



ULSN SNOW GAUGE

Ultrasonic sensor that measures the height of the snow blanket, model ULSN



PRODUCT DESCRIPTION

The sensor uses ultrasound technology to measure the height of the snow by measuring the distance of the snow from the sensor case and then subtracting the value found from the zero value place at the level of the base on which the snow deposits.

The time between transmission and the subsequent receipt of a signal is proportionate to the distance between the transmitter/receiver and the snow blanket.

A temperature sensor compensates the changes in sound based on the air temperature.

The sensor is equipped with fast semiconductor electronic devices for protection from electric discharges. All mechanical parts are made in AISI 304 steel or in high stability plastic.

OPERATION

The sensor takes a measurement of the distance of the snow from the sensor case and then subtracts the value found from the zero value place at the level of the base on which the snow deposits.

MAIN FEATURES

Correction algorithm:

the sensor integrates electronics able to compensate the effects that changes in temperature and atmospheric pressure can have on the level measurement. This is achieved by making use of another sensor, this time a temperature sensor, integrated inside the measuring device.

Easy maintenance:

the benefits that our snow gauge sensor offers are not limited to precision, but also include simple and quick maintenance due to the engineering of the sensor that simplifies the phases.

Sturdy and reliable construction:

lastly makes it an instrument with a long lifetime, which safeguards the customer's investment.

INSTALLATION

The instrument was designed to operate outdoors continually, in all weather conditions.

The sensor must be positioned horizontally and with its trajectory free from rocks and obstacles that might invalidate its measurement. It is also required that in a 100-cm-radius area no objects higher than the base be present.

Maintenance requires a periodic check before the winter period begins of the levelling of the sensor and of the horizontal base conditions (compared to the initial installation conditions).

COMPONENTS THAT CAN BE ADDED OR BE BUILT INTO THE PRODUCT

The sensor in question can be combined with any datalogger and can be integrated with any sensor on the market.

It is recommended to combine this sensor with the other ETG weather sensors in order to get a complete weather station.

In weather monitoring applications, especially to prevent the risk of avalanches, it is recommended to integrate this sensor with the ETG model TNIV snow blanket temperature sensor and the ETG control units, models iEngine and iLogger, respectively.

SPECIFICATIONS

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Measurement range	0 – 10 m
Operating temperature	-40 + 60°C
Protection rating	IP 66
Resolution	1 mm
Interface	4 – 20 mA
Power supply	10.5.....15 Vdc