Technical Data
Snow Depth Sensor SHM31



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

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 interval	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