

FARSIGHT™

Providing the highest confidence in challenging velocity measurement applications while maintaining maximum performance.

High-Performance, Non-Contact Velocity Sensors

With excellent low-velocity measurement capabilities, greater beam width, built-in tilt compensation, rainfall interference discrimination, and low-power consumption with Modbus output, the Pulsar Measurement FarSight™ is the right choice for demanding remote or mains-powered velocity applications in environmental, water & wastewater, industrial, and irrigation markets.

Tried and Tested

Specifically designed with global challenging weather conditions in mind, the FarSight™ velocity sensor has been tried and tested in a wide range of climate conditions, including UK tropical storms Dudley, Eunice, and Franklin. With no loss of data, the FarSight™ provided repeatable and accurate results thanks to its more powerful signal processing and rainfall discrimination system.

Easy to Install and Use

Skill and resource requirement from installation is minimized thanks to the built-in tilt sensor which auto-mitigates user error in installation angle. With the standard Modbus output, the FarSight™ is compatible with both third-party RTUs or Loggers as well as controllers from Pulsar Measurement such as the FlowCERT and Ultimate Controller. The FarSight™ can be used with continuous power or at regular intervals to reduce power consumption when connected to a logger.



THE RIGHT SENSOR FOR

- River Flow
- Open Channel Flow
- Effluent Flow
- Remote Installations
- Irrigation
- Metals & Mining

Enhanced Measurement Capabilities

The FarSight™ can be mounted as far away as 15 meters (49 feet) from the water surface, making it great for applications where the mounting location can't be changed, like river flows underneath a bridge. The measurement area of the sensor can be as large as 3 meters (9.8 feet), which means less sensors are required for measuring the velocity across wider channels. The FarSight™ is the right choice for applications with variable flow rates thanks to the ability to measure velocities as low as 0.2 meters per second (0.66 feet per second).

Technology

The FarSight™ uses K-Band radar technology with built-in signal processing to take readings from the whole measurement area of the sensor. By using short pulses of microwaves that are reflected from surface disturbances on the water surface, the FarSight™ measures the shift in frequency in order to determine velocity. More than one FarSight™ can be used to average readings across very wide channels. Built-in tilt compensation automatically adjusts the measurement when the sensor isn't mounted at exactly 45 degrees to the surface.

PC Software

Free PC software is available for users who want to setup and view diagnostics. Using the Modbus output and a RS485 connection, the MicroFlow / FarSight™ PC software allows users to test, obtain and record readings, and provides insight on diagnostics like signal strength, stability, and much more.

Mounting

To aid installation, the dBA0008 angled mounting bracket is ideal for mounting the FarSight™ sensor, making installation quick, simple, and easy. To gain a full area-velocity reading of your application, there is also room for mounting an additional Pulsar Measurement level sensor.

Maintenance

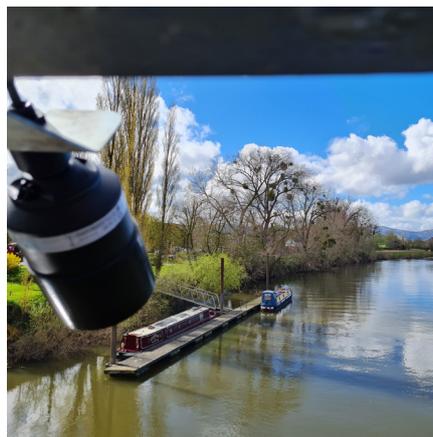
Thanks to Pulsar Measurement's world-renowned non-contacting technology, the FarSight™ sensor is maintenance free. The sensor does not come into contact with the measurement medium, therefore wear and tear issues are eliminated, and routine maintenance is minimized.



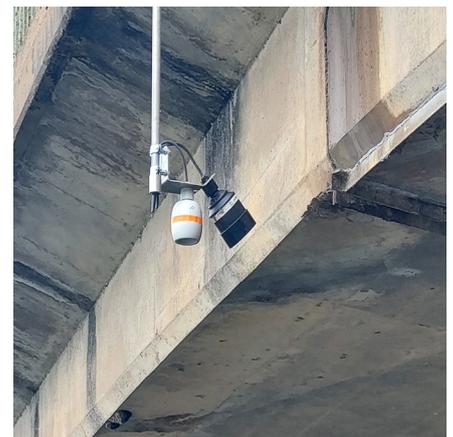
FarSight™ angled bracket



River Monitoring with Small Surface Disturbances



River Monitoring with Large Distance to Surface



FarSight™ and REFLECT™ mounted with dBA0008 angled mounting bracket for area-velocity flow measurement

Technical Specifications

GENERAL

Measurement Type: Non-contact velocity

PHYSICAL

Dimensions:	Nominal 195 mm H x 145 mm D (7.7 in x 5.7 in)
Weight:	Nominal 1.2 kg (2.6 lbs)
Frequency:	24 GHz
Sensor Body Material:	PVDF main body, Valox 357 on cap and submersion shield
Mounting Connection:	Rear: 1-inch BSP or NPT thread with BReez™ adapter. Optional mounting bracket available.
Cable:	5-core screened
Cable Lengths:	Standard: 10 m, 20 m, or 30 m (32.8 ft, 65.6 ft, or 98.4 ft) Optional: 50 m or 100 m (164 ft or 328 ft)
Maximum Separation:	Up to 500 m (1,640 ft) from FarSight™ to controller or RTU/logger

PERFORMANCE

Operational Range:	Up to vertical height of 15 m (49 ft)
Technology:	K-Band (ISM) Radar
Beam Angle:	10° inclusive
Velocity Range:	±0.2 m/s to ±6 m/s (±0.66 ft/s to ±19.7 ft/s) in most applications. Performance may vary depending on application. Ideal surface condition would include visually observable ripples.
Accuracy:	The greater of ±1.5% or 0.05 m/s (0.16 ft/s)
Max. Width of Measurement Area Per Sensor:	Up to 3 m (9.8 ft)
Optimal Installation Angle:	30° to 50° (from horizontal) with built-in electronic tilt compensation

ENVIRONMENTAL

Enclosure Protection:	IP68 / NEMA 6P
Vibration Protection:	Fully Potted
Ambient Operating Temperature:	-40°C to +80°C (-40°F to +176°F)
Humidity:	0 to 99% (non-condensing)
Process Connection Temperature:	-40°C to +80°C (-40°F to +176°F)

OUTPUT / COMMUNICATION

Connection:	RS485
Protocol:	Modbus RTU
Compatibility with Pulsar Measurement Controllers:	Integrates with FlowCERT, Ultimate Controller, and Flow Monitor
Compatibility with Third-Party RTUs/Loggers:	Any Modbus RTU via RS485 RTU or Logger

APPROVALS

Regulatory Approvals:	FCC, RED, CE, UKCA
WEEE and ROHS:	Compliant

PROGRAMMING

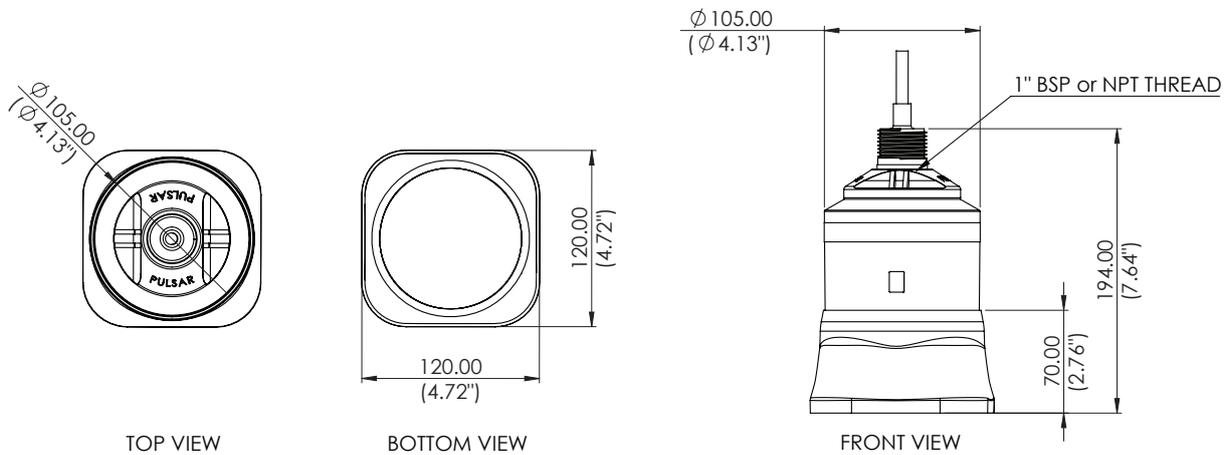
PC Programming:	Via RS485 Modbus RTU, including free Pulsar Measurement MicroFlow PC Software
Programming Security:	Support for passcode protection
Programmed Data Integrity:	Configuration stored in non-volatile memory
PC Setup & Monitoring Software:	MicroFlow/FarSight PC version 3.1 or newer - Compatible with Windows 10 & 11

POWER SUPPLY

Operating Voltage:	10 - 28 V DC
Power Consumption:	0.42 W
Power Conservation:	Support for complete power-down between measurements. Required power-on duration depends on application and field programming of FarSight. See manual for details.

ACCESSORIES

BReez™ Adapter:	Increases ease of use, supplied as standard and greatly reduces installation time
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Delivering the Measure of Possibility

Pulsar Measurement offers worldwide professional support for all of our products, and our network of global partners all offer full support and training. Our facilities in Malvern, UK and Largo, USA are home to technical support teams who are always available to answer your call or attend your site when required. Our global presence, with direct offices in the UK, USA, Canada, and Malaysia, allows us to create close relationships with our customers and provide service, support, training, and information throughout the lifetime of your product.

For more information, please visit our website:

www.pulsarmeasurement.com



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