CG-FS
Wind speed sensor

Product

manual

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CG-FS, wind speed sensor

Product overview

This product mainly uses polymer carbon fiber as raw materials, has good corrosion, corrosion prevention and other characteristics, can ensure that the instrument long-term use of rust, at the same time with the internal smooth bearing system, to ensure the accuracy of information collection. Small and light, easy to carry and assemble, the three-cup design concept can obtain external environment information.

1. Functional characteristics

◆ Small size, easy to carry, simple installation

◆ High measurement accuracy, wide measurement range, and good stability

◆ Reasonable structure design, good appearance quality

◆ Good data information linearity, long signal transmission distance, strong resistance to external interference ability

2. Scope of application

It can be widely used in greenhouse, environmental protection, weather station, ship, wharf, aquaculture and other environments.

3、Working, storage conditions

Operating temperature: -40~85° C

Working Humidity: 0 ~ 100% RH

Storage temperature: -40~125° C

Storage humidity: <80% (no condensation)

⊙ technical parameter

Starting wind force: 0.2-0.4m/s

Measurement accuracy: ± (0.3+0.03V) m/s (V indicates wind speed value)

☑Signal output: (mark ″□″ is the model you purchased)

□Voltage-mode

Range: 0-32.4 m / s

Power supply voltage: 7V~24 V DC

Output signal: 0.4~2V

Wind speed value = (output voltage-0.4) / 1.6 * 32.4

Power supply voltage: 12V~24 V DC

Output signal: 0~5 V, 1~5 V

Wind speed value = output voltage / 5 * 32.4

Wind speed value = (output voltage-1) / 4 * 32.4

□current-mode

Range: 0-32.4 m / s

Power supply voltage: 12V~24V DC

Output signal: 4 ~ 20 mA

Load capacity: 200 Ω

Wind speed value = (output current-4) / 16 * 32.4

□Pulse type

Range: 0-60 m / s

Output signal: Pulse (0.88 m/s per pulse)

Signal description: add pull resistance logic 1 = VCC, logic 0 = GND

Power supply voltage: 5V~24V DC

□Type RS 485

Range: 0-32.4 m / s

Power supply voltage: 7V~24V DC
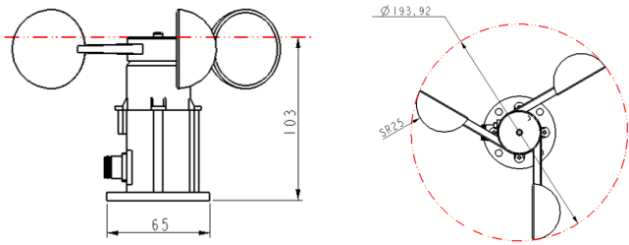
Communication protocol: Modbus-RTU

Equipment power consumption: <15 mA

Protection level: IP66

Power-on response time: 2s

Dimensions and Weight

Appearance size: as shown below

Overall weight: 98g

## ⊙ Installation Method

Using the flange installation method, the flange connection holds the lower pipe of the wind speed sensor on the flange plate, the chassis Φ 65mm, opens four mounting holes Φ 6mm on Φ 50mm circumference, and uses the bolts to keep the whole set of instrument at the level, ensure the accuracy of the wind speed data, the flange connection is easy to use and can withstand high pressure.

Dine wiring definition

Line color	Brown	Black	Blue	Gray
analog signal	Power Positive	Power negative	signal	
RS485	Power Positive	Power negative	485A	485B

Output map of uterine cord signal

脉冲、电流、电压输出类型　　485输出类型
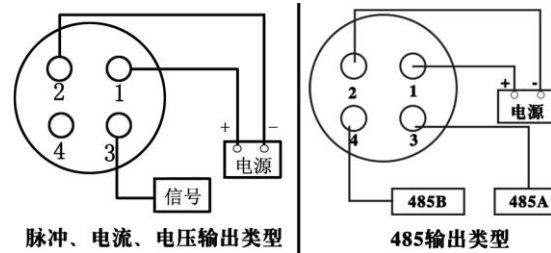
MODBUS Agreement (customizable)

◆ Communication mode: 485 communication, and the transmission distance is <1,000 meters

◆ Communication rate: 9,600, n, 8,1

◆ Communication protocol: MODBUS-RTU protocol, the factory station number is Station 2, which can be modified as required.

ModBus The protocol commands include:

Read out the sensor value (factory station 2)

Example of the read numerical command format:

02 03 00 00 00 01 84 39

Note: the first byte 02 is the station number. If you have changed the station number setting, change 02 to the station number you set. At the last two digits, 84 39 is the 16-bit CRC check value.

Example of the returned command format:

02 03 02 00 1F BD 8C

Note: Position 4 and 5 of 00 1F is the value of wind speed, and BD 8C is the CRC check code.

Data resolution method:

Wind speed (m/s) =0X001F/10=31/10=3.1

Modify your station number

Method 1: know the current station number, send the following instructions

02 10 10 00 00 01 02 00 **03** E3 60　Its function is to change the station number from 2 to 3.

Note: The italic characters are replaced by the original station number, and the main characters are replaced with the target station number value desired to be modified, and the value of CRC calculated by the customer should be sent.

Method two: know the current station number, send the following instructions

02 06 10 00 00 **03** CD 38 Its function is to change the station number from 2 to 3.

Note: The italic characters are replaced by the original station number, and the main characters are replaced with the target station number value desired to be modified, and the value of CRC calculated by the customer should be sent.

Method three: forget the original station number, you need to connect the product to the computer alone, pay attention to it

There can be no other 485 products on the bus. Use station 0 to operate them. The instructions are as follows:

00 10 10 00 00 01 02 00 **03** FA 00

Note: The big character is the target station number value intended to be modified, and the customer calculates the CRC check value by himself.

Preparation and examination before use

<u>pay attention to</u>

⚠ Please read this manual completely before use

⚠ Connect the equipment line correctly

<u>earlier true recognize</u>

Check that the device is the same as the equipment you purchased

Check the appearance of the equipment for damage

Check whether the equipment accessories are complete

<u>warn</u>

⊘ Failure to wire sequence may cause damage to the equipment and the instruments connected to the equipment

⊘ When the input power exceeds the upper limit of access power, damage to the device

Failure analysis and troubleshooting

1. The sensor output signal is abnormal	2, the sensor has no signal output
◆ Check whether the power supply voltage is stable ◆ Check whether the power supply range is normal ◆ Check whether the line is falsely connected	◆ Check whether the positive and negative power supply and the ground wire are connected correctly ◆ Check whether the power supply voltage meets the requirements

Vacation and maintenance

This instrument is a technology product with excellent design and functional principle, and should pay attention to maintenance and maintenance. The following recommendations will help you use the maintenance service.

Avoid the scraping of the instrument, maintain the external integrity, and increase the service life of the instrument

When using the instrument, please fix the connection parts firmly to avoid damage to the instrument

Treating instruments roughly can destroy the internal circuit boards and sophisticated structures

Do not apply the instrument with paint, which will block the debris in the removable parts and affect the normal operation

Clean the outside of the instrument by using a clean, dry soft cloth

Check the power supply of other configured equipment regularly to ensure the normal operation of the instrument