

DeltaSpan™

General Purpose Water & Wastewater Small Bore Pressure Level Transmitter

LD34-S1_1 & LD35-S_ _1 Series Quick Start



**LD34 Series
Water**



**LD35 Series
Wastewater**

QS301035 Rev B
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Welcome to the DeltaSpan™ Quick Start

The DeltaSpan™ Quick Start provides basic mounting, setup and use instructions for getting the DeltaSpan™ up and running quickly. If you have a non-standard installation or setup requirement that is not addressed here, please refer to the DeltaSpan™ Manual or other support documentation located at www.flowline.com.

We Do Your Level Best

The LD34 Series DeltaSpan™ is only 0.63" in diameter making it ideal for level monitoring in well and borehole applications. Constructed for years of trouble free service, the LD34 Series has a welded 316 SS body and 316 SS nose cap. Body top is also 316 SS and tapered to prevent damage or snares when pulling the unit out of the installation. The LD34 Series comes with polyether polyurethane cable.

The LD35 Series DeltaSpan™ is designed with a flush diaphragm tip that will not clog in harsh applications such as sewage lift stations. Narrow body design allows the FBLT to fit into stilling wells and narrow installations. The FBLT features a robust FKM fluoroelastomer diaphragm that is PTFE coated for a stick resistant surface that will hold up in aggressive fluids. The diaphragm cavity is filled with a gel that will not leak. Body is constructed of 316 SS and the cable is either polyurethane or ETFE for more corrosive applications. The unit measures the height of liquid above the position that it is mounted in a tank or pit in reference to atmospheric pressure.

Both units come equipped with a shielded, vented cable. Ventilation tube in the cable automatically compensates for changes in atmospheric pressure above the tank. The vent tube has a maintenance-free filter attached to the end that will block particles, such as dust, dirt, and water droplets, from entering the tube. For extra protection against humidity, Flowline offer the LD90-3000 desiccant filter that can be attached to the vent tube. Lightning and surge protection (not guaranteed or covered by standard warranty) is included standard to stand up in harsh applications.

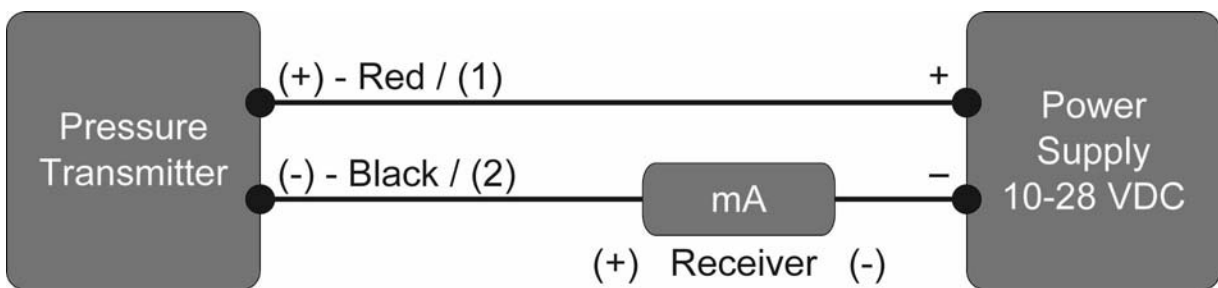
This Quick Start includes everything you'll need to get the DeltaSpan up and running. For complete information, please refer to DeltaSpan documentation located at www.flowline.com.

| P/N | Range in WC | Cable Length | Cable Material |
|-----------|-------------|--------------|----------------|
| LD34-S101 | 11.5' | 40' | Polyurethane |
| LD34-S111 | 15' | 40' | |
| LD34-S121 | 20' | 40' | |
| LD34-S131 | 30' | 40' | |
| LD34-S141 | 40' | 70' | |
| LD34-S151 | 50' | 120' | |

| P/N | Range in WC | Cable Length | Cable Material |
|-----------|-------------|--------------|----------------|
| LD35-S101 | 11.55' | 40' | Polyurethane |
| LD35-S111 | 15' | | |
| LD35-S121 | 20' | | |
| LD35-S131 | 30' | | ETFE |
| LD35-S201 | 11.55' | | |
| LD35-S211 | 15' | | |
| LD35-S221 | 20' | | |
| LD35-S231 | 30' | | |

Current (4-20 mA) Output Operation

An external power supply delivering 10-30 VDC with minimum current capability of 40mA DC (per transmitter) is required to power the control loop. The Current Output diagram (above) shows the connection of the power supply, transmitter and receiver.



