

RK120-03 is a measuring instrument that uses the time difference of ultrasonic propagation in air to measure wind speed, direction, and acoustic temperature. The built-in signal processing unit can output corresponding signals according to user needs, with a lightweight and compact structure, no moving parts, and a high-strength structural design that can accurately detect in harsh weather conditions, making the components precise and stable, easy to maintain, and using open communication protocols. It can be widely applied in fields such as meteorology, oceanography, environment, airports, ports, laboratories, industry and agriculture, transportation and other fields.

FEATURES

- No moving parts, zero wear and tear
- Maintenance free, long service life
- ASA shell, more lightweight
- Adopting ultrasonic probe reflection type, the structure is more compact
- Probe heating, strong anti freezing ability
- Adopting acoustic phase compensation technology and random error identification technology to make the output smoother and more accurate
- Digital filtering technology with stronger resistance to electromagnetic interference
- Optional electronic compass, electromagnetic shielding and other functions

APPLICATIONS

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



SPECIFICATIONS

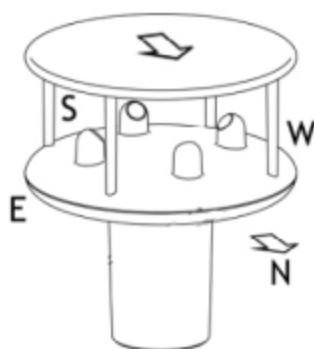
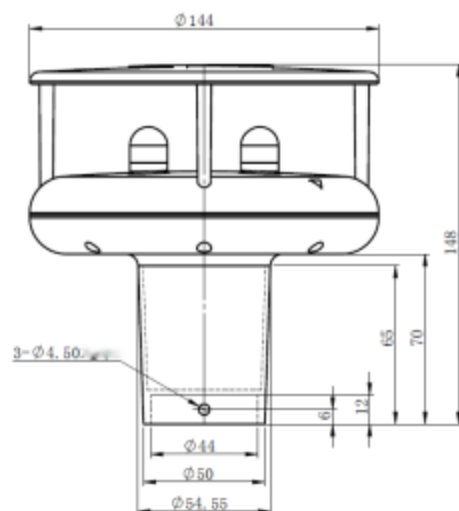
Item	Technical Specification		
	Wind speed	Wind direction	Atmospheric pressure
Range	0-45m/s, 0-60m/s, 0-80m/s (extended range, not standard)	0-360°	300-1100hPa
Resolution	0.01m/s	1°	0.1hPa
Accuracy	≤10m/s: ±0.2m/s >10m/s: <±2% the current value	±3°	±1 hPa
Starting threshold	0.1m/s	0.1m/s	
Power Supply	12-24VDC		
Power consumption	0.12W(normal mode), 0.008W(sleep mode), 1.8W(heating mode)		
Output signal	RS485(Modbus-Rtu/NMEA-0183)/RS232/SDI-12 4-20mA/0-5V(only for wind speed & direction optional)		
4-20mA output impedance	Impedance< 500 ohms		

Baud rate	4800-19200
Operating temperature	-40°C-+70°C
Storage temperature	-40°C-+80°C
Working humidity	0 - 100%
Ingress protection	IP66
Electronic compass	optional
Atmospheric pressure	optional
Dimension	Φ144*148mm
Weight(unpacked)	0.8kg
Main material	ASA

MOUNTING & DIMENSION

- The sensor has a rotatable installation hole at the bottom,
- When installing the sensor, ensure that the indicator arrow on the sensor is facing towards the geographic north.

Unit: mm



PARAMETER SELECTION TABLE

Remark	Series	Type	Parameter	Supply	Output	Cable length	
RK							
	120						
		03					
			A				Without compass & atmospheric pressure
			B				With electronic compass
			C				With atmospheric pressure
			D				With electronic compass & atmospheric pressure
				A			12-24V
				X			Other
					A		4-20mA
					B		0-5V
					C		RS485(Modbus)
					D		RS485(NMEA-183)
					E		RS232(Modbus)
					F		RS232(NMEA-183)
					G		SDI-12
						4000	4m,default
						10000	10m
						...	

Example: RK120-03AAA4000 Without compass & atmospheric pressure, Supply: 12-24V, Output: 4-20mA, Cable length: 4m.

Revision time	Reviser	Current Version	Remarks
20250329	Lee	V5.0	