

# LX-80-50 10 Hz Oceanographic Radar Sensor

RADAR LEVEL SENSOR FOR TIDAL AND WAVE MONITORING

## Highlights

- Measurement of water level and automatic calculation of wave parameters
- High sampling rate of up to 10 samples per second allows accurate wave analysis
- Ultra-precise 80 GHz radar technology
- Measurement accuracy  $\pm 2$  mm
- Measurement quality not affected by changes in air temperature or density
- Simple installation
- IP68 rated enclosure
- Supports a variety of communication interfaces
- Configurable range of interest
- Easy mounting
- Compatible with Geolux SmartObserver datalogger and Geolux HydroView cloud-based software for real-time remote monitoring
- Low power consumption



## Product Description

Geolux LX-80-50 10 Hz oceanographic radar sensor is a high sampling frequency version of the radar level sensor, which is targeted towards tidal monitoring, oceanographic, coastal and maritime applications.

The level sensor uses radar technology to accurately measure the distance between the radar instrument and the surface of the water. The water level measurements are repeatedly performed up to 10 times per second.

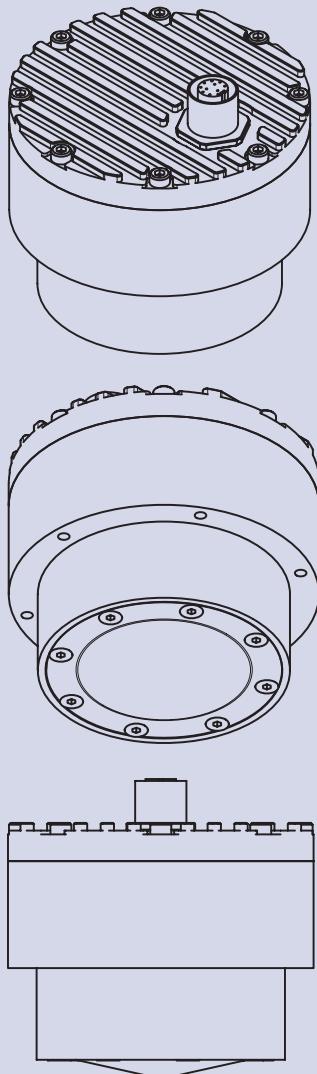
An internal wave analysis module uses these water level measurements for advanced wave

analysis. Wave parameters, such as significant wave height, zero up-crossing period, crest period as well as minimum, maximum, mean and median water level are automatically calculated by the radar unit.

The instrument can internally store up to 20 minutes of water level data to be used for calculation of the wave parameters.

The low power consumption of the instrument, the integrated wave analysis module, small form factor and a rugged enclosure make this instrument easy to setup and use.

## Detailed Specifications



|                             |  |
|-----------------------------|--|
| <b>Model</b>                | GLX-LX-80-50 10sps                               |
| <b>Radar Type</b>           | W-band 77-81 GHz<br>FMCW radar                   |
| <b>Beam Angle</b>           | 5°   |
| <b>Detection Distance</b>   | 50 m   |
| <b>Blind Zone</b>           | 0.2 m  |
| <b>Resolution</b>           | 0.5 mm   |
| <b>Accuracy</b>             | ± 2 mm   |
| <b>Sampling Frequency</b>   | 2.56 sps / 5.12 sps / 10 sps                     |
| <b>Wave Analysis</b>        | Internal, analysis window up to 20 minutes       |
| <b>IP Rating</b>            | IP68   |
| <b>Serial Interface</b>     | 1x RS-485 + 1x RS-232, or<br>2x RS-485           |
| <b>Serial Baud Rate</b>     | 300 bps to 115200 bps                            |
| <b>Serial Protocols</b>     | Modbus, GLX-NMEA                                 |
| <b>Analog Interface</b>     | 4-20 mA  |
| <b>Other Interfaces</b>     | SDI-12   |
| <b>Connector</b>            | M12 circular 12-pin                              |
| <b>Input Voltage</b>        | 9 to 27 VDC                                      |
| <b>Power Consumption</b>    | 1.85 W<br>standby 0.15 W;<br>sleep 0.03 W;       |
| <b>Maximal Current</b>      | < 470 mA   |
| <b>Temperature Range</b>    | -40 °C to +85 °C<br>(without heating or coolers) |
| <b>Enclosure Dimensions</b> | Ø 65 mm x H 78 mm                                |

FCC & CE APPROVED

MADE IN EU

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