
Power	3 off – C cells alkaline. 0.5mA STANDBY, 15mA ON. 40mA ON and wiping.	
Wipe Time	8 seconds nominal.	
Weight	1.5kg - including batteries. 3kg - shipping incl carry tube.	
Dimensions	540mm long overall nom. 45mm diameter.	
Construction	Acetyl copolymer casing. Screw on end cap to allow battery replacement and PC connection via RS232 interface cable.	
Depth Rating	100m (330ft) static water column.	
Operating Temp.	-5°C (non-freezing) to 50°C. Storage Temp. -10°C to 55°C.	
Accessories	a) Protective shroud for optics b) Replacement wiper kit NEP-WIPE. c) RS232/USB adapter.	



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