

Hyperion Turbidity

Optical Turbidity sensor

Teledyne Valeport's Hyperion Turbidity is essentially 2 sensors in one.

The first is a "classic" turbidity sensor, a nephelometer that uses a 90° beam angle, for low turbidity levels (0 to 1,000 NTU). The second, for high turbidity levels (1,000 to 6,000 NTU) uses an Optical Backscatter (OBS) arrangement (~120° beam angle). Intelligent sampling and use of a 24 bit ADC eliminates the need to gain switch at higher turbidity levels. The optical head is very compact, measuring just 20 mm in diameter and with a full ocean depth rating lends itself to OEM type solutions.

A compact & robust package ideal as a standalone sensor, for ROV and AUV integration or used as part of a multi-sensor array and data logger system.

Offered as standard in a 6,000 m depth rated, titanium housing the Hyperion Turbidity Instrument has a wide range (9-28 V DC) isolated power supply, data output up to 16 Hz on RS232 and RS485 or Modbus RTU communication protocols. Hyperion offers an industry leading dynamic range with no adjustment of gain settings required.

Hyperion Fluorometers can be supplied in a more rugged form that includes Acetal protection rings, a shaped anti-snag connector cover and a Kevlar weave protected cable.

DATA SHEET

Product Details



OPTICAL

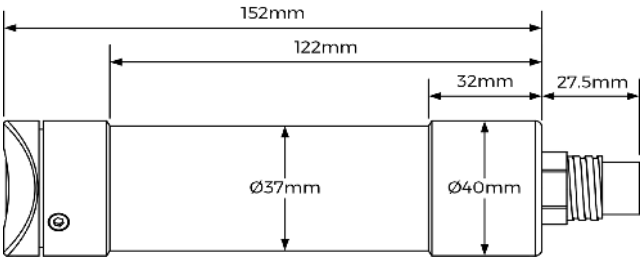


CONFIGURE
SOFTWARE

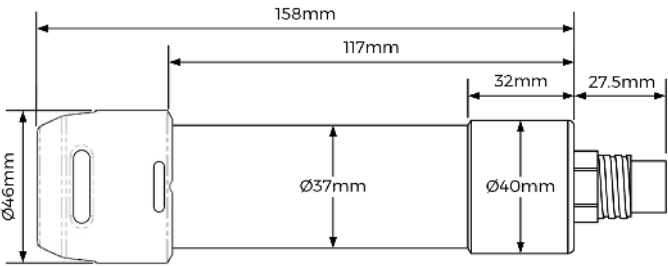


Sensor Specification Turbidity	
Dynamic Range	Nephelometer: 0 to 1,000 NTU - linear response OBS: 0 to 4,000 NTU - linear response >4,000 NTU has a non-linear monotonic response that allows derivation of higher values using look-up tables
Minimum Detection Level	0.03 NTU (Nephelometer)
Linearity	0.99 R ²
Physical	
Materials	Titanium with Sapphire window
Depth Rating	6,000 m
Dimensions	Ø40 mm x 179.5 mm (including connector)
Weight	0.50 kg (in air) 0.26 kg (in water)
Operating Temperature	-5°C to 35°C (the sensor is damaged above 60°C)

Dimensions - Standard Hyperion



Dimensions - with optional Sensor Guard



Electrical	
External	9 – 28 V DC Isolated
Power	<600 mW
Connector	SubConn MCBH6F
Communications	
The instrument will operate in real time, with set up performed by direct communications with a PC before deployment.	
RS232 RS485	2400 - 230400 baud rate 8 data bits 1 stop bit No Parity No Flow Control
USB	Supplied cable and converter (RS232 to USB)
RS485 Modbus RTU (standard)	19200 baud rate 8 data bits 1 stop bit Even Parity No Flow Control
Software	
System is supplied with Configure Windows based PC software for instrument set up.	
Ordering	
0901009 - TU	Hyperion Turbidity instrument
	Supplied with: • Y lead • Manual and transit case • Configure Software
0901EA2	Hyperion to EnviroLog System interface cable (various lengths available)
0901251	Sensor Guard