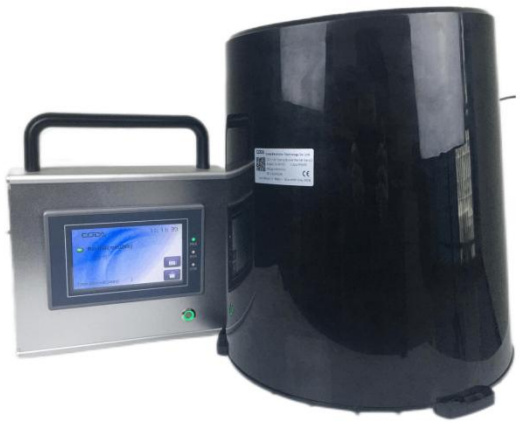
CDY-18B Economical Tipping Bucket Rainfall

For weather automation applications



Features

- Compact size for easy use
- High accuracy, good stability
- Mesh in the funnel preventing debris such as leaves and insects from entering the working of rain sensor
- Well made tipping bucket with low resistance
- The main body made of high strength ABS
- Horizontal Bubble in the bottom
- Outlet with insect-proof screen

CDY-18B Automatic Rainfall Station is used to measure and record the rainfall information. The display can show the real time rainfall value, with time & date. Large-capacity FLASH memory chips can automatically stored at least one year of meteorological data. The data logger is equipped with two types of communication interfaces (RS232 / RS485) which establish communication with the computer. Meteorological weather data can be further processed and analyzed by the data logger. The station can be equipped with CDY-10B or CDY-12A rainfall sensor.

Typical installation locations

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

Design structure

The rain water enters the water bearing device through the water bearing mouth, and then flows into the tipping bucket through the funnel mouth. When the amount of water in the tipping bucket reaches a certain degree (such as 0.1mm, 0.2mm, 0.5mm, etc., different types of sensors may have different set values), the tipping bucket will be turned over due to the loss of balance due to gravity. Each time the skip is turned over, a switching signal is triggered (for example by a reed tube, etc.), producing a pulse signal. By recording the number of pulse signals, the corresponding precipitation can be converted.

Easy installation

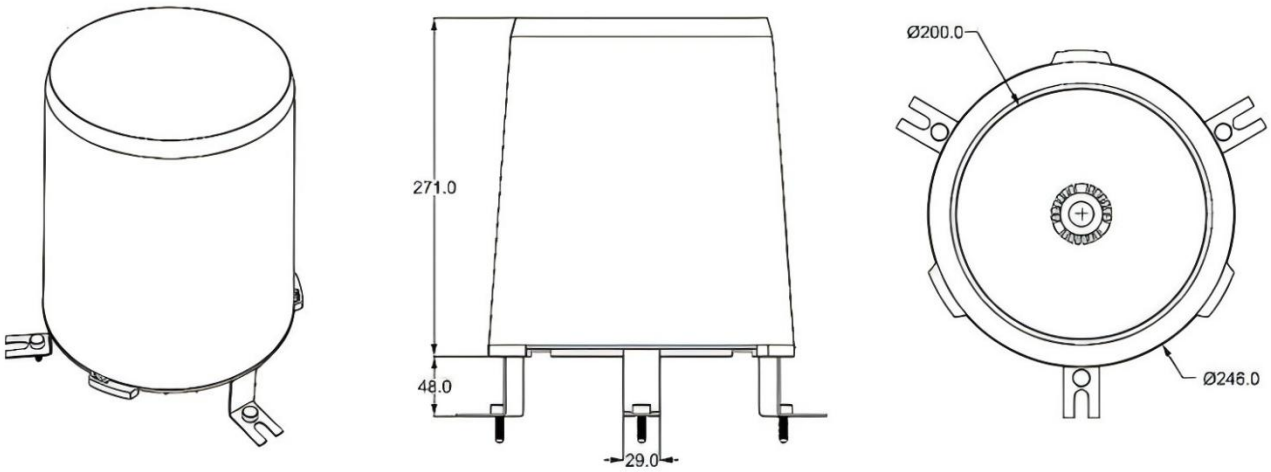
should be installed in an open, flat and unobstructed area, and avoid installation near buildings, trees or other objects that may affect the accurate measurement of rainfall. It is generally required that the distance between the height of the instrument's rain socket and the ground plane is 70cm, and it is ensured that no shelter higher than the instrument's rain socket is allowed within 3-5 meters around the instrument's mouth.

