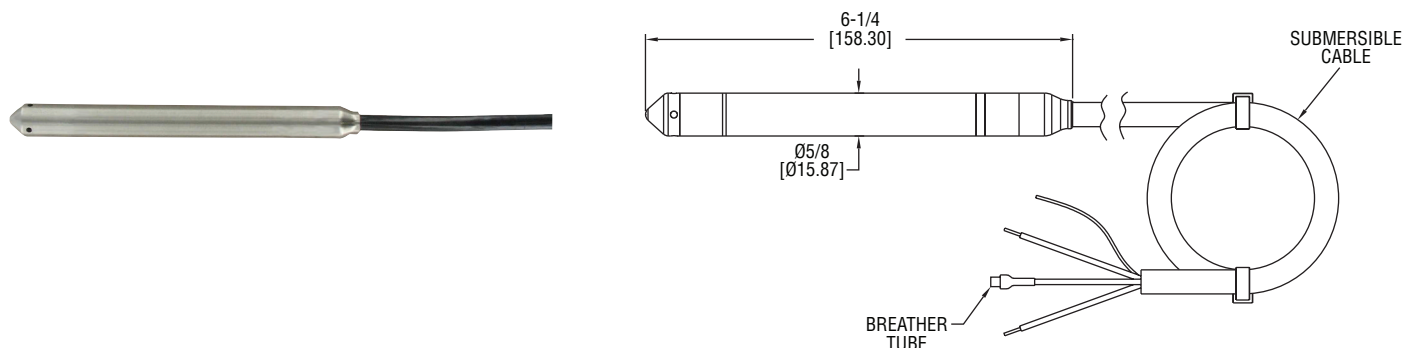




DeltaSpan LD34 Series Miniature Submersible Level Transmitter

Specifications - Installation and Operating Instructions



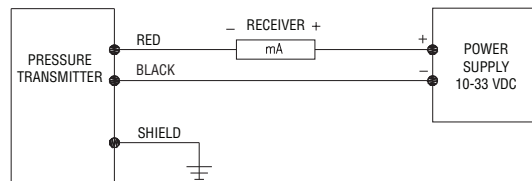
The LD34 Series Miniature Submersible Level Transmitter is only 0.63" in diameter making it ideal for level monitoring in well and borehole applications. Constructed for years of trouble free service, the LD34 has a welded 316 SS body and 316 SS nose cap. Body top is also 316 SS and tapered to prevent damage or snares when pulling the unit out of the installation. Featured in the LD34 is a precision $\pm 0.10\%$ or $\pm 0.25\%$ of full scale accuracy output, better than BFSL or BSL rated outputs used by most competitors. Lightning and surge protection (not guaranteed or covered by standard warranty) is included standard to stand up in harsh applications. LD34 comes with polyether polyurethane cable materials and all are vented for barometric pressure compensation. Vent is covered with a maintenance-free filter preventing particulate or water droplets from entering the transmitter.

APPLICATIONS

- Ballast tanks; Ground water monitoring; Surface water monitoring; Dewatering; Down hole; Remediation and other environmental monitoring applications.

ELECTRICAL INSTALLATION

An external power supply delivering 10 to 33 VDC with minimum current capability of 40 mA DC (per transmitter) is required to power the control loop. See figure below for connection of the power supply, transmitter and receiver.



The maximum receiver load resistance (R_{Lmax}) for the DC power supply voltage (V_{sup}) is expressed by the formula:

$$R_{Lmax} = \frac{V_{sup} - 10V}{0.02A}$$

Shielded cable is recommended for control loop wiring.

MAINTENANCE/REPAIR

Upon final installation of the LD34 Series, no routine maintenance is required. The LD34 Series is not field serviceable and should be returned if repair is needed (field repair should not be attempted and may void warranty).

WARRANTY/RETURN

Refer to "Terms and Conditions of Sales" in our catalog and on our website. Contact customer service to receive a Return Goods Authorization number before shipping the product back for repair. Be sure to include a brief description of the problem plus any additional application notes.

SPECIFICATIONS

Service: Compatible liquids.

Wetted Materials:

- Body and nose: 316 SS;
- Cable: Polyether polyurethane;
- Seals: Fluoroelastomer;
- Label: Polyethylene polyamid.

Accuracy: $\pm 0.25\%$ or $\pm 0.10\%$ of FS.

Temperature Limits: -4 to 176°F (-20 to 80°C).

Compensated Temperature Limits: 0.25%: (0 to 70°C); 0.10%: (0 to 60°C).

Thermal Effect: 0.25%: $\pm 0.45\%$ FS TEB; 0.10%: $\pm 0.30\%$ FS TEB.

Pressure Limit: 2x FS.

Power Requirements: 10 to 33 VDC.

Output Signal: 4 to 20 mA DC 2-wire.

Response Time: < 50 ms.

Max Loop Resistance: 1000 Ω @ 30 VDC.

Electrical Connections: Wire pigtail.

Mounting Connection: Suspended below point being monitored.

Electrical Protection: Surge/lightning protected per EN61000-4-5, Class 5.

Weight:

- Body: 0.235 lb (0.107 kg);
- Cable: 0.037 lb (0.009 kg) per foot.

Agency Approval: CE.

Part Number Block

- LD34-S101: 11.5 FT/40 FT
- LD34-S111: 15 FT/40 FT
- LD34-S121: 20 FT/40 FT
- LD34-S131: 30 FT/40 FT
- LD34-S141: 50 FT/70 FT
- LD34-S151: 100 FT/120 FT

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.)

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, which is equal to the shorter of one year from the date of purchase of such products or 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 or replaced under this warranty will be warranted only for the remainder of the original warranty period.

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.