

# RK150-01 Wind Speed Display Controller User Manual



Revision Time	Reviser	Current Version	Remarks
20250402	SUN	V5.0	

## User Notice

Please read this manual carefully before use to ensure safe and optimal operation. Retain this manual for future reference.

### Pre-Use Instructions

- Carefully review this manual and follow all operational and safety guidelines to prevent malfunctions and hazards.

### Unpacking Inspection

- Upon receipt, carefully inspect the sensor device and accessories for any shipping damage.
- If damage is detected:
- Immediately notify the manufacturer and distributor.
- Retain all packaging materials for return or replacement processing.

### Parts List

Item	Quantity	Remarks
Wind speed sensor	1	
Display controller	1	
Cable between sensor and controller	1	For wired type, the length depends on the order
Control cable	1	The length depends on the order
Controller mounting screw	1	Set
Wind speed sensor mounting screw	1	Set
Wind speed sensor antenna	1	For wireless type
Controller antenna	1	For wireless type

## 1. Product Introduction

The RK150-01 anemometer is equipped with an LED digital display screen that can intuitively display real-time wind speed. Built in microprocessor with high performance and low power consumption. Wind speed warning and alarm values can be set through the buttons on the panel. When giving a warning or alarm, the wind speed sensor signal output can control the relay action. Sensors and anemometers can be connected both wired and wireless to monitor environmental wind speed in real-time.

## 2. Product Features

- Easy operation
- Visual display
- Real-time monitoring
- Rapid response
- Low power consumption
- With self-checking function
- 2 relays correspond to early warning and alarm

## 3. Applications

- Weather monitoring stations
- Safety monitoring of high altitude equipment
- Ports
- Solar and Wind power generation
- Mobile weather monitoring vehicles
- Marine vessels
- Remote airports & Helipads
- Road & Rail tunnels

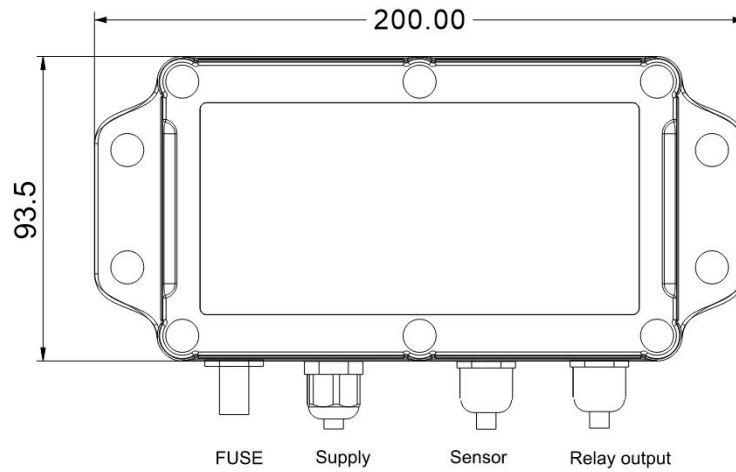
#### 4. Specifications

Items	Specification	
Range	0-60m/s	0-216km/h
Accuracy	$\pm(0.3+0.03V)m/s$	$\pm(1.08+0.11V)km/h$
Resolution(Display)	0.1m/s	0.1km/h
Early Warning	Any value within 1 m/s ~59 m/s, the early warning value must be lower than the alarm value	Any value within 1km/h ~212km/h, the early warning value must be lower than the alarm value
Alarm	Any value within 1 m/s~60 m/s	Any value within 1km/h ~216km/h
Alarm Response Time	<100mS	
Type of Alarm	Sound and light alarm	
Contact Capacity	10A@30VDC/250VAC	
Wired Type	Cable: 200m(max.) between sensor and controller	
Wireless Type	Effective distance: 1km(LOS) between sensor and controller	
Operating Temperature	-30℃~+70℃	
Power Supply	AC100-240V/DC12V-DC24V	
Power Consumption	Wired:<3W(sensor & controller)	
	Wireless:sensor: 0.25W,controller: 2.5W	
Ingress Protection	Controller:IP54,wind speed sensor:IP65	
Weight(Unpacked)	Controller:315g,wind speed sensor:240g	
Main Material	Controller(housing):ABS,wind speed sensor:Aluminum alloy	
Storage Condition	10℃-50℃@20%-90%RH	

#### 5. Electrical Connections

Power supply 12-24VDC		Control output			
		Early warning		Alarm	
Cable	Power	Cable	Relay output	Cable	Relay output
Red	V+	Yellow	NC	Green	NC
		Black	COM	Brown	COM
Black	V-	Red	NO	White	NO

## 6. Product Dimensions



## 7. Operation

### 7.1 Wired Connection Sensor

- Fix the wind speed sensor securely and ensure that its cable is properly connected to the wind speed display controller.
- Turn on the power of the wind speed display controller, and the real-time wind speed will be displayed. If the cable connection is poor or the wiring is incorrect, 1 minute later the display will show "00.E", simultaneously triggering sound and light alarms.
- Press the "Setting" button, and the number "1" will flash. Press the "+" button to adjust the warning threshold. Press the "Setting" button again, and the number "2" will flash. Press the "+" button to adjust the alarm threshold. Press the "Setting" button once more to enter normal operation mode. **Note: The warning threshold should be lower than the alarm threshold.**
- Press the "Test" button to test the alarm. The alarm light will turn on, an audible alarm will sound, and the relay will be triggered.

