

Application Note

Making the right AVFM Sensor Choice

Up or Down-looking Level Sensor...

After price - it's the most common question:

“When should I use the separate PZ12-LP down-looking level sensor?”

Greyline offers two sensor configurations for the AVFM:

- QZ-A with Up-looking ultrasonic level and Doppler velocity combined into a single-head sensor that is installed in the bottom of a channel or pipe
- QZ-B Doppler-only velocity sensor plus a separate PZ12-LP down-looking ultrasonic level sensor

Choose the separate down-looking sensor when:

1. The water level is expected to drop below the 1" / 25.4 mm minimum range of the standard QZ-A sensor.
2. The water is highly aerated.

These photos illustrate two recent AVFM applications where separate PZ12-LP down-looking sensor was the best choice.

Fly Creek Pump Station

Three 100 horsepower pumps discharge stormwater into this 5 ft. Diameter concrete pipe. Maximum water level is 24" / 610 mm and maximum velocity is 8 ft/sec 2.44 m/sec. Flow is highly turbulent and the water is aerated.

Lafarge

Final wastewater discharges from a settling lagoon through this corrugated 24" / 610 mm steel pipe. Normal level is 10" and velocity is 7 ft/sec / 2.13 m/sec. Again the water is turbulent and highly aerated.

In both these sample applications the QZ-A up-looking level sensor cannot obtain a reliable echo from the water surface so the PZ12-LP sensor is the best choice.

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Fly Creek Pump Station



Lafarge Lagoon Discharge