

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



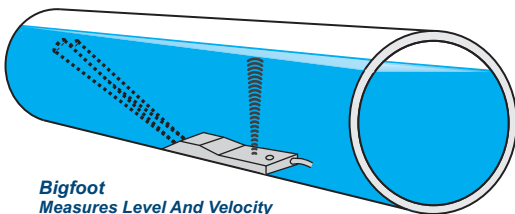
Bigfoot Hydrodynamic Sensor Measures Level and Velocity in Open Channels

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.



Bigfoot
Measures Level And Velocity

Flow is calculated from the Bigfoot transmitter outputs by using the formula: $Flow = Area \times Velocity$, 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 Level-Velocity Transmitter

General Specifications

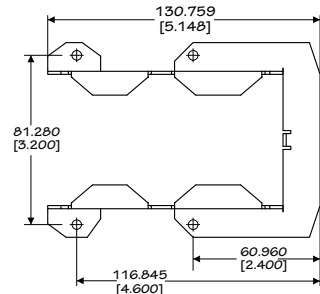
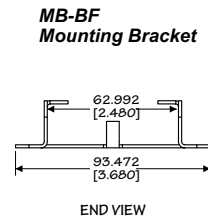
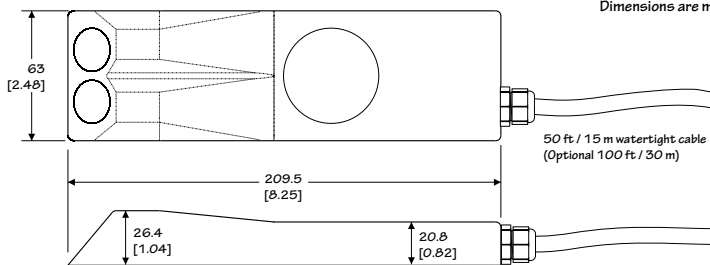
Level Measurement Range:	45.8 to 3678 mm (1.8 to 144.8") from bottom of sensor
Velocity Measurement Range:	0.03 to 3.0 m/sec (0.1 to 9.84 ft/sec)
Outputs:	4-20mA Velocity and 4-20mA Level, 1000 ohm at 24VDC
Power Input:	12-24VDC, 200mA Max.
Operating Temperature:	0° to 65°C (32° to 150°F)
Accuracy:	Level: $\pm 0.25\%$ of actual Range or 1 mm (0.04"), whichever is greater. Velocity: $\pm 2\%$ of Reading. Repeatability and Linearity: $\pm 0.1\%$
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 $\pm 0.5"$ / 13 mm diameter

Dimensions

Dimensions are mm [inches]



Application Note:

The bigfoot sensor provides a one point value for velocity in an open channel, such as a non-pressurized pipe, culvert or ditch. It does NOT provide velocity data across the width of the channel. Please be aware that this can effect the accuracy of the flow reading that you will receive from your flow measurement location. The bigfoot functions best in water that is not turbulent, if the water is turbulent then the readings will fluctuate. The signal from the sensor is the raw velocity reading, we recommend that users take that raw velocity reading into the datalogger or PLC and perform averaging over an extended time period to create a more linear velocity reading, this will improve the variability of your flow reading.



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