# MODEL H-3611/3612/3613

FAMILY OF SDI-12 RADAR WATER LEVEL SENSORS

The WaterLOG® models **H-3611/3612/3613** make up the **Radar** series of SDI-12 water level sensors. Interface the Radar with any data recorder/logger that is SDI-12 compliant. This user friendly series is simple to install and contains a built-in LCD display for monitor, setup and maintenance. Sensors measure stage in units of feet, meters or other engineering units.

## APPLICATIONS
Accurately measure river, lake, well, ocean and waste water levels through non-contact transmission.

## KEY FEATURES

- ±0.01 ft (±3.0 mm) accuracy
- Out of the box measurement range:

  H-3611: 0.75 - 131 ft (0.3m - 40m)

  H-3612: 0.75 - 230 ft (0.3m - 70m)

  H-3613: 0.75 - 131 ft (0.3m - 40m)
- NEMA 4x (IP65) enclosure is suitable for outdoor installations
- PTB Sealed Horn (H-3613)

- Frequency range 26 Ghz
- Low current operation (8.0 mA)
- Continuous operation, no warm-up or "lock on"
- Mounting enclosures, radio communication links and other accessories are available
- Mounting bracket included

H-3613

WATER **LOG**®

a **xylem** brand

# SPECIFICATIONS

## PERFORMANCE

| | | | |
|---|---|---|---|
| **Accuracy** | ±0.01 ft (±3 mm) | | |
| | (including linearity, repeatability and hysteresis) | | |
| **Frequency** | ~26 GHz | | |
| | Electromagnetic Compatibility | Emission to EN 61326 Electrical Equipment Class B | |
| | Pulse Energy | 1mW max (1µW average) | |
| **Range** | Radar Unit Measuring Distance | Radar Unit Beam Radius 3 in. Horn (76.2 mm) | Radar Unit Beam Radius 4 in. Horn (101.6 mm) |
| | 10 ft (3.0 m) | 0.87 ft (0.27 m) | 0.69 ft (0.21 m) |
| | 20 ft (6.1 m) | 1.75 ft (0.53 m) | 1.4 ft (0.427 m) |
| | 30 ft (9.1 m) | 2.62 ft (0.80 m) | 2.1 ft (0.64 m) |
| | 40 ft (12.2 m) | 3.50 ft (1.07 m) | 2.8 ft (0.85 m) |
| | 50 ft (15.2 m) | 4.37 ft (1.33 m) | 3.5 ft (1.06 m) |
| | 75 ft (22.9 m) | 6.56 ft (2.00 m) | 5.24 ft (1.6 m) |
| | 100 ft (30.5 m) | 8.75 ft (2.67 m) | 6.99 ft (2.13 m) |
| | 131 ft (40 m) | 11.46 ft (3.49 m) | 9.16 ft (2.8 m) |
| | H-3612 Measuring Distance | H-3612 Beam Radius 3 in. Horn (76.2 mm) | H-3612 Beam Radius 4 in. Horn (101.6 mm) |
| | 150 ft (45.72 m) | 13.12 ft (4 m) | 10.49 ft (3.2 m) |
| | 175 ft (53.34 m) | 15.31 ft (4.66 m) | 12.34 ft (3.73 m) |
| | 200 ft (60.96 m) | 17.5 ft (5.33) | 13.99 ft (4.62 m) |
| | 230 ft (70 m) | 20.12 ft (6.13 m) | 16.1 ft (4.89 m) |
| **General** | Rating | NEMA 4x | |
| | Internal Display | LCD with back light | |

## MECHANICAL / POWER

| | | |
|---|---|---|
| **Size** | Housing H-3611/3612 | 17 in. L x 6 in. W x 6 in. H (431.8 mm L x 152.4 mm W x 152.4 mm H) |
| | Housing H-3613 | 13 in. L x 6 in. W x 6 in. H (330 mm L x 150 mm W x 150 mm H) |
| | Horn H-3611/3612 | 8.3 in. L x 3 in. W (211mm L x 75 mm W) standard |
| | | 11 in. L x 4 in. W (282 mm L x95 mm W) optional |
| | Horn H-3613 | 5.5 in. L x 4.5 in. W (140 mm L x 114 mm W) |
| **Weight** | H-3611/3612 | 8 lbs. (3.6 kg) |
| | H-3613 | 7 lbs. (3.18 kg) |
| **Material** | Housing | Aluminum coated IP65 |
| | Horn H-3611/3612 | Stainless steel |
| | Horn H-3613 | PTB |

## Power Requirements

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|---|---|---|
| **Power Requirements** | Voltage Input | 10 to 16 volts DC |
| | Surge Protection | Built in, 1.5 KVA |
| | Supply Current | Standby: 8 mA Active: 15 mA Startup:20 mA |
| **Connection** | +12V & SDI-12 | Internal 3-position connector. 6 ft (1.8 m) polyurethane pigtail is provided. |
| | Cables | 6 ft (1.8 m) cable with RS-232 connector for TofTool® connection. |
| **General** | Beam Angle | 10° 3 in. (76.2 mm) Standard Horn |
| | | 8° 4 in. (101.6 mm) Extended Horn |
| | | 10° 3 in. (76.2 mm) PTB Horn |

## COMMUNICATIONS

| | | |
|---|---|---|
| **SDI-12** | Baud Rate | 1200 |
| | Protocol | SDI-12, V1.2 7-bit even parity, 1 stop bit |
| | Output Voltage Levels | Minimum high level: 3.5 volts Maximum low level: 0.8 volts |

## ENVIRONMENTAL

| | | |
|---|---|---|
| **General** | Operating Temperature | -40° C to + 60° 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 |

## MISCELLANEOUS

| | |
|---|---|
| **Warranty** | The WaterLOG® H-3611/H-3612/H-3613 series radars are warranted against defects in materials and workmanship for two years from date of shipment. |
| **Notes** | Specifications subject to change without prior notice due to ongoing commitment to product testing and improvement. LR June 17, 2013 (D4 0613) |



H-3611/H-3612

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