VAISALA

IRU-9429 Snow Depth Sensor



Self-Contained Ultrasonic Sensor

The IRU-9429 sensor uses ultrasonic technology to provide a non-contact method of detecting snow depth and presence/absence.

The ultrasonic sensor transmits pulsed waves of high frequency

sound. If the sound wave meets a reflective object, such as snow, it bounces back toward the sensor. The sensor records the time required for the sound wave to travel to the target and return. Using the speed of sound, which is a well-known variable, the sensor calculates the distance to the object. Until recently, the many factors that influence the speed of sound created inaccurate readings. Now with microprocessor technology, many of these variables can be factored into the equation and eliminated. Temperature change is one such variable. The IRU-9429 sensor uses internal temperature compensation to

offset the effects of these changes.

Technical data

General

Operating Range Total Current Draw Transducer Type Sample Rate Resolution Accuracy Operating Temperature Beam Pattern Frequency 0.15 to 10.67 m (0.5 to 35 ft.) 75 mA @ 12 VDC Electrostatic Programmable (1-22 Hz) 2.5 mm (0.1 in.) ± 0.25% of detected range (with no temperature gradient) -40 to 60°C (-40 to +140°F) 9° off axis (at full signal strength and sensitivity settings) 50 kHz



For more information, visit www.vaisala.com or contact us at sales@vaisala.com



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Features/Benefits

- Range from 150 mm to 10.67 m (0.5 to 35 ft)
- Easy to install
- Works on solids and liquids
- Easily configured for snow depth measurements
- Internal temperature compensation
- Virtually maintenance free