RK100-01G Wind Speed Sensor

Hunan Rika Electronic Tech Co.,Ltd

Add: 401, 1st Unit, 10th Bd, International Enterprise Center, No.268 Xinxing Rd, Yuhua Dist, Changsha, 410116 Hunan, China.

T:+86-731-85132979

E:info@rikasensor.com

W:www.rikasensor.com

RK100-01G wind speed sensor is made of aluminum alloy material, using special mold precision die-casting process, small dimensional tolerance, high surface precision, internal circuits are protected, and the sensor has the characteristics of high strength, weather resistance, corrosion resistance and water resistance. The cable connector is a military plug, which has good anti-corrosion and anti-corrosion performance, which can ensure the long-term use of the instrument. It can be widely used in greenhouses, environmental protection, weather stations, ships, docks, tower cranes, heavy machines, cranes, ports, docks, cable cars and other places where wind speed needs to be measured.

FEATURES

- Easy to carry and install
- High measurement accuracy and good stability
- IP65 protection class
- Strong anti-electromagnetic interference ability
- Strong anti-interference ability
- Aluminum alloy material is light in weight and high in strength
- Unique internal treatment, strong anti-vibration ability

Part:

Wind speed sensor: 1

Cable: 1

Install screws: 1 sets

SPECIFICATIONS

Item	Technical Specification
Supply Voltage	DC9-30V
Range	0-60m/s
Accuracy	±3%
Resolution	0.1m/s
Response time	<1s
Output	4-20mA,RS485
Starting Threshold	0.2m/s
Power consumption	<1W
Ingress Protection	IP65
Operating Temperature	-20℃-+55℃
Main material	Aluminum alloy
Storage Condition	10℃-60℃@20%-90%RH

OUTPUT CHARACTERISTICS

- **Pulses**

Characteristic transfer function:

V=0.083*F

(where V = wind speed (m/s),F = output frequency(Hz))

- **Current**

Characteristic transfer function:

V=(I-4)/(20-4)*30(Range:0-30m/s), V=(I-4)/(20-4)*60(Range:0-60m/s).

(where V = wind speed (m/s),I = output current(mA))

- **Voltage**

Characteristic transfer function:

V=U/(full scale voltage-zero point voltage)*30(Range:0-30m/s), V=U/(full scale voltage-zero point voltage)*60(Range:0-60m/s).

(where V = wind speed (m/s),U = output voltage(V))

- **RS485**

If the transmission distance is over 100m, please add one 120Ω terminal matching resistance on the front end and back end of bus interface respectively.See appendix for communication protocol.

DIMENSION & MOUNTING

- When the wind speed sensor is unpacked it should be checked carefully for any signs of shipping damage.
- Proper placement of the instrument is very important. Eddies from trees, buildings, or other structures can greatly influence wind speed observations. To get meaningful data for most applications locate the instrument well above or upwind from obstructions. For some applications it may not be practical or necessary to meet these requirements.
- Flange mounted, fix four screws on the bracket and keep the product horizontal.

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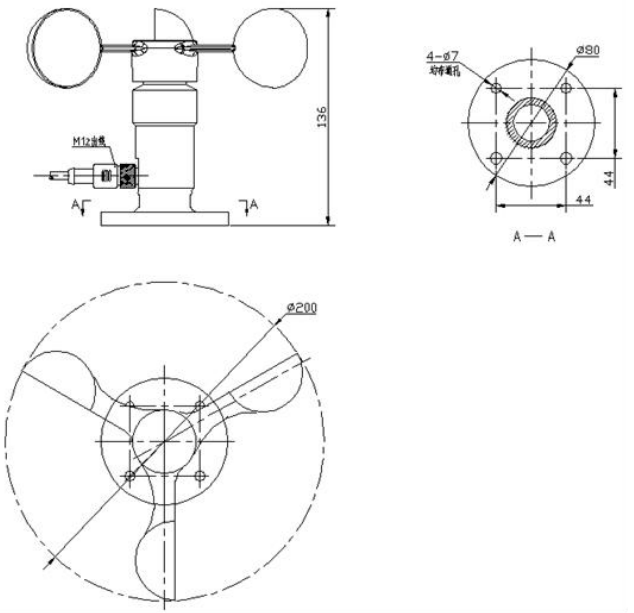

WARRANTY

This product is warranted to be free of defects in materials and construction for a period of 12 months from date of lead time.

Liability is limited to repair or replacement of defective item.

ELECTRICAL CONNECTIONS

Connector（cable）	RS485
Red	V+
Black	V-
Yellow	RS485A
Green	RS485B

Note: This product has been tested and complies with European CE requirements for EMC directive.

Communication Protocol（MODBUS）

Transmission mode: MODBUS-RTU,**Baud rate:** 9600bps,**Data bits:**8,**Stop bit:**1,**Check bit:**no

Slave address:the factory default is 01H (set according to the need,01H to FDH)

- **The 03H Function Code Example: Read The Wind Speed**

Host Scan Order(slave address:0x1)

01 03 00 00 00 01 840A

Slave Response

01 03 02 00 2E 3858

Wind speed:(002E)H=(46)D,46/10=4.6(m/s)

- **The 06H Function Code Example: Modify the slave address(After the restart to take effect)**

Host Scan Order (Changed the 01H to 02H):

01 06 00 02 00 02 A9CB

Slave Response:

01 06 00 02 00 02 A9CB

- **If you forget the original address, you should use the broadcast address(FEH) (ensure that no other devices on the bus at this time).**

Note:

1. All underlined is fixed bit;

2. The last two bytes is CRC check command.

CE Complies with applicable CE directives.

Manual subject to change without notice. Version 3.0