Rika Sensor RK120-07 Ultrasonic Wind Speed and Direction Sensor User Guide

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Rika Sensor RK120-07 Ultrasonic Wind Speed and Direction Sensor

Product Usage Instructions

Mounting & Dimension

- To mount the RK120-07 Ultrasonic Wind Speed & Direction Sensor, refer to the provided dimensions. Ensure proper installation for accurate measurements.

Equipment Maintenance & Attention

- If maintenance is required, lightly scrub the instrument with a cloth and soft detergent. Avoid using dissolvable reagents. Ensure proper cable connections and shield maintenance to maintain electromagnetic compatibility.

Installation Tips

- Avoid installing near radar scanning devices and turbulent areascaused by surrounding buildings. Install the sensor on the side of prevailing wind for optimal accuracy. Ensure proper power supply during operation.

RK120-0 7 The wind speed and direction meter are a kind of measuring instrument that uses the time difference of ultrasonic wave in the air to measure the wind speed and direction. RK120 07 uses low power chip with power consumption of only 0.2W, which is especially suitable for solar or battery-powered environments with high power consumption requirements. Due to the adoption of new technology and new process, the structure is more compact and compact. Optional temperature and air pressure module

FEATURES

- Adapt to complex weather conditions
- No moving parts, long service life
- The surface preservative treatment
- Strong anti-interference
- High accuracy

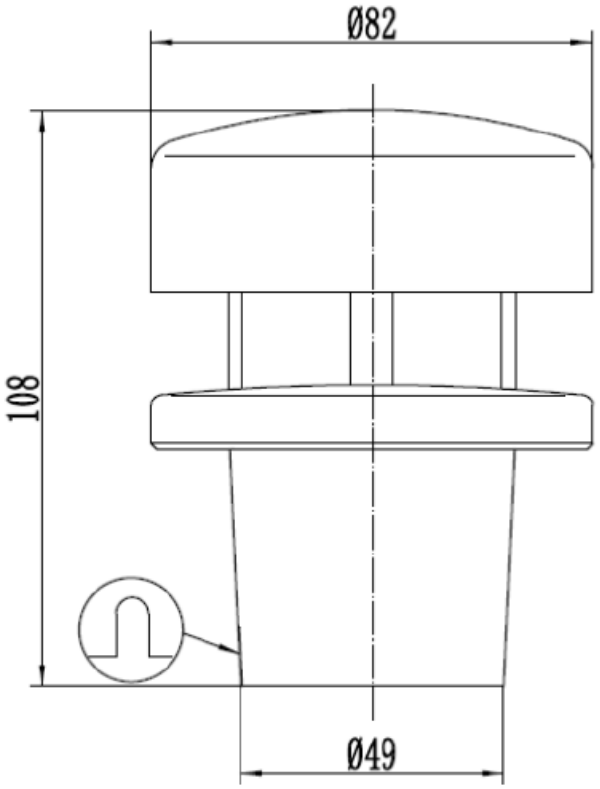
APPLICATIONS

- Environmental monitoring
- Sea going vessel
- Bridge & Tunnel
- Solar and wind power generation
- Wind resource assessment
- Drilling platform
- Automatic weather station
- Agriculture

SYSTEM TECHNICAL SPECIFICATIONS

Item	**Technical Specification**		
Power Supply	12-24VDC		
Power consumption	0.2W		
Output Signal	4-20mA①,RS232/RS485(Modbus or NMEA-183), SDI-12		
Operating Temperature	-30℃-+60℃		
Ingress Protection	IP65		
Dimension	Φ82*108mm		
Weight(unpacked)	0.18kg		
Main material	ASA		
Item	**Technical Specification**		
	Range	**Resolution**	**Accuracy**
Wind speed	0-40m/s	0.1m/s	±3%
Wind direction	0-360°	1°	±3°
Starting Threshold	0.1m/s	0.1m/s	
Extreme Wind Speed	60m/s		

DIMENSION



Step1:

- Positioning: Generally, RK120 07 is installed in a vertical installation pipe. ensure the measurement is on the same level.
- For indoor use, the sensor can be used anywhere. Directional installation to measure wind speed on different planes

Step2:

- There are rotary adjustable mounting holes at the bottom of the sensor. when mounting the sensor to ensure the indicator on the sensor comply with the geographic north

Step3:

- Installation: the installation pipe needs 3 equally spaced holes, tapping M5 screws, position7.5mm from the top of the pipe.

EQUIPMENT MAINTENANCE ATTENTION

Equipment maintenance:

- If there is dust on the instrument, it can be lightly scrubbed with a cloth st ained with (biodegradable) soft detergent.
- Do not use dissolvable reagents. Scrub carefully to avoid scratching the surface of the instrument. If there is

snow or ice on the surface of the instrument, wait for it to dissolve naturally slowly, and do not us e tools to remove it.

Attention:

- Do not install it on the same plane with any radar scanning device, and keep a distance of at least 2m
- If the cable is not properly connected after cutting, or the cable shield is not well maintained, EMC (electromagnetic compatibility) may be reduced
- Ensure the continuous power supply of RK 120 0 7 in operation.
- Avoid turbulence caused by surrounding buildings, such as trees, power poles, tall buildings, etc., which can affect. The accuracy of acoustic wind speed a nd direction detector is affected. The detector is best installed on the side of prevailing wind.
- If it is installed on the building, theoretically, the installation height of anemometer should be 1.5 of the building heights
- RK 120 0 7 can meet or even exceed the specifications listed in it, and can be used in environments around the world without calibration

PARAMETER SELECTION TABLE

Remark	Series	Type	Parameter	Supply	Output	Cable length	
RK							
	120						
		07					
			A				With atmospheric pressure
			X				Other
				A			12-24V
				X			Other
					A		4-20mA
					B		
					C		RS485(Modbus)
					D		RS485(NMEA-183)
					E		RS232(Modbus)
					F		RS232(NMEA-183)
					G		SDI-12
						4000	4m default
						10000	10m
						…	

- **Example:** R K1 2 0 0 7 A A G 4000 With atmospheric pressure, Supply:12 24V, Output: SDI 12 Cable length:4m.

MORE INFO

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FAQ

- **Q: How do I clean the instrument?**
  - A: Lightly scrub the instrument with a cloth and a soft detergent. Avoid using dissolvable reagents.
- **Q: What should I do if there is snow or ice on the instrument?**

- A: Wait for it to dissolve naturally. Do not use tools to remove it to avoid damage.

- **Q: How far should the sensor be installed from the radar scanning devices?**
  - A: Maintain a distance of at least 2m from any radar scanning device to ensure proper electromagnetic compatibility.

Documents / Resources

	Rika Sensor RK120-07 Ultrasonic Wind Speed and Direction Sensor [pdf] User Guide RK120-07, RK120-07 Ultrasonic Wind Speed and Direction Sensor, RK120-07, Ultrasonic Wind Speed and Direction Sensor, Wind Speed and Direction Sensor, Direction Sensor, Sensor

References

- Weather Sensors, Best Weather Station Manufacturer/Suppliers | Rika Sensor
- User Manual