



CDY-11A Rain & Snow Sensor

For weather automation applications



Features

- Environmental monitoring
- Greenhouse control system
- Smart doors & windows
- Smart light box
- Livestock farm
- Intelligent building control system
- Relay output
- Low power consumption: Using advanced electronic technology, low power consumption, suitable for long-term operation

CDY-11A Rain & Snow Sensor is a high sensitive detector to achieve qualitative detection of rain and snow. There is a ring conductor sense rain board on the surface. Products are optional automatic melting snow and melting ice function (automatic heating). When it rains or snows, it will output switch signal.

Typical installation locations

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

Design structure

Capacitive rain and snow sensors use the capacitance changes formed between rain and snow and sensor electrodes to detect rain and snow. When there is rain and snow covering the sensor surface, the capacitance value will change, which triggers the detection signal.

Resistive rain and snow sensors judge rain and snow conditions by detecting changes in resistance on the sensor surface. When rain and snow fall on the sensor, it will change the electrical conductivity of the sensor, causing the resistance value to change.

Easy installation

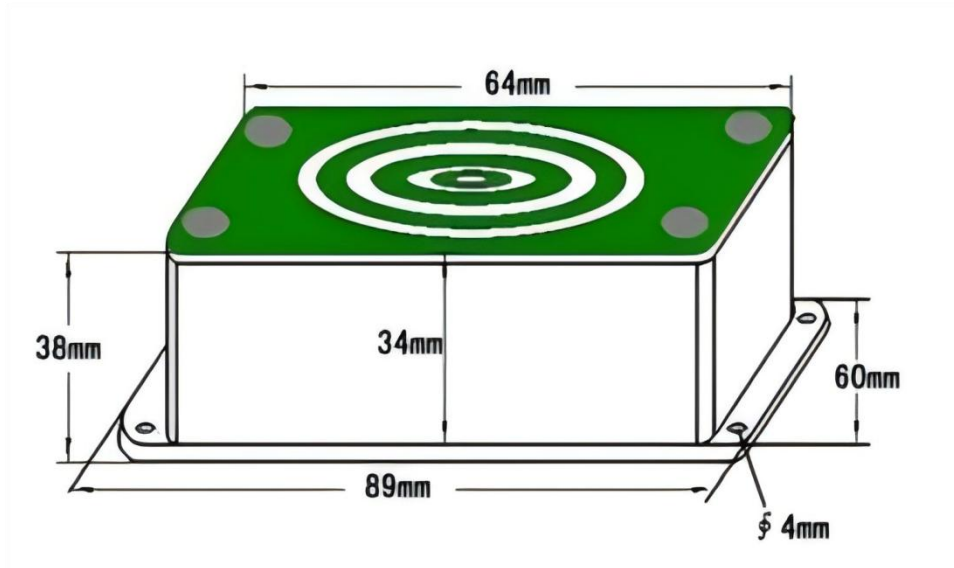
Select a location that accurately represents the surrounding rain and snow conditions for installation. Usually it should be installed in a high place with no shelter and good ventilation, such as the roof, telephone poles, etc. Consider the stability and safety of the installation location, and avoid installing in places that are susceptible to vibration, strong winds or other external forces

Reliable operation

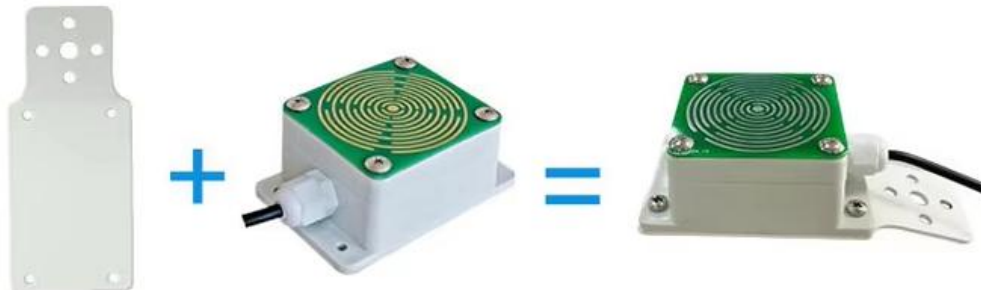
The correct installation position and method are critical to the reliability of the sensor. It should be installed in a location that can accurately reflect the surrounding rain and snow, and avoid being installed in a place where there are interference factors such as occlusions, strong magnetic fields, and strong electric fields. At the same time, ensure that the sensor is solid and reliable during installation to avoid loosening or damage of the sensor due to vibration, wind and other reasons.

Dimensions & packing

CDY-11A connector dimension



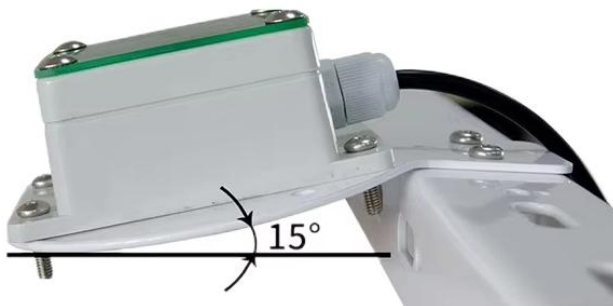
Installing



Mounting plate

Rain and Snow Sensor

Installation and fixation



The angle between sensor and horizontal level should be about 15°

Technical data

Measurement performance, models CDY-11A

Supply Voltage	12-24VDC
Automatic heating	heating power:10W max.
Output	Relay(NO) RS485
Load Capacity(relay)	AC120V/2A ,DC24V/2A
Coil material	Gold-plated(Strong corrosion resistance)
Ingress protection	IP67
Operating Temperature	-30°C-+70°C
Weight(unpacked)	150g
Dimension	90*60*40mm
Shell material	ABS
Storage Condition	10°C-60°C@20%-90%RH

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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