

## ANALITE NEP390 Series Turbidity Probes

### With RS323 & SDI-12 Interface

The ANALITE 390 series of microprocessor based turbidity probes are designed for monitoring and process applications where turbidity levels of up to 5,000NTU may be encountered. Currently there are two probe types available in the ANALITE 390 series, namely the NEP390 and the NEP395. Specifically the **NEP390** probe is designed for applications where bio-fouling will not be a problem such as short monitoring deployment or placement in fast and cold running water. The **NEP395** probe however, with its integral wiper assembly, is designed where bio-fouling or sedimentation build-up is likely. Wiping can be initiated automatically (periodically), via a direct RS232 command or externally as required.

The ANALITE 390 series probes may be operated at depths of up to 100m (approx. 330 feet) in stainless steel construction and 60m (200 feet in delrin constructed case.

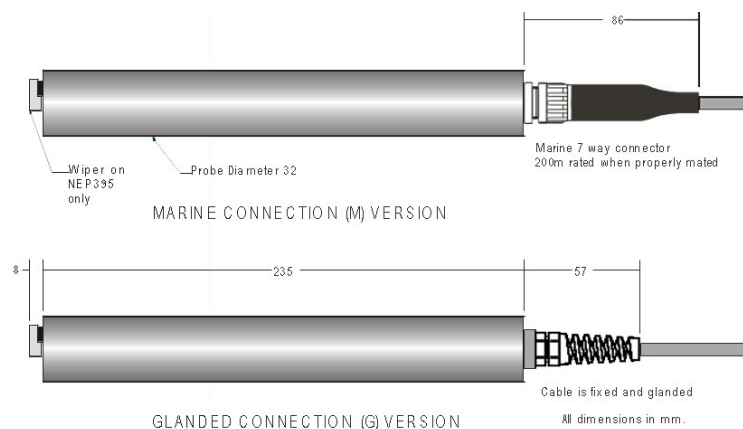
All ANALITE 390 series probes use 90° optics and employs infrared light in accordance with ISO7027. All probes use a unique modulation technique that ensures almost total rejection of fluctuating ambient light conditions.

The probes may be calibrated at any time or have later firmware uploaded by the user via the RS232 interface.

The applications that suit the ANALITE 390 series probes are so extensive and too numerous to list but generally they include:

- 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
- Sediment load studies

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*Dimensions Analite NEP390 probe*

# SPECIFICATIONS

Technique	90° modulated infra-red (ISO7027).			May be set by the user only through the RS232 interface and for the range selected. Can be reverted back to factory calibration settings after user calibration by user.
Ranges	40, 100, 400, 1,000, 3,000 and 5,000NTU – range selection set by user			
Resolution	<b>Range</b>	<b>RS232/SDI-12</b>	<b>Version</b>	Power
	40NTU	< ±0.01NTU	V1 only	9.6 - 16V dc, 35mA ON. 60mA ON and wiping for NEP395 only. STANDBY of 1.5mA.
	100NTU	< ±0.02NTU	V1, 2 & 3.	Wiping
	400NTU	< ±0.1NTU	V1, 2 & 3.	Initiated by wipe or auto wipe \$ commands under the RS232 interface or M8! Command under SDI-12 or it can be externally initiated by momentarily (>50msecs) bringing the RS232RX conductor to the 0V conductor.
	1,000NTU	< ±0.2NTU	V1, 2 & 3.	
	3,000NTU	< ±01.0NTU	V2 only.	Wipe Time
	5,000NTU	< ±1.5NTU	V3 only.	8 seconds nominal
Repeatability	±1% at 25°C up to 1000NTU, 2% from 1000NTU.			Weight
Linearity	Better than 1% for 100NTU and 400NTU, 3% for 1,000NTU and 5% for 5,000NTU after calibration.			<b>NEP390S</b> 500gms - probe only stainless steel
Temp. Coefficient	Better than ±0.07%/°C			<b>NEP390P</b> 450gms - probe only composite
Outputs	RS232 - 1200BPS, 7 data bits, even parity, one stop bit; and SDI-12 Protocol (V1.3).			<b>NEP395S</b> 550gms - probe only stainless steel
Measurements	<b>RS232 and SDI-12 interfaces</b> Latest turbidity measurement -1 sample Mean and Sample Variance (over 100 samples) Median (over 100 samples) Minimum (over 100 samples) Maximum (over 100 samples) Probe supply voltage Probe internal temperature			<b>NEP395P</b> 500gms - probe only composite
Calibration	2 or 3 point calibration for each range.			Dimensions
				<b>NEP390M</b> 250mm long unmated, 321mm long mated to end of protective boot, 32mm diameter.
				<b>NEP390G</b> 292mm long including glancing and strain relief assembly, 32mm diameter.
				<b>NEP395M</b> 258mm long unmated, 329mm long mated to end of protective boot, 32mm diameter.
				<b>NEP395G</b> 300mm long including glancing and strain relief assembly, 32mm diameter.
				Construction
				Composite casing (P suffix) or, Stainless steel casing (S suffix).
				Cable
				7 core + overall shield, 6.5mm dia. PUR sheath. Conductor resistance 75 ohms per km. Cable part number is NEP-CBL.
				Depth Rating
				60 meters (200 feet)
				Operating Temp.
				-10°C to 40°C
				Storage Temp.
				-20°C to 50°C.