

# LX-80S

## Snow Level Sensor

PRECISE RADAR SENSOR FOR SNOW LEVEL MONITORING

### Highlights

- Non-contact measurement of snow depth from above
- Extremely accurate radar technology - the accuracy is not affected by air density or temperature
- Small and robust device, easy to install and maintain
- The measurement accuracy is not affected by rainfall, snowfall, wind or the formation of icicles
- Detection range up to 15 meters
- Extremely narrow radar beam width of only 5° (+/- 2,5°)
- Configurable range of interest
- Compatible with Geolux SmartObserver datalogger and Geolux HydroView cloud-based software for real-time remote monitoring
- Low power consumption



### Product Description

Geolux LX-80S is the innovative snow depth sensor that uses advanced 80 GHz radar technology to accurately measure the distance from the sensor down to the surface of the snow. The LX-80S offers superior performance compared to traditional ultrasound devices used for snow depth measurement.

Installing and maintaining the LX-80S is easy, and the device can cover a long detection distance of up to 15 meters. The radar technology allows for non-invasive measurement from above the snow, ensuring that the snow's structure is not disturbed in any way.

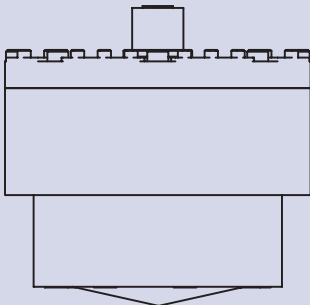
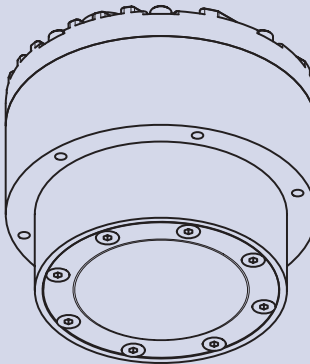
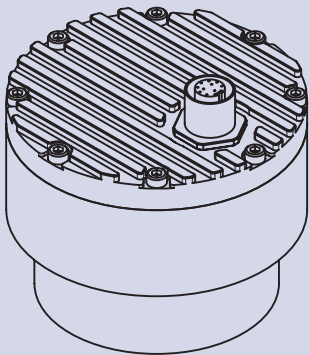
The LX-80S has many applications, including continuous monitoring of snowpack buildup and melting, making it essential for meteorological monitoring, hydrological planning, avalanche warning, and ski resorts.

The device provides accurate data on snow depth, which is crucial for many industries, especially those that depend on snow conditions.

Unlike traditional ultrasound devices that require temperature compensation due to their distance measurement being affected by air density, the LX-80S radar is not impacted by such environmental changes. Moreover, ultrasonic sensors are more susceptible to negative effects from snowfall or icicles, which can form close to the device. However, the LX-80S radar uses advanced signal processing algorithms for precipitation detection, and has a narrow radar beam of only 5°, which prevent such issues.

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

## Detailed Specifications



<b>Radar Type</b>	W-band 77-81 GHz FMCW radar
<b>Beam Angle</b>	5°
<b>Detection Distance</b>	15 m
<b>Blind Zone</b>	0.4 m
<b>Resolution</b>	0.5 mm
<b>Accuracy</b>	± 1 mm
<b>Sampling Frequency</b>	10 sps
<b>IP Rating</b>	IP68
<b>Serial Interface</b>	1x serial RS-485 half-duplex 1x serial RS-232 (two wire interface)
<b>Serial Baud Rate</b>	9600 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>	1.5 W standby 0.15 W; sleep 0.03 W; extended 0.6 W
<b>Maximal Current</b>	< 470 mA
<b>Temperature Range</b>	-40 °C to +85 °C (without heating or coolers)
<b>Enclosure Dimensions</b>	Φ 65 mm x H 78 mm

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