## 7.2 Wireless Connection Sensor

- Fix the wind speed sensor securely and ensure that there are no tall obstructions between the sensor and controller.
- Turn on the power of the wind speed sensor and display controller, and the real-time wind speed will be displayed. If the wireless connection is poor, 1 minute later the display will show "00.E", simultaneously triggering sound and light alarms.
- Press the "Setting" button, and the number "1" will flash. Press the "+" button to adjust the warning threshold. Press the "Setting" button again, and the number "2" will flash. Press the "+" button to adjust the alarm threshold. Press the "Setting" button once more to enter normal operation mode. **Note: The warning threshold should be lower than the alarm threshold.**
- Press the "Test" button to test the alarm. The alarm light will turn on, an audible alarm will sound, and the relay will be triggered.

## 8. Installation Guidelines

- Ensure no obstacles (e.g., buildings, trees, billboards) exist around the device to prevent local airflow interference.
- Avoid areas with strong electromagnetic interference (e.g., high-voltage power lines, motors) and corrosive environments.

### 8.1 Installation Method

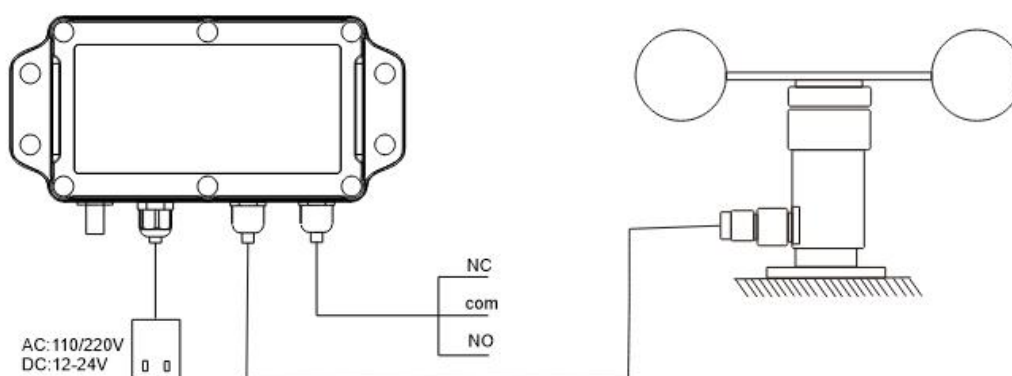


Figure 8.1.1  
Wired Connection for Wind Speed Sensor

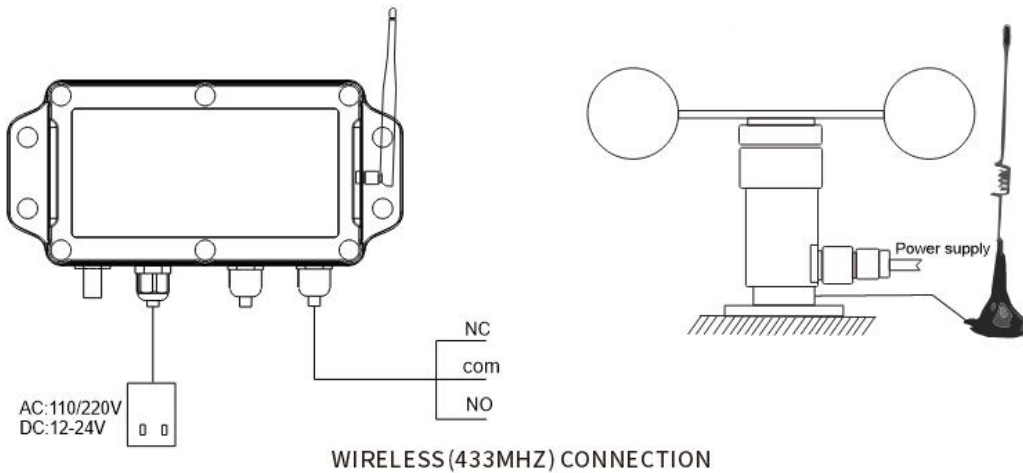


Figure 8.1.2  
Wireless (433MHz) Connection for Wind Speed Sensor

## 9. Precautions

### Package and Model Verification

- Ensure the packaging is intact and verify the device model and specifications match your purchased product.

### Powered Wiring Prohibition

- Do not connect wires while powered. Only energize the device after confirming correct wiring.

### Component Modification Restriction

- Do not alter factory-soldered components or pre-connected wires.

### Precision Handling Requirement

The sensor is a precision device. Avoid:

- Unauthorized disassembly
- Structural components are strictly prohibited from being compressed under stress

### Environmental Protection

- Avoid moisture exposure to maintain measurement performance.

**Note:** Unauthorized modifications void the warranty.

## 10. Troubleshooting

### No Signal Transmission:

- Verify wiring correctness and secure connections.
- Check for possible sensor damage and replace it if needed.
- Ensure the device is not affected by electromagnetic interference from nearby equipment.

### Persistent Issues:

- Contact the manufacturer if the above steps fail to resolve the problem.

## 11. Product Maintenance

### Maintenance and Safety


- Regularly clean and inspect the device to maintain performance.
- Do not expose the device to extreme temperatures, moisture, or corrosive substances unless explicitly specified.
- Unauthorized disassembly, modification, or repairs may void the warranty and lead to malfunctions

### Troubleshooting Protocol

- In case of malfunction, refer to the troubleshooting section of this manual.
- Do not attempt unauthorized disassembly or repairs.
- Contact the manufacturer's after-sales department directly for technical support.

## 12. Warranty Terms

This product comes with a one-year warranty, starting from the date of delivery. Within twelve months, the Company shall be responsible for free repair or replacement of any failure caused by sensor quality issues (non-human damage). Fees will be charged for repairs or replacements after the warranty period expires.

 Complies with applicable CE directives.

Manual subject to change without notice.

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