



## Accurate, Rugged

Optics avoid obstructions on sides of probe

### Overview

The OBS300 is a submersible turbidity probe that has downward-facing optics. It uses OBS<sup>®</sup> 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 OBS300 probe's output and calculate turbidity.

### Benefits and Features

- › Downward-facing optics avoid obstructions around the sides of the probe
- › Measures suspended solids and turbidity for up to 4000 NTUs
- › Provides a compact, low-power probe that is field proven
- › Stainless-steel body allows use down to 500 m in fresh water
- › Compatible with most Campbell Scientific data loggers
- › Titanium body allows use down to 1500 m in fresh or salt water
- › Accurate and rugged
- › 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 OBS300 uses its downward-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 downward-facing optics avoid obstructions around the sides of the probe. The OBS-3+ is available for locations that have obstructions above and below the probe. (OBS<sup>®</sup> is a registered trademark of Campbell Scientific.)

### Specifications

- |       |                 |                 |
|-------|-----------------|-----------------|
| Range | › 0 to 500 NTU  | › 0 to 3000 NTU |
|       | › 0 to 250 NTU  | › 0 to 1000 NTU |
|       | › 0 to 4000 NTU |                 |



Maximum Submersion Depth	<ul style="list-style-type: none"> <li>› 1500 m (4921.5 ft ) for titanium body</li> <li>› 500 m (1640.5 ft) for stainless-steel body</li> </ul>
Maximum Concentration Range	<ul style="list-style-type: none"> <li>› <i>Maximum concentration depends on sediment size, particle shape, and reflectivity.</i></li> <li>› 5,000 to 10,000 mg/l (for mud)</li> <li>› 50,000 to 100,000 mg/l (for sand)</li> </ul>
Concentration Accuracy	<ul style="list-style-type: none"> <li>› 2% of reading or 1 mg/l (whichever is larger) for mud</li> <li>› 4% of reading or 10 mg/l (whichever is larger) for sand</li> </ul>
Operating Temperature Range	0° to 40°C
Drift over Time	< 2% per year
Maximum Data Rate	10 Hz
Minimum Warm-up Time	2 s
Infrared Wavelength	850 nm ±5 nm
Daylight Rejection	-28 dB (re: 48 mW/cm <sup>-2</sup> )
Optical Power	2000 μW
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
Diameter	2.5 cm (0.98 in.)
Height	13.1 cm (5.15 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/obs300](http://www.campbellsci.eu/obs300) 



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