

PF LV550 Level - Velocity Logger

Area-Velocity Flow Measurement in Open Channels and Pipes

Portable, Battery-powered

This compact new meter operates on standard alkaline batteries for extended time periods to log level, velocity and water temperature in open channels, partially full sewer pipes and surcharged pipes without a flume or weir. It is designed for municipal stormwater, combined effluent, raw sewage, irrigation water and stream flow.

- Logs Level and Velocity for Flow Studies
- Includes powerful Windows software for Flow analysis and reporting

Streamlined Ultrasonic Sensor

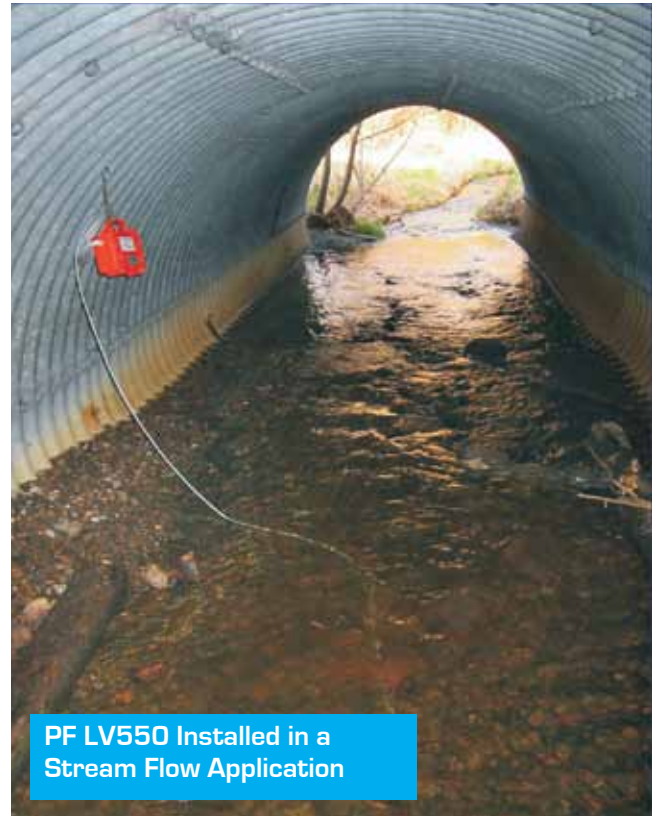
PF LV550 uses a submerged ultrasonic sensor to continuously measure both Velocity and Level in the channel. The sensor has no moving parts and is resistant to fouling and corrosion.



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Portable Area-Velocity Meter

PF LV550 measures Level and Velocity in open channels or pipes. No calibration is required. The sensor is a completely sealed ultrasonic unit with no orifices or ports. It mounts inside the pipe or at the bottom of a channel. The watertight electronics enclosure is hung in the manhole or at a convenient location. Sensor mounting bracket, batteries, software and cables are included with each PF LV550.

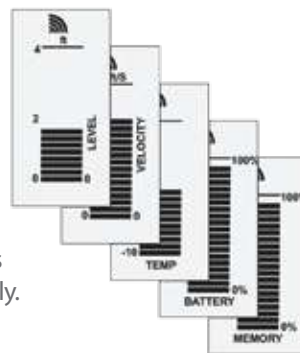


PF LV550 Installed in a Stream Flow Application

Built-in Display for Operator Confidence

Check PF LV550 status and performance without connecting to your laptop. Press the display button and the PF LV550 scrolls through bar graph displays of level, velocity and temperature readings, plus remaining battery and logger storage capacity.

PF LV550 LCD bar graph display



Operators can use the LCD display to check performance at start-up and confirm PF LV550 readings and signal strength at any time during operation. The display powers off after 60 seconds to conserve battery power automatically.

Logger Software

Powerful Windows software is included free with each PF LV550. Use it to set the logger interval, to download log files and view Level, Velocity and water temperature readings in real-time.

The Logger will display log files and flow rates in graph and table formats. It will generate flow reports including minimum, maximum and average flow, calculate flow totals, and convert between common measurement units.

Reporting is easy with the Logger - you can export charts as image files and export data to use in spreadsheet or database programs.



Retrieve a Log file from PF LV550

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Click 'Generate Flow Log'

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Logger calculates Flow

Calculate flow with Logger software

PF LV550 Specifications

General Specifications PF LV550 Level-Velocity Logger

| | |
|---------------------------------------|---|
| Electronics Enclosure: | Watertight, airtight, dust proof (IP 67) polycarbonate |
| Accuracy: | Level: $\pm 0.25\%$ of Range. Velocity: $\pm 2\%$ of Reading |
| Display: | LCD displays: Level, Velocity, Water Temperature, Battery and Memory capacity |
| Operating Temp. (electronics): | -20° to 60°C (-4° to 140°F) |
| Instrument Set-up: | via Logger software for Windows: Logging Time Interval, Site Name |
| Logger Interval: | 10 sec (15 days), 30 sec (45 days), 1 min (3 months), 2 min (6 months), 5 min (1 year), 10 min (2 years), 20 min (4 years) |
| Data Logger Capacity: | 130,000 data points |
| Power: | 4 Alkaline 'D' cells |
| Output/Communications: | RS232, 28,800 Baud |
| RS232 Cable: | 6 m (20 ft) shielded with DB9 M/F connectors |
| Software: | Logger for Windows. Supports real-time monitoring, log file download and export, graph and data table presentation, level/velocity to flow conversion |