Reliable operation

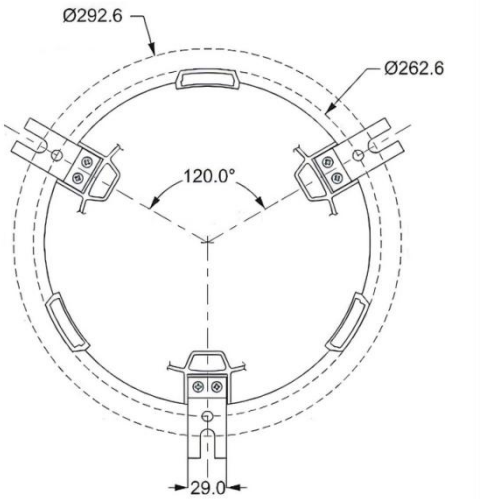
The correct installation position and method are critical to the reliability of the sensor. The sensor should be installed in an open, unobstructed place to ensure that rainwater can accurately flow into the water receiver. At the same time, the installation should ensure the level of the sensor to avoid affecting the measurement accuracy due to tilt. Regular maintenance and calibration are important measures to ensure the reliability of the sensor. expansion and improve sensor reliability.

Dimensions & packing

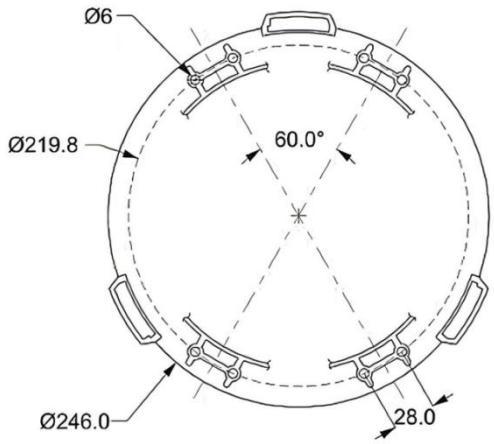
CDY-12A connector dimension



Installing



Installation hole position No.1

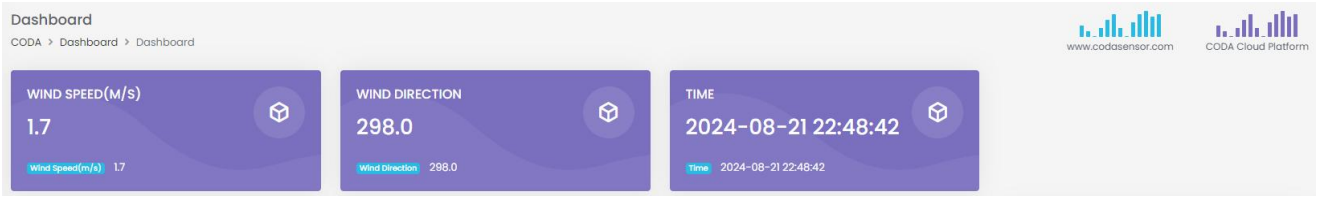


Installation hole position No.2

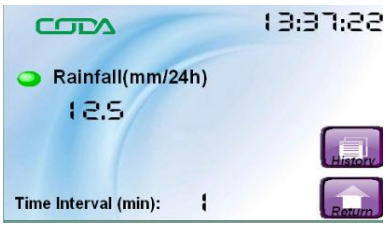
Display

4G/WIFI/Ethernet

Add wireless module, data upload to the cloud（Historical data can be downloaded）



Online LCD display（Historical data can be downloaded）



Technical data

Measurement performance, models CDY-18B

Items	Specification
Power supply	12VDC (adapter AC110V-AC220V), solar power, optional
Measured rainfall intensity	Max: 4mm/min
Resolution	0.1mm,0.2mm,0.5mm,1mm optional
Accuracy	<±4%
Display	4.3” color touch screen
Storage capacity	65000 pieces of data can be stored.
Inter-record gap	1min-240min adjustable
Communication interface①	RS232 or RS485(customized)
Operating temperature	-40℃-+75℃@5%-95%RH
Install accessories	Tripod，data logger shelter, cable optional
Dimension	Data logger :4.3“
Relay and alarm output	Customized alarm and relay control output

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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