Level-Velocity Transmitter
for Irrigation Water, Stormwater and Sewage

Please read Application Note on page 2

Submersible Transmitter

Bigfoot

for Partially Filled Pipes and Open Channels

No Moving Parts
4-20mA Level Output
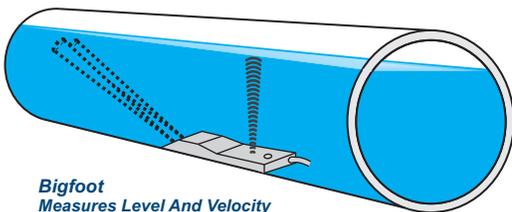4-20mA Velocity Output
12-24VDC Power Input

**Bigfoot Hydrodynamic Sensor
Measures Level and Velocity in Open Channels**

Easy to Install

Mount Bigfoot on the bottom of a pipe or channel to accurately measure and transmit both water level and velocity. This sealed, ultrasonic sensor is your solution for continuous water measurement in open channels and partially filled pipes. No calibration is required.

No Calibration Required

The Bigfoot can be powered from batteries, solar charging systems or DC power supplies. Its 4-20mA outputs can be connected to data loggers, SCADA systems or PLC measuring systems.

Flow is calculated from the Bigfoot transmitter outputs by using the formula: *Flow = Area x Velocity*, where Area is the cross-sectional area of the channel at the Level measured by the Bigfoot, and Velocity is the speed of the water. It can be mounted in pipes, culverts, channels or ditches with defined dimensions.

Bigfoot generates ultrasonic signals which are projected into the water to measure flow velocity and level. Some solids or bubbles in the water are required for proper velocity measurement.

The Bigfoot can be a quick and economic option for monitoring flow in open channels.

*Bigfoot
Measures Level And Velocity*

Bigfoot Level-Velocity Transmitter

General Specifications

Level Measurement Range:	45.8 to 3678 mm (1.8 to 144.8") from bottom of sensor
Velocity Measurement Range:	0.03 to 3.0 m/sec (0.1 to 9.84 ft/sec)
Outputs:	4-20mA Velocity and 4-20mA Level, 1000 ohm at 24VDC
Power Input:	12-24VDC, 200mA Max.
Operating Temperature:	0° to 65°C (32° to 150°F)
Accuracy:	Level: ±0.25% of actual Range or 1 mm (0.04"), whichever is greater.
	Velocity: ±2% of Reading. Repeatability and Linearity: ±0.1%
Temperature Compensation:	Automatic, continuous
Sensor Cable:	15 m (50 ft) submersible 6-conductor, 18 ga. (see Options)
Sensor Mounting:	Includes MB-BF stainless steel mounting bracket
Exposed Materials:	PVC, epoxy resin, ultem, polyurethane
Approximate Shipping Weight:	2 kg (4.4 lbs)

Options

Sensor Cable Length:	30 m (100 ft) continuous
Pipe Mounting Bands:	for pipe sizes from 12 to 40 inch and DN 300 to 1000 mm
	Each band size is adjustable ±0.5" / 13 mm diameter

Dimensions

Dimensions are mm [inches]

63 [2.48]

209.5 [8.25]

50 ft / 15 m watertight cable
(Optional 100 ft / 30 m)

26.4 [1.04]

20.8 [0.82]
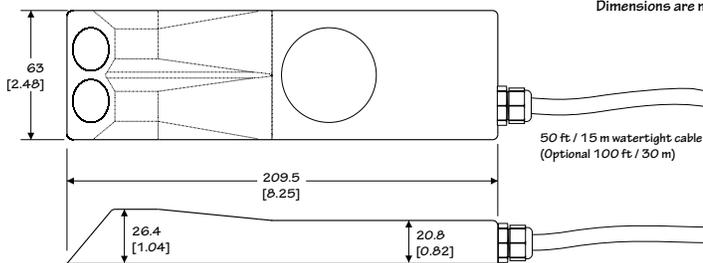
Application Note: The Bigfoot sensor provides a single point value for velocity in an open channel, such as a non-pressurized pipe, culvert or ditch. It does NOT provide velocity profile across the entire width of a channel or pipe. We do NOT recommend it for channels wider than 5 feet and pipes with a diameter larger than 48 inches. Please be aware that the wider the width the more the accuracy of the velocity measurement will be affected. The Bigfoot functions best in water that is NOT turbulent, if the water is turbulent then the measurements will fluctuate more. The signal from the sensor is a raw velocity measurement, we recommend that users take that raw velocity measurement into a Datalogger or PLC and perform averaging over an extended time period to create a more linear velocity measurement, this will improve the stability of your flow calculation.