Current Output

The range of appropriate receiver load resistance (RL) for the DC power supply voltage available is expressed by the formula:

$$RL \text{ Max} = \frac{V_{ps}-10}{20 \text{ mA DC}}$$

Shielded cable should always be used for control loop wiring.

Maximum Loop Resistance is 850 ohms @ 30VDC.

MAINTENANCE/REPAIR

Upon final installation of the LD34_LD35 Series, no routine maintenance is required. The LD34_LD35 Series is not field serviceable and should be returned if repair is needed (field repair should not be attempted and may void warranty).

Safety Concern

Where personal safety or significant property damage can occur due to a spill, the installation must have a redundant backup safety system installed.

Warranty

Flowline warrants to the original purchaser of its products that such products will be free from defects in material and workmanship under normal use and service in accordance with instructions furnished by Flowline for a period of two years from the date of manufacture of such products. Flowline's obligation under this warranty is solely and exclusively limited to the repair or replacement, at Flowline's option, of the products or components, which Flowline's examination determines to its satisfaction to be defective in material or workmanship within the warranty period. Flowline must be notified pursuant to the instructions below of any claim under this warranty within thirty (30) days of any claimed lack of conformity of the product. Any product repaired under this warranty will be warranted only for the remainder of the original warranty period. Any product provided as a replacement under this warranty will be warranted for the full two years from the date of manufacture.

Returns

Products cannot be returned to Flowline without Flowline's prior authorization. To return a product that is thought to be defective, go to www.flowline.com, and submit a customer return (MRA) request form and follow the instructions therein. All warranty and non-warranty product returns to Flowline must be shipped prepaid and insured. Flowline will not be responsible for any products lost or damaged in shipment.

Limitations

This warranty does not apply to products which: 1) are beyond the warranty period or are products for which the original purchaser does not follow the warranty procedures outlined above; 2) have been subjected to electrical, mechanical or chemical damage due to improper, accidental or negligent use; 3) have been modified or altered; 4) anyone other than service personnel authorized by Flowline have attempted to repair; 5) have been involved in accidents or natural disasters; or 6) are damaged during return shipment to Flowline. Flowline reserves the right to unilaterally waive this warranty and dispose of any product returned to Flowline where: 1) there is evidence of a potentially hazardous material present with the product; or 2) the product has remained unclaimed at Flowline for more than 30 days after Flowline has dutifully requested disposition. This warranty contains the sole express warranty made by Flowline in connection with its products. ALL IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY DISCLAIMED. The remedies of repair or replacement as stated above are the exclusive remedies for the breach of this warranty. IN NO EVENT SHALL FLOWLINE BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND INCLUDING PERSONAL OR REAL PROPERTY OR FOR INJURY TO ANY PERSON. THIS WARRANTY CONSTITUTES THE FINAL, COMPLETE AND EXCLUSIVE STATEMENT OF WARRANTY TERMS AND NO PERSON IS AUTHORIZED TO MAKE ANY OTHER WARRANTIES OR REPRESENTATIONS ON BEHALF OF FLOWLINE. This warranty will be interpreted pursuant to the laws of the State of California. If any portion of this warranty is held to be invalid or unenforceable for any reason, such finding will not invalidate any other provision of this warranty.

For complete product documentation, video training, and technical support, go to www.flowline.com.

For phone support, call 562-598-3015 from 8am to 5pm PST, Mon - Fri.

(Please make sure you have the Part and Serial number available.)