RK120-01 Combined Wind Speed & Direction Sensor

Overview

The RK120-01 combined wind speed and direction sensor is assembled with precision-machined ABS and aluminum alloy parts, offering high strength and easy installation. The wind speed section features a traditional three-cup design made of ABS material, delivering excellent starting performance, wide measurement range, superior linearity, and reliable stability. The wind direction section utilizes a low-inertia vane that responds instantly to wind changes. When wind direction shifts, the rear-mounted angle sensor detects azimuth changes and converts them into corresponding electrical signal variations, providing outstanding linearity, high accuracy, and full 360° coverage without blind spots.

Features

Integrated wind speed & direction measurement

Low starting threshold

Good corrosion resistance

Compact and light design

Easy installation

Applications

Environmental monitoring

Bridge & tunnel safety

Renewable energy systems

Wind resource assessment

Automatic weather station

Agriculture monitoring

Technical Parameter

Item	Wind speed	Wind direction
Range	0-45m/s (current or voltage output); 0-70m/s (pulse, RS485, RS232 output)	0-360°
Resolution	0.1m/s	1°
Accuracy	±(0.3+0.03V) m/s, V is current wind speed	≤±3°
Starting wind speed	≤0.5m/s	
Limited wind speed	75m/s	
Supply	5V (only for digital output),12-24VDC	
Output signal	RS485,4-20mA,0-5V, RS232, pulse (NPN, only for wind speed)	
Power consumption	0.7W max.	
Operating temperature	-40℃-+70℃	
Ingress protection	IP65	
Main material	Aluminum alloy and ABS	
Storage	10-60℃@20%-90%RH	
Cable length	Default 2.5m, other length is optional	
Installation bracket	attached	
Weight(unpacked)	1200g(with bracket)	

Dimension

Unit:mm

Mounting

Arrow pointing south

1

make sure
wind direciton
upward

2
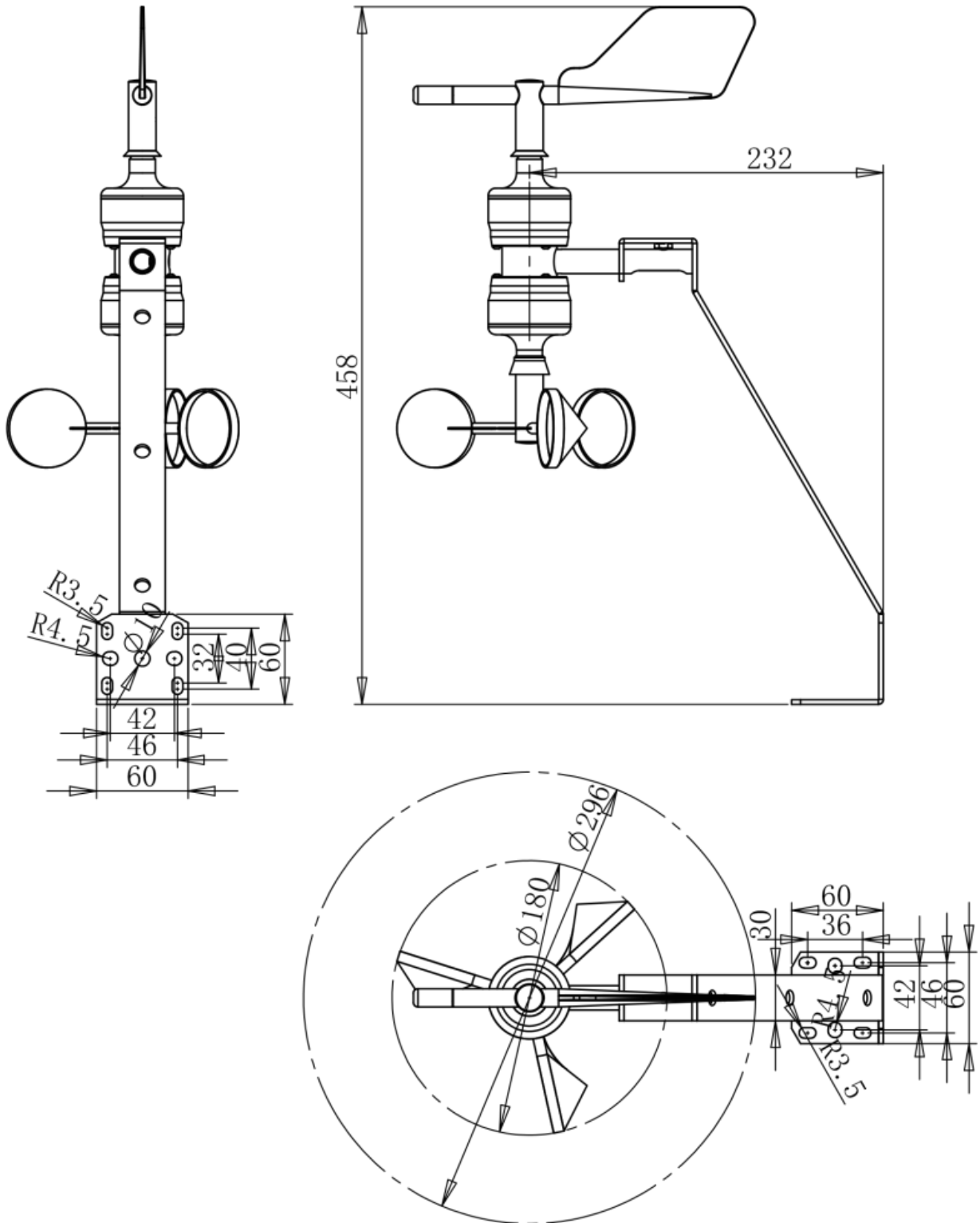