Model 327 Volumetric Line Leak Detector (VLLD)

While pressure may have its place in many fuel-related applications, it's performance in line-leak detection has been found less than reliable. Rising to the challenge of finding a more reliable solution, OPW Fuel Management Systems offers the Model 327 Volumetric Line Leak Detector (VLLD). The VLLD has been designed to use a highly accurate flow sensor, rather than less-reliable pressure decay methods, to measure the product line's leak rate. In turn, VLLD provides a more accurate measure of the actual product volume that is being lost.

The Model 327 VLLD has been designed to detect a leak in the pressurized product pipe by utilizing the submersible turbine pump (STP) in order to monitor volume changes in the product piping when no one is dispensing fuel. The OPW VLLD utilizes an internal flow sensor to detect and measure any volume changes in the product pipe and will initiate an alarm condition if an actual leak is detected. Constructed from hardened anodized aluminum, the rugged Model 327 VLLD is easy to install in the 2-inch (5.1 cm) leak-detector port found on the submersible turbine pump (STP).

Model 327 Volumetric Line Leak Detector (VLLD)

Capable of >3 gph catastrophic line leak test, even if an STP relay fault condition occurs where the STP motor is in a continuous run state

Features

Easy Integration

- Provides a true volumetric line leak test
- Capable of >3 gph (11.4 L/h) catastrophic line leak test, even if an STP relay fault condition occurs where the STP motor is in a continuous run state
- Installs into the 2-inch (5.1 cm) leak detector port on the submersible turbine pump (STP) motor
- Capable of connecting three (3) VLLD sensors via one (1) three-conductor wire back to the building
- Capable of testing the largest pipe volume in the industry [1.5-inch (3.8 cm), 2-inch (5.1 cm), 3-inch (7.6 cm), and 4-inch (10.2 cm) pipe]
- Capable of controlling up to four (4) STP motors within a single-line manifold set

Easy Installation

Easy To Use

Savings

- Capable of controlling two separate STP motors installed in the same tank
- Eliminates the need to know exact line lengths or diameters of underground pipe
- Works with a combination of fiberglass and flex pipe
- Configurable for STP motor control as a way to bring all tanks in a manifold set down evenly either by percent of volume in the tank or until a user-defined product level is reached before switching over to another tank in the manifold set
- Reduces installation cost - Line Leak Interface Module (LIM) is mounted separately, near STP motor relays, to eliminate the need for running pump-control wires back to the tank-gauge console

Listings and Certifications

U.S. Patent No. 8,316,695

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LISTED

6900 Santa Fe Drive ◆ Hodgkins, Illinois, USA 60525 ◆ Phone: 708 485-4200 ◆ Fax: 708 485-7137

Additional Features

- LIM is capable of controlling up to four (4) STP motors
- Will shut off STP motor if a low-level alarm or probe failure has occurred
- Programmable to run an optional monthly 0.2 gph (0.76 L/hr) or annual 0.1 gph (0.38 L/hr) compliance test
- Reduces installation time by eliminating the need to run a line-leak calibration test to determine the leak characteristics of the pipe
- Runs precision tests at the pump's operating pressure
- Reduces hydraulic hammering on the dispenser meters

Leak Test Certification

- Leak rate of 3.0 gph (11.4 L/hr) at 10 psi with Pd = 100% and Pfa = 0%
- Leak rate of 0.2 gph (0.76 L/hr) at operating pressure with Pd = 100% and Pfa = 0%
- Leak rate of 0.1 gph (0.38 L/hr) at 1.5 times operating pressure with Pd = 97.9% and Pfa = 2.1%

Specifications

Type: Volumetric Line Leak

Material: Hardened Anodized Aluminum

Location: Hazardous, Class 1, Division 1, Group D

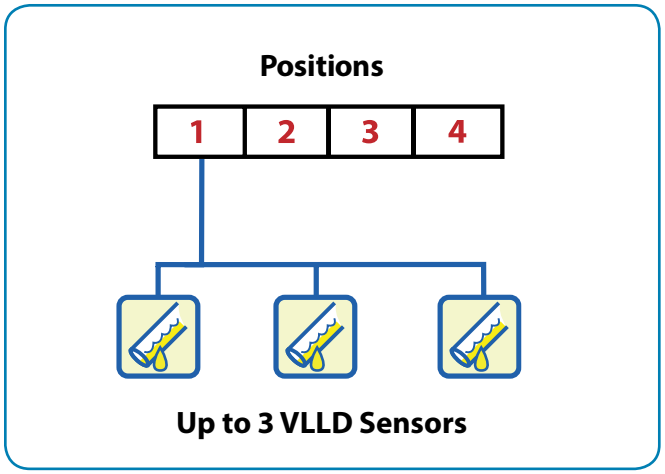
Temperature Range: -40ºF to 140ºF (-40ºC to 60ºC)

Data Cable: 1,000 ft (305 m) Belden 88760; 500 ft (152 m) maximum Belden 88761

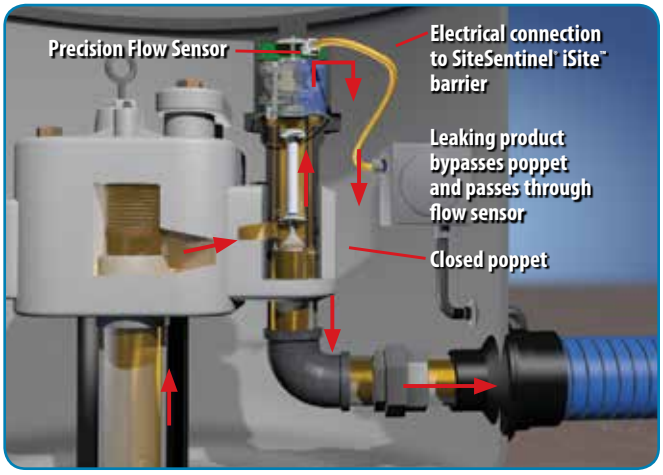
Pipe Characteristics

Pipe Diameter	Flex Pipe Length	Rigid Pipe Length
1.5 in (3.8 cm)	1,187 ft (362 m)	4,628 ft (1,411 m)
2 in (5.1 cm)	668 ft (204 m)	2,603 ft (793 m)
3 in (7.6 cm)	297 ft (91 m)	1,157 ft (353 m)

Integra™ / iSite™ VSmart I.S. Barrier



Operation of OPW VLLD Precision Flow Sensor



NOTE: See OPW Fuel Management Systems' website at www.opwglobal.com for detailed product literature, manuals and sales representative contact information for your area.