

Model H-3611

Family of SDI-12 Radar
Water Level Sensors

The **WATERLOG[®]** H-3611 series radars are a family of SDI-12 water level sensors. Typical applications include non-contact measurement of river, lake and reservoir water level. The H-3611 family is easy to use and interface with any data recorder/logger that is SDI-12 compliant. The sensors measure *Stage* in units of Feet, Meters or other engineering units.



KEY FEATURES

- Out of the box measurement range = 131 feet (40 meters)
- ± 3.0 mm accuracy
- Non-contact level measurement eliminates the need for stilling wells and other infrastructure.
- -40°C to $+60^{\circ}\text{C}$ operation
- NEMA 4x enclosure is suitable for outdoor installations
- Stainless steel horn
- No FCC licence required
- Frequency range - approx 26 Ghz
- Built-in LCD display for monitor and setup
- Low current operation (8.0 mA typical standby)
- Continuous operation, no warmup or "lock on"
- Simple to install, use, and maintain
- Mounting enclosures, radio communication links and other accessories are available.

SPECIFICATIONS

Measurement

Standard Range: 0.75 ft to 131 ft (0.3 m to 40 m)
 Accuracy: ± 0.01 ft (± 3 mm)
 (including linearity, repeatability and hysteresis)

Radar Unit

Frequency: ~ 26 GHz
 Electromagnetic Compatibility:
 Emission to EN 61326
 Electrical Equipment Class B
 Pulse Energy: 1mW max (1 μ W average)
 Beam angle: 10° (3-in dia horn, standard)
 8° (4-in dia horn, extended)

Measuring Distance Beam Radius (3-in Horn)

10 ft (3.0 m)	0.87 ft (0.27m)
20 ft (6.1 m)	1.75 ft (0.53m)
30 ft (9.1 m)	2.62 ft (0.80 m)
40 ft (12.2 m)	3.50 ft (1.07 m)
50 ft (15.2 m)	4.37 ft (1.33 m)
75 ft (22.9 m)	6.56ft (2.00 m)
100 ft (30.5 m)	8.75 ft (2.67 m)
131 ft (40 m)	11.46 ft (3.49 m)

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

Response Time

SDI-12 measurement sequence: 800mS (typ)
 5 sec (max)

Power Requirements

Voltage Input: 10 to 16 Volts DC
 Surge Protection: Built in, 1.5 KVA
 Supply Current:
 Sleep mode 7.6 mA typ
 Active (measuring) 12 mA typ
 Startup 18 mA max



Environmental

Operating Temperature: -40° C to +80° C
 Storage Temperature: -40° C to +80° C
 Temperature Sensitivity: average T_k : 2 mm/10 K,
 max 5 mm over the entire temperature
 range -40° C to +80° C

Mechanical

Rating: NEMA 4x
 Housing: Aluminum, coated IP65
 Horn size: 3-inch (L = 211mm, d = 75 mm) *standard*
 4-inch (L = 282 mm, d = 95 mm) *optional*
 Horn Material: 316L stainless steel
 Internal Display: LCD with back light

Connections

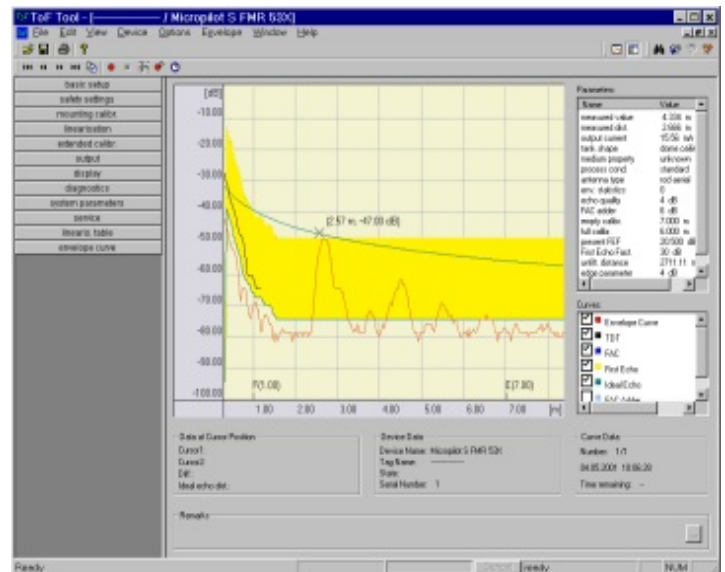
+12V & SDI-12: Internal 3-position connector.
 6-ft polyurethane pigtail is provided.

Cables: 6-ft cable with RS-232 connector for ToFTool® is provided.

The **WATERLOG®** H-3611 series radars are warranted against defects in materials and workmanship for one year from date of shipment.

Notes

Specifications subject to change without prior notice due to ongoing commitment to product testing and improvement. LR Feb 15 2010



Free ToFTool® Diagnostic Software

The *ToFTool* (time-of-flight) is a Windows™ based graphic configuration and diagnostic tool. If needed, the graphical user interface aids documentation, maintenance and setup of the radar unit.

WATERLOG®
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