ANALITE NEP495 Turbidity & Temperature Logging Probe

ANALITE

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. 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 60 meters.

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 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. A RS232 to USB adapter is available as an option for PCs that are not fitted with a COM (RS232) port.

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.

Dimensions Analite NEP495 probe

SPECIFICATIONS

Technique	90° modulated infra-red (ISO7027).
Ranges	40, 100, 400, 1,000, 3,000 and 5,000NTU – range selection set by user

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
Outputs	RS232 – 1200, 2400, 4800 or 9600BPS, 7 data bits, even parity, one stop bit. The factory default setting is 9600BPS.

Measurements
RS232 Real-time 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	User set, from 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	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	60m static water column
Operating Temp.	-5°C (non-freezing) to 50°C
Storage Temp.	-10°C to 55°C
Interface Cable	3 meters with DB9 female (RS232) termination. Optional RS232 to USB adapter available.
Accessories	a) Protective shroud for optics NEP49SHRD2, 45mm ext. dia. b) Replacement wiper kit NEP-WIPE. c) RS232/USB adapter.