

SND

Snow drift sensor

Environmental monitoring equipment by Sommer Messtechnik

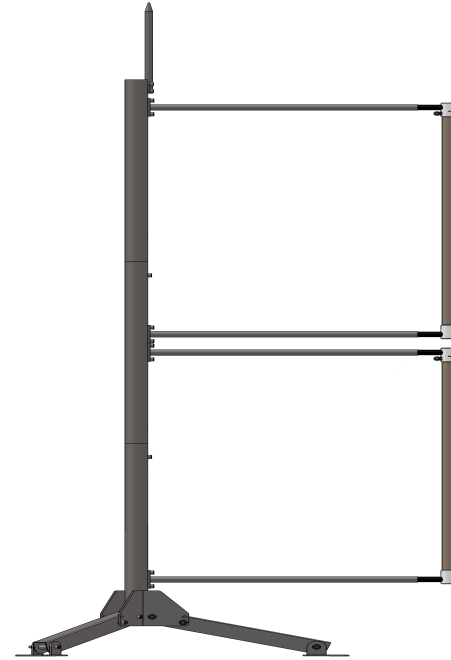
Extremely robust
sensor
to determine
snow drift intensity
and
wind speed

A photograph of a car driving through a heavy snowstorm. The car's headlights and taillights are on, illuminating the snow. The background is a dense, white snowfall, creating a hazy atmosphere. The car is positioned in the lower center of the frame, moving away from the viewer.



What is it?

The SND sensor is an ultra-robust instrument for measuring solid particle flux intensities and wind speeds. It is a low-power, maintenance-free and totally sealed acoustic instrument with no moving parts.



Application example with two SND sensors.

How does it work?

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 full configuration of the sensor can be customized at any time with a Plug-and-Play PC connection or remotely, using serial commands.



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.
- Plug-and-Play and configurable to fit any application.
- 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.).

Applications

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



Sommer Messtechnik
Strassenhäuser 27
6842 Koblach
Austria
www.sommer.at
E office@sommer.at
T +43 5523 55989
F +43 5523 55989-19



Sommer Messtechnik

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