

Model H-310

Submersible Pressure Transducer

The **WATERLOG**® Model H-310 is a submersible pressure transducer for water level monitoring. Accuracy exceeds government requirements of ± 0.01 ft.



KEY FEATURES

- Simple to install, use, and maintain (no on-site calibration required)
- Performs extremely accurate measurements:
 - linear deviation is less than 0.02%
 - resolution is 1 part in 250,000
 - accuracy over temperature range exceeds ± 0.01 ft. of water
- Enclosure is nonconductive and corrosion proof
- Output options: SDI-12 and RS-232
- Pressure measurement data is transmitted digitally over long cable lengths without error
- Sensor cable has large venting capacity for compensation of rapid barometric pressure changes
- Dry air moisture barrier system provides atmospheric compensation without impairing the sensor's accuracy



SPECIFICATIONS

Accuracy

(Maximum percent of error in measurement)

Pressure: Less than or equal to 0.02% of full scale output (FSO) over temperature range referenced to a straight line stretched from zero PSI to maximum pressure

Temperature: Internal temperature $\pm 1^\circ\text{C}$ over temperature range

Resolution

(Smallest change detectable in output signal)

Pressure: 1 part in 250,000 (0.0004%)

Temperature: 1 part in 250,000 (0.0004%)

Linearity

Less than 0.02% deviation from a straight line referenced to end points

Pressure Hysteresis

Less than 0.01% of FSO

Long-term Stability

Accuracy drift is less than $\pm 0.05\%$ of FSO per year

Response Times

SDI-12: 8 second measurement sequence
(programmable 2 second "fast measure")

RS-232C: 8 second measurement sequence

Standard Ranges

Pressure	Depth	Accuracy
0 to 15 PSI	0 to 34.60 ft.	± 0.007 ft.
0 to 30 PSI	0 to 69.20 ft.	± 0.014 ft.

Custom calibration ranges available from 5 to 75 PSI

Pressure Overload

Less than 2 times the rated pressure

Environmental Restrictions

Operating Range: 0° to 40°C (non-freezing)

Compensated Range: 0° to 40°C

Storage: -10° to 75°C

Media Compatibility

Liquids and gases compatible with PVC, RTV and stainless steel

Pressure Port

Stainless steel screen with 149 micron filter, field replaceable

Power Supply

Voltage: 9.6 to 16.0 volts DC

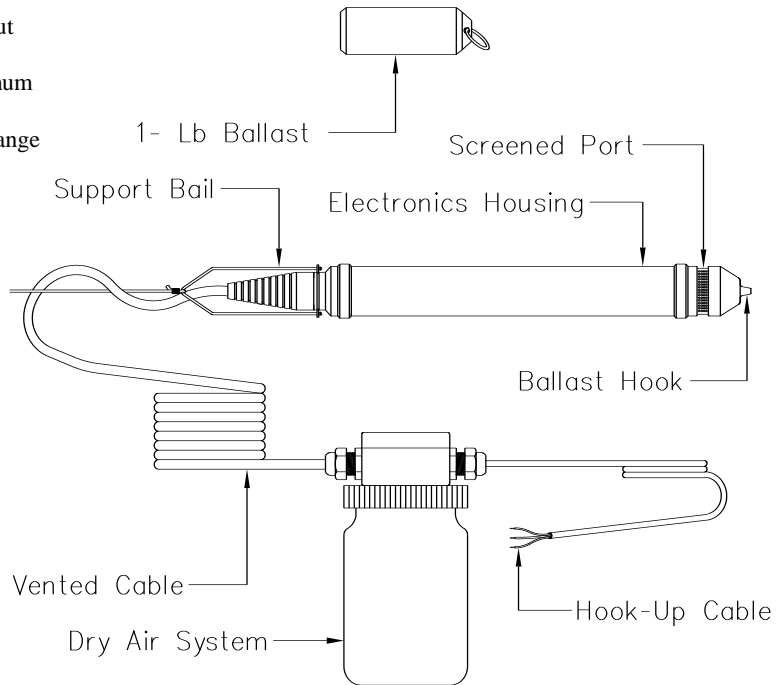
Supply Current:

Sleep Mode: 1 mA maximum

Active (measuring): 50 mA maximum

Dry Air System

Prevents moisture from condensing in the submersible pressure transducer, provides compensation for changes in atmospheric pressure without impairing the sensor's accuracy.



SDI-12 Output

Baud Rate: 1200

Protocol: SDI-12, 7-bit even parity, 1 stop bit

Output Voltage Levels:

Minimum High Level: 3.5 volts

Maximum Low Level: 0.8 volts

Maximum Cable Length: 1000 ft.

RS-232C Output (requires H-214 option)

Baud Rate: 1200

Protocol: RS-232C, 7-bit even parity, 1 stop bit

Mechanical Data

Material: PVC, engineering plastics, and polyethylene vent tubing

Size: 1.425 in. maximum diameter x 12 in. long

Cables

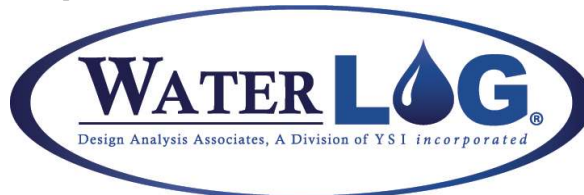
Sensor Cable (H-310 to junction box): vented, shielded, three-wire cable; 10 ft. standard length (longer lengths are available if required)

Warranty

The WATERLOG® H-310 is warranted against defects in materials and workmanship for one year from date of shipment.

Note

Specifications subject to change without prior notice due to ongoing commitment to product testing and improvement. LR May 5, 2003



75 West 100 South
Logan, UT 84321
Tel: (435) 753-2212
Fax: (435) 753-7669
E-mail: sales@waterlog.com
Internet: www.waterlog.com