PRODUCT OVERVIEW

Snow Depth Sensor (LX80s)

Key applications:

- **Monitoring snowpack buildup and melting**
- **Avalanche monitoring**
- **Ski resorts**
- **Road maintenance**
- **Monitoring snowfall on solar power plants**

ASK ABOUT: LT1 LOGGING TRANSCEIVER

Improve response time with our compact, IoT-connected LT1 logging transceiver. Collect, store, and transmit real-time data and alerts from your Snow Depth Sensor for a complete hydrology solution.

Precise, contactless snow level monitoring

The Snow Depth Sensor uses advanced 80 GHz radar technology to provide precise contactless measurement of snow level from above. It is used for continuous monitoring of snowpack buildup and melting which are essential for hydrological planning, avalanche warning, and ski resorts. Unlike ultrasound-based snow level sensors, the measurement accuracy is not affected by rainfall, snowfall, wind, or the formation of icicles. Contactless radar technology also enables quick and simple sensor installation above the snow surface and requires minimum maintenance.

Snow level

Radar Technology

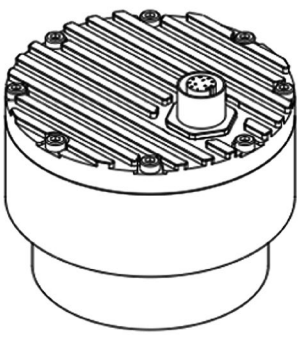
HOW IT WORKS

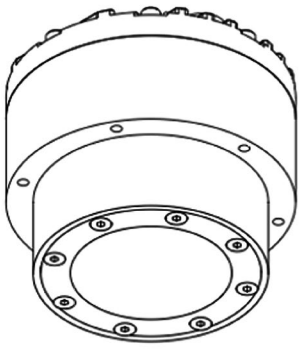
Radar technology allows for non-invasive snow level measurement from above, ensuring that the snow's structure is not disturbed in any way. Radar level measurement is achieved by transmitting modulated radar wave in 80 GHz frequency range (W-band). This delivers high accuracy and permits multiple radars to operate close to each other, without mutual interference.

In contrast to ultrasonic sensors, radar technology is unaffected by changes in air temperature and density. Moreover, radar technology employs advanced signal processing algorithms to detect precipitation, and its narrow radar beam of only 5° helps prevent adverse effects from snowfall or icicle formation near the device.

Detailed Specifications

COMPONENT	SPECIFICATIONS
Radar Type	W-band 77–81 GHz FMCW radar
Beam Angle	5°
Detection Distance	15 m
Blind Zone	0.4 m
Resolution	0.5 mm
Accuracy	±1 mm
65 mm x H 78 mm	10 sps
IP Rating	IP68
Output Protocol	SDI-12
Input Voltage	9 to 27 VDC
Power Consumption	1.5 W standby 0.15 W; sleep 0.03 W; extended 0.6 W
Maximum Current	< 470 mA
Temperature Range	-40 °C to +85 °C
Dimensions	Φ 65 mm x H 78 mm





Key Features:

- Contactless measurement of snow depth from above
- Extremely narrow radar beam width of 5° (+/- 2,5°)
- Detection range up to 15 meters
- Compact, low-power design is easy to install and maintain
- Rugged IP68-rated enclosure for outdoor applications and harsh environments

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