



## 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  $\pm 0.01$  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  $\pm 0.01$  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.	$\pm 0.007$ ft.
0 to 30 PSI	0 to 69.20 ft.	$\pm 0.014$ ft.

Custom calibration ranges available from 5 to 75 PSI

## Pressure Overload

Less than 2 times the rated pressure

## Environmental Restrictions

Operating Range:  $0^\circ$  to  $40^\circ\text{C}$  (non-freezing)

Compensated Range:  $0^\circ$  to  $40^\circ\text{C}$

Storage:  $-10^\circ$  to  $75^\circ\text{C}$

## 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

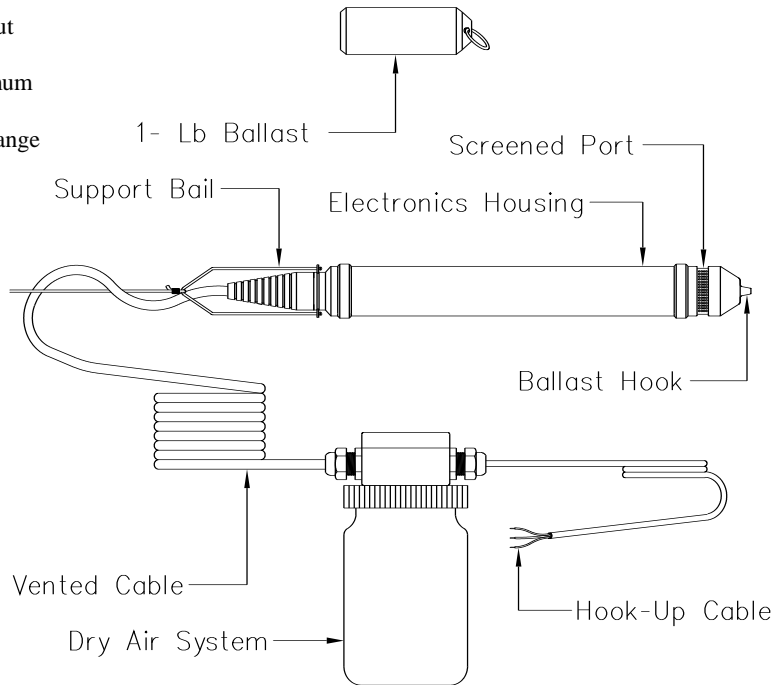
Supply Current:

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

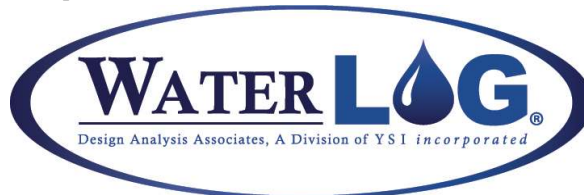
Sensor Cable (H-310 to junction box): vented, shielded, three-wire cable; 10 ft. standard length (longer lengths are available if required)

## 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



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