



CDF-11A Wind Direction Sensor

For weather automation applications



Features

- Low starting threshold
- Overall carbon fiber material
- Strong corrosion resistant ability
- Light structure
- Various output signals optional
- Easy Installation
- It can effectively resist the influence of external factors such as electromagnetic interference and vibration interference to ensure the reliability of measurement results
- Strong corrosion resistance: Plastic material has good corrosion resistance and can be used for a long time in harsh environments

The CDF-11A wind direction sensor is a sensitive wind direction indicator that gives a visual indication of wind direction. High precision magnetic sensitive chips are built in the housing shell. The wind vane is constructed on low inertia light metal to show wind directions. The product is wide range, good linearity, strong anti-lightning strike, good performance.

Typical installation locations

- Top of building
- Walls
- Open areas
- Outdoor locations

Design structure

Wind vanes are usually streamlined to reduce wind resistance and ensure sensitive rotation even in light winds. For example, it can be designed to resemble the shape of an airplane wing, with a sharp front end and a gradually wider rear end, which allows wind to flow smoothly over the surface of the vane and reduces the influence of air turbulence on its rotation. It is necessary to ensure that the center of gravity of the wind vane is located on the rotation axis, so that the wind vane is more stable when rotating.

Easy installation

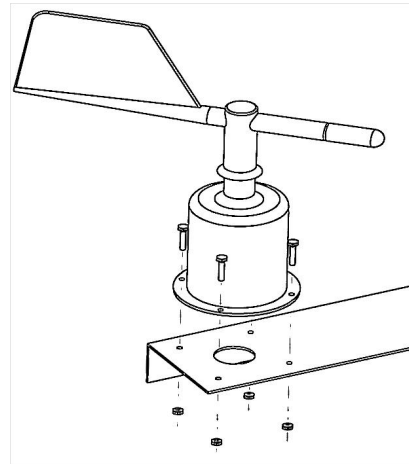
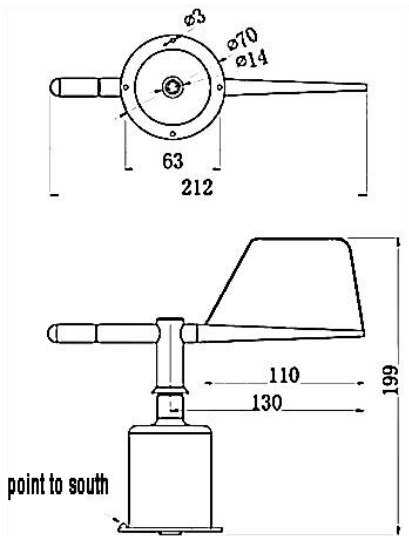
Choose an open area, away from buildings, trees, large equipment and other objects that may block or interfere with the wind. Make sure there is enough space around the wind vane for the wind to flow freely to get accurate wind direction information. According to the installation method of the wind vane, it is fixed on the support structure. Common installation methods include threaded connection, flange connection, etc. Make sure the connection is secure and not loose. For the wind vane that needs to be adjusted, the initial Angle adjustment can be made during the installation process to make it point in the correct direction.

Reliable operation

The rotating shaft should adopt a high-precision processing technology to ensure that it is closely matched with the wind vane and rotates flexibly. Stainless steel shafts or specially treated plastic shafts can be used, while bearings are installed at the point of contact between the shaft and the wind vane to reduce friction and wear.

Dimensions & installing

CDF-11A connector dimension



Movable pole bracket



Cross arm bracket

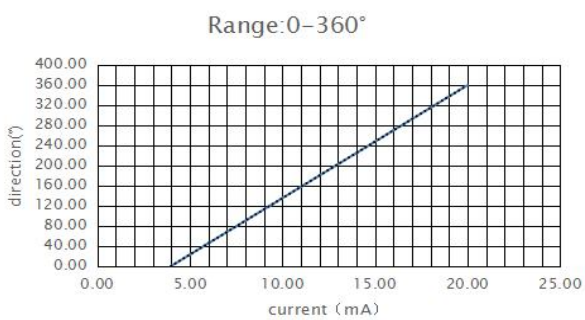


Stainless steel bracket

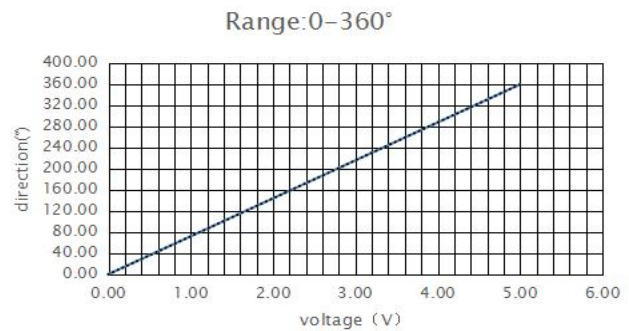


Output characterist

Current



Voltage



Rs485

If the transmission distance is over 100m, please add a 120Ω terminal matching resistances on the front end and back end of bus interface respectively. See the modbus communication protocol specification.

Technical data

Measurement performance, models CDF - 11 A

Output	4-20mA	0-5V	RS485
Supply Voltage	5V,12V-24V	5V,12V,24V	5V,12V-24V
Load Capacity	<500Ω(typ 250Ω)	>1kΩ	
Range	0~360°		
Accuracy	±3°		
Resolution	1°		
Starting Threshold	<0.5m/s		
Limit wind speed	50m/s		
Ingress Protection	IP65		
Operating Temperature	-40℃~+50℃		
Cable Grade	Nominal voltage:300V ,Temperature grade:80℃		
Weight(unpacked)	195g		
Dimension	Turning Radius:147mm,Height:199mm		
Main material	Carbon fiber		
Storage Condition	10℃-50℃@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-12A	Pipe wind speed	RS485 4-20MA 0-5V 0-10V	Duct type wind speed sensor
CDF-13B	Wind speed display controller	LED display	Wireless output relay output
CDF-15A	Digital Anemometer	LCD display	Hand-held anemometer
CDF-20B	Combined Wind Speed & Direction	RS485 4-20MA 0-5V 0-10V	Integrated wind speed and direction
CDF-21A	Ultrasonic Wind Speed & Direction	RS232/RS485(Modbus/NMEA-0183), Voltage(0-5V),Current(4-20mA) optional	Ultrasonic principle
CDF-22A	Mini Ultrasonic Wind Speed & Direction	4-20mA,RS232/RS485(Modbus or NMEA-183), SDI-12	Ultrasonic principle
CDF-26B	Recorder station for wind	LCD display & 4G WIFI Ethernet	Wind speed & direction recorder
CDQ-T6A	Miniature Ultrasonic Automatic Weather	RS485	Wind speed & direction temp & humidity & pressure
CDW-33A	Atmospheric Temperature, Humidity & Pressure	RS485	Shelter installation
CDY-12A	Economical Tipping Bucket Rainfall	Pulses(@10kΩ&0.01uF),RS485	Diameter :φ200mm, height: 271mm
CDG-10B	Solar Radiation	0-5V,4-20mA,RS485	Spectral range:300~1100nm

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