



## Titanium Housing for Harsh Environments

Offering analog, Modbus, and SDI-12 communications

### Overview

The ClariVue™20 is an ISO 7027-compliant, submersible, 90-degree, side-scatter turbidity sensor in a rugged titanium housing, making it the ideal choice for highly corrosive environments. The side-scatter turbidity measurement can be used as a surrogate for suspended sediment

concentration (SSC) in aquatic ecosystems. The sensor returns data via SDI-12, analog, or Modbus to a data logger or controller for easy integration into your new or existing system.

### Benefits and Features

- ▶ Accurate measurement of suspended solids and turbidity to the industry standard 4000 FNU's
- ▶ Field-proven performance and reliability in a compact, low-power probe
- ▶ Compatible with modern Campbell Scientific data loggers and third-party systems
- ▶ Titanium housing for long-term deployment in the harshest of environments
- ▶ Wet-mateable connector allows for flexible installation without the worry of water ingress

### Detailed Description

The ClariVue 20 is designed to operate in fresh and saline environments. The sensor face is made from titanium to slow biological growth over the optical windows; however, the

sensor requires regular maintenance to keep the optical window clean in high bio-fouling environments.

**Caution:** The ClariVue 20 may become damaged if it is encased in frozen liquid.

### Specifications

Standards	Meets ISO 7027-1:2016 (side scatter) standard for turbidity measurements
Signal Type	SDI-12 v1.4, Modbus through RS-485, or analog

Operating Temperature Range	-2° to +40°C (28° to 104°F)
Analog Signal Output	0 to 1 Vdc
Power Requirements	9.6 to 18 Vdc



Measurement Range	0 to 4000 FNU
SDI-12 Measurement Response Time	12 to 28 s depending on the SDI-12 command (Refer to the manual for more information.)
Resolution	0.2 FNU
Particle Size	0.1 to 0.5 $\mu\text{m}$
Accuracy	$\pm 2\%$ or 0.5 FNU, whichever is greater
Housing Material	Titanium
Head Material	Titanium
Optics	Sapphire lens
Connector Description	MCBH-5-FS, titanium, six gold-plated pins, wet-mateable

Cable Type	Six-conductor, polyurethane jacket with water block
Optical Assembly	Sealed with double O-rings
Internal Temperature Measurement	$\pm 0.2^{\circ}\text{C}$ ( $\pm 0.4^{\circ}\text{F}$ ) accuracy
Maximum Depth	500 m (1,640 ft)
Sensor Diameter	3.0 cm (1.2 in.)
Sensor Length	16.6 cm (6.5 in.)
Sensor Weight	200 g (0.44 lb)

### Power Consumption

Initial Measurement	32 mA (30 s)
Idle	0.75 mA
Measurement	32 mA

For comprehensive details, visit: [www.campbellsci.com.au/clarivue20](http://www.campbellsci.com.au/clarivue20) 



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