



The laser-based snow depth sensor Lufft SHM31 stands for millimeter-accurate snow level detection over long distances in all weather conditions without any maintenance, due to opto-electronic/laser based rangefinder technology.

- **Parameters measured**
Snow depth
- **Measurement technology**
opto-electronic measuring technique (rangefinder; laser distance sensor) with eye-safe laser
- **Product highlights**
Determination of snow depth over long distances, heating options allow high quality measurements in all weather conditions, simplified installation due to automatic inclination angle compensation
- **Interfaces**
RS485 & RS232 with Modbus RTU, UMB, UMB-ASCII 2.0 & SDI12 protocol
- **Article number**
8365.30

Millimeter-accurate snow levels in all weather conditions: The SHM 31 operates with a visible, easy-to-measure measuring beam. The snow depth is given up to 15 meters within seconds, millimeter-accurate and reliable. Various heating functions significantly extend the lifetime of the laser diode and allow high-quality measurement data in all weather conditions. Regular maintenance becomes redundant with the SHM 31. A very robust

Technical Data

Snow Depth Sensor SHM31



housing and an elaborate operation principle allows almost no maintenance work throughout the lifetime of the sensor.

| General | |
|----------------------|--------------------|
| Dimensions (LxWxH) | 302 × 130 × 234 mm |
| Weight | 2.35 kg |
| Operating parameters | |
| Temperature range | -40 ... +50 °C |
| Relative humidity | 0 ... 100% |

| Measuring parameters | |
|--|-------------------|
| Snow Depth | 0 ... 15 m |
| Mounting distance to surface | 0.1 ... 16 m |
| Accuracy (snow depth) ² | ± (5 mm + 0.06 %) |
| Repeatability | 0.6 mm |
| Intermediate precision/ reproducibility | 5 mm |

| Data-interfaces | |
|--------------------|--|
| RS485 | Modbus RTU , ASCII, UMB protocol |
| RS232 | ASCII protocol |
| SDI-12 | SDI-12 protocol |
| Data transfer mode | Polling (UMB, ASCII, SDI-12); Auto telegram output (ASCII) |

| Electrical parameters | |
|--|---|
| typ. power consumption at 24VDC and 10 s measurement | without heater: approx. 0.7 W; with window heating: approx. 3.4 W |
| Power supply | 12 or 24 VDC, tolerance +/- 15% |
| Maximum power consumption(connecting power with heater on) | 18 W |

| Safety | |
|----------------------|---|
| Laser classification | Laser class 2 (IEC 60825-1:2014); complies with 21 CFR 1040.10 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007 |
| Protection class | IP68 |
| EMC | EN 61326-1:2012 (industrial standard) |
| EC | 2014/30/EU & RoHS 2011/65/EU |