



OBS-3+ Turbidity Sensor



Accurate, Rugged

Compact, low-power probe is field-proven

Overview

The OBS-3+ is a submersible, turbidity probe that has sideways-facing optics. It uses OBS technology to measure suspended solids and turbidity for applications ranging from water quality in freshwater rivers and streams to sediment

transport and dredge monitoring. Campbell Scientific dataloggers measure the OBS-3+ probe's output and calculate turbidity.

Benefits and Features

- › Sideways facing optics avoid obstructions above and below the probe
- › Measures suspended solids and turbidity for up to 4000 NTUs
- › Provides a compact, low-power probe that is field proven
- › Accurate and rugged
- › Compatible with all Campbell Scientific dataloggers (including the CR200(X) series)
- › Stainless-steel body allows use down to 500 m in fresh water
- › Titanium body allows use down to 1500 m in fresh or salt water
- › Fitted with MCBH-5-FS, wet-pluggable connector—multiple mating cable length options available
- › Offers an optional five-point sedimentation calibration for better measurements (see Ordering Info on the web page)

Technical Description

The OBS-3+ uses its sideways-facing optics to emit a near-infrared light into the water. It then measures the light that bounces back from the water's suspended particles.

If an obstruction is in the emitted light's range, the light will scatter back and the turbidity reading will be too high. This

probe's sideways-facing optics avoids obstructions above and below the probe. The OBS300 is available for locations that have obstructions around the sides of the probe.

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Specifications

Operating Temperature Range 0° to 40°C

Drift < 2% per year

Maximum Data Rate 10 Hz

Minimum Warm-up Time	2 s
Infrared Wavelength	850 nm \pm 5 nm
Daylight Rejection	-28 dB (re: 48 mW/cm ⁻²)
Optical Power	2000 μ W
Turbidity Accuracy	2% of reading or 0.5 NTU (whichever is larger)
Housing Material	316 stainless steel or titanium
Connector	MCBH-5-FS, wet-pluggable
Maximum Depth	<ul style="list-style-type: none"> › 500 m (1640.5 ft) for stainless-steel body › 1500 m (4921.5 ft) for titanium body
Maximum Concentration Range	<ul style="list-style-type: none"> › 5,000 to 10,000 mg/l (for mud) › 50,000 to 100,000 mg/l (for sand)
Concentration Accuracy	<ul style="list-style-type: none"> › 2% of reading or 1 mg/l (whichever is larger) for mud › 4% of reading or 10 mg/l (whichever is larger) for sand
Diameter	2.5 cm (0.98 in.)

Height	14.1 cm (5.56 in.)
Weight	181.4 g (0.4 lb)

-2.5 Output Option

Output Voltage	0 to 2.5 V (over selected NTU range)
Supply Voltage	5 to 15 Vdc
Current Drain	15 mA

-5 Output Option

Output Voltage	0 to 5 V (over selected NTU range)
Supply Voltage	5 to 15 Vdc
Current Drain	15 mA

-20 Output Option

Output Voltage	4 to 20 mA (over selected NTU range)
Supply Voltage	9 to 15 Vdc
Current Drain	45 mA

For comprehensive details, visit: www.campbellsci.eu/obs-3plus 



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