



Snow drift sensor SND

Extremely robust sensor to determine snow drift intensity

The sensing part of the instrument is a cylindrical, anti-abrasion, anti-adhesion and anti-rime coated tube supported by two strong stainless steel arms. The impact of drifting snow and the friction of laminar wind induce a change in internal acoustic pressure. The excitation by snow and wind is discriminated by a specific acoustic, mechanical and electronic design.

It features continuous or pulse analog voltage outputs and supports SDI-12 communication, serial RS-232, and Modbus RTU RS485 (using an optional adapter). The amount of snow drift is returned in $\text{g/m}^2/\text{s}$, a simple unit to interpret how much snow has been transported onto a road or an exposed slope.

Features and advantages

- Maintenance-free & special design to resist the highest winds, extreme temperatures, rime, sunlight, abrasion, ashes and even temporary submersion.
- Lightweight, corrosion free, UV/Ozone stable, non-obstructable. Resistant to shock, vibration, lightning, corrosion, humidity, animals, insects and splashes. Operating temperature from $-40\text{ }^{\circ}\text{C}$ to $80\text{ }^{\circ}\text{C}$ ($-50\text{ }^{\circ}\text{C}$ to $100\text{ }^{\circ}\text{C}$ extended).
- Very low power consumption: 2.1 mA continuous for nominal operation (10% duty-cycle) or 21 mA for continuous operation.
- Adaptable to any structure thanks to a range of high standard stainless steel clamping accessories.
- Directly connect the sensor to your central unit or configure any analog or digital communication through the included USB dongle.
- Compatible with almost any external analog or digital central unit, with a very long extension cable (typ. up to 200 m), with IoT (LPWAN) transceivers and industrial control systems (BMS, SCADA, etc.).

Fields of application

- Monitoring of snowdrift
- particles mass flux and wind-speed measurements
- Meteorological and scientific applications
- Road security and avalanche danger
- Industrial surveillance applications

Technical details

- **Range particle flux** 0 to 250 g/m²/s (0 to 2.5 V, or 0 to 5 V)
- **Range wind speed** 0 to 250 km/h (0 to 2.5 V, or 0 to 5 V)
- **Measurement principle** Acoustic pressure
- **Temperature range** -40°C to +80°C (-40°F to +176°F)
- **Analog interface** 0 to 2.5 V, or 0 to 5 V
- **Digital** SDI-12, RS-232 TTL
- **Power supply** 6 to 30 VDC
- **Power consumption** <1 mA in stand-by and 20 mA in acquisition mode
- **Protection** IP67