HARDWARE

Quadredundant Ultrasonic Level Sensor

The ADS® Quadredundant Ultrasonic Sensor is a non-intrusive, accurate measurement device for use in open channel flow monitoring applications. It operates by measuring the elapsed time for an ultrasonic signal to travel to the flow surface and back, and calculates the distance to the flow surface. This information, in conjunction with data pertaining to pipe geometry, is used to compute depth of flow. The sensor is mounted at the top of the pipe. The patented Quadredundant Ultrasonic Sensor is manufactured under an ISO9001 Quality Management System.

Sensor Features

- ***Quadredundancy*** - Four independent ultrasonic transceivers allow up to twelve sensor pair configurations for independent cross-check, which provides superior confidence and reliability
- ***Minimal Dead Zone*** - Less than 1" (2.54 cm) - allows for up-the-pipe mounting
- ***Remote Diagnostics*** - Sensor pairs can be activated, deactivated, or calibrated from a remote location
- ***Zero Drift*** - Solid state, non-mechanical
- ***Local Temperature Compensation*** - Through redundant temperature sensors mounted in the sensor housing
- ***Non-Intrusive Installation*** - Top of pipe mounting minimizes fouling, flow distortion, and head loss - also suitable for mounting in chambers, vaults, or other structures
- ***Optional Intrinsically Safe Configuration*** - Suitable for installation in hazardous areas when used with ADS Model 1600™, ADS Model 3600™ and IS FlowShark monitors

Applications

Depth data provided by the ADS Quadredundant Ultrasonic Level Sensor is used to calculate flows in a variety of applications, including:

- ***Infiltration/inflow programs***
- ***Inter-agency billing***
- ***CSO and SSO monitoring***
- ***Storm sewer monitoring***
- ***Sewer capacity studies/trending***
- ***Rehabilitation effectiveness monitoring***
- ***Flume calibration studies***
- ***Sewer master plan studies***

Approvals

- Intrinsically Safe, Class 1, Div. 1, Group C & D (US)
- Intrinsically Safe, ATEX Zone 0, EEx ia IIB T4 (International)

ETV

The ADS Quadredundant Ultrasonic Sensor accuracy specification was tested and verified by the EPA's Environmental Technology Verification Program.

Product Specifications

Range
Up to 10.0 ft. (3.05 m)

Housing
Marine-grade aluminum / epoxy
7.13 x 4.2 x .86 in.
(18.11 x 10.67 x 2.19 cm)

Resolution
0.02 in. (0.05 cm)

Accuracy
0.125 in. (0.32 cm)

Drift
0.0 in.

Sensor Cable
- 0.50" (1.27 cm) OD polyurethane jacket
- 35 ft. (10.67 m) standard cable length
- Extension cables available to 300 ft. (91.4 m)

The Quadredundant Ultrasonic Level Sensor utilizes four independent transceivers and up to 144 measurements to generate accurate and reliable flow depth quantity calculations.

About ADS®

A leading technology and service provider, ADS® Environmental Services has established the industry standard for open channel flow monitoring and has the only ETV verified flow monitoring technology for wastewater collection systems. These battery-powered monitors are specially designed to operate with relability, durability, and accuracy in sewer environments.

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INNOVATION • FLEXIBILITY • AFFORDABILITY