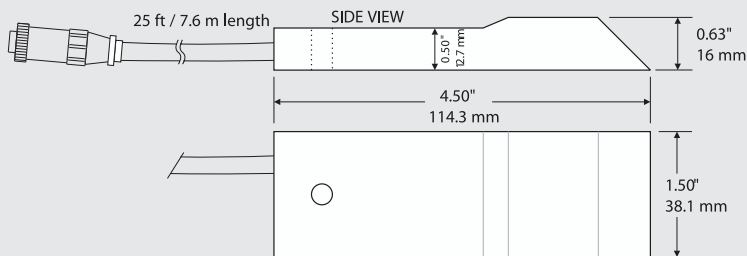
QZ02 Sensor

| | |
|------------------------------------|---|
| Velocity Measurement Range: | 0.03 to 3.05 m/sec (0.1 to 10 ft/sec) |
| Level Measurement Range: | Minimum Head: 25.4 mm (1 in). Maximum Head: 4.5 m (15 ft.) |
| Operating Temperature: | -15 to 65°C (5 to 150°F) |
| Exposed Materials: | PVC, polyurethane, epoxy |
| Sensor Cable: | 7.6 m (25 ft.) submersible polyurethane jacket, shielded, 3-coaxial |
| Sensor Mounting: | includes MB-QZ stainless steel mounting bracket |
| Temperature Compensation: | Automatic, continuous |

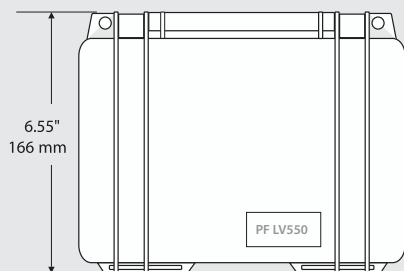
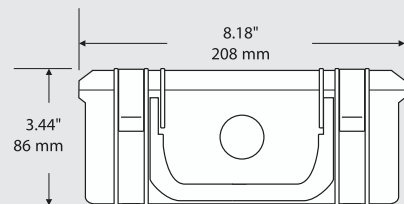
Options

| | |
|--------------------------------|--|
| Sensor Cable Extension: | shielded 15 m (50 ft.) submersible, polyurethane jacket with watertight connectors |
| Sensor Mounting Bands: | Stainless steel sensor mounting bands for pipes from 150 to 1800 mm (6" to 72") |

Dimensions



QZ02-UT-01-PS VELOCITY/LEVEL SENSOR



ELECTRONICS ENCLOSURE

PF LV550 Level - Velocity Logger

New Portable Level-Velocity Logger for Flow Surveys in Sewers, Streams and Open Channels



Recommended for:

- Flow Surveys
- Inflow & Infiltration Studies
- CSO Monitoring
- Stormwater Runoff
- Irrigation Water
- Permit Compliance
- Wastewater Treatment Plant Flow Studies

Easy to Operate

No calibration is required. Just install the sensor at the bottom of the pipe or channel and the PF LV550 logs level and velocity readings. Use the Logger software (included) to set the logging interval, and to view readings in real-time on your laptop or PC. PF LV550's built-in LCD display lets operators check level and velocity rates, remaining battery life and logger memory.

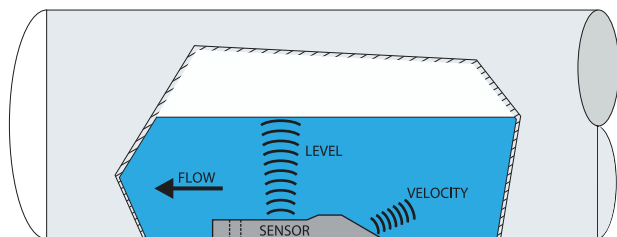
Efficient, Battery Powered

With 4 standard Alkaline D-cells the PF LV550 will operate and datalog for extended time periods. (For example: logging at 5 minute intervals the PF LV550 batteries will last for 12 months and store over 105,000 separate level, velocity and temperature readings!)

How it Works

The sensor transmits ultrasonic pulses that travel through the water and reflect off the liquid surface. To monitor water level, the PF LV550 precisely measures the time it takes for echoes to return to the sensor.

Velocity is measured with an ultrasonic signal continuously injected into the flow. This high frequency sound is reflected back to the sensor from particles or bubbles suspended in the liquid. If the fluid is in motion, the echoes return at an altered frequency proportionate to flow velocity. The PF LV550 uses this Doppler frequency shift to accurately calculate flow velocity.



SUBMERGED ULTRASONIC SENSOR
MEASURES LEVEL AND VELOCITY



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