CDY-19B Ultrasonic Snow Depth

For weather automation applications

Features

- Non - contact measurement:
- High accuracy, good stability
- Wide measurement range
- Fast response speed
- Greatly affected by the environment
- Easy Installation and Maintenance

CDY-19B Ultrasonic snow depth sensors are devices used to measure the depth of snow cover. They offer several notable features, making them valuable in various applications related to snow depth monitoring.Ultrasonic snow depth sensors operate based on the principle of ultrasonic wave propagation. The sensor emits ultrasonic pulses towards the snow surface. These pulses travel through the air and bounce back when they encounter the snow - air interface.

Typical installation locations

- Top of building
- Solar energy
- Open areas
- Outdoor locations

Design structure

Ultrasonic snow depth sensors operate based on the principle of ultrasonic wave propagation. The sensor emits ultrasonic pulses towards the snow surface. These pulses travel through the air and bounce back when they encounter the snow - air interface. The sensor then measures the time it takes for the ultrasonic waves to travel from the sensor to the snow surface and back. By knowing the speed of sound in air (which can be adjusted for temperature), the distance from the sensor to the snow surface, and thus the snow depth, can be accurately calculated.

Easy installation

Ultrasonic snow depth sensors are relatively easy to install. They can be mounted on poles, buildings, or other suitable structures above the ground. Their simple design also makes maintenance straightforward. Routine maintenance usually involves checking the sensor's connections, cleaning the transducer surface, and ensuring proper calibration.

Reliable operation

Ultrasonic snow depth sensors can perform rapid measurements. They can quickly emit and receive ultrasonic pulses, allowing for frequent and timely updates on snow depth. This makes them ideal for real - time monitoring applications, such as in weather stations or ski resorts, where up - to - date information on snow depth is essential for safety and operational purposes.

Technical data

Measurement performance, models CDY-19B

Item	Specification
measuring range	0-1000mm
Power	DC12V/DC24V
power consumption	240mV
Resolution	0.1mm
Accuracy	±0.1F.S
level of protection	IP67
weight	780g
Output	RS485(12VDC supply) 4-20mA 0-5V
Operating temperature	-40-50℃@0%-100%RH
Main material	Aluminium alloy
Self-heating	＜0℃ (5W)
Size	105mm*130mm

Model number	Type	Output	Special features
CDF-10A	Wind speed	Pulses(PNP) RS485 4-20MA 0-5V	Three cup plastic wind speed
CDF-11A	Wind direction	RS485 4-20MA 0-5V	Plastic wind direction sensor
CDF-20B	Combined Wind Speed & Direction	RS485 4-20MA 0-5V 0-10V	Integrated wind speed and direction
CDG-10B	Solar Radiation	0-5V,4-20mA,RS485	Spectral range:300～1100nm
CDG-13B	Ultraviolet(UV) Radiation	0-5V 0-10V 4-20mA RS485	Spectral range:280～400nm
CDW-33A	Atmospheric Temperature,Humidity & Pressure	RS485	Shelter installation
CDY-10B	Metal Economical Tipping Bucket Rainfall	Pulses(@10kΩ&0.01uF),RS485	Diameter :φ200mm, height: 330mm
CDY-11A	Rain & Snow Sensor	Relay(NO) RS485	Gold-plated(Strong corrosion resistance)
CDY-12A	Economical Tipping Bucket Rainfall	Pulses(@10kΩ&0.01uF),RS485	Diameter :φ200mm, height: 271mm
CDY-14B	Evaporation sensor	RS485	Range 75mm
CDY-15A	Optical Rain Sensor	Pulses(@10kΩ&0.01uF),RS485(12VDC supply)	Diameter :φ82mm, height: 80mm
CDQ-X100	Piezoelectric Type Rain	RS485	Measuring range: 0-200mm/h
CDY-18B	Automatic rainfall station	4G/WIFI/Ethernet	LCD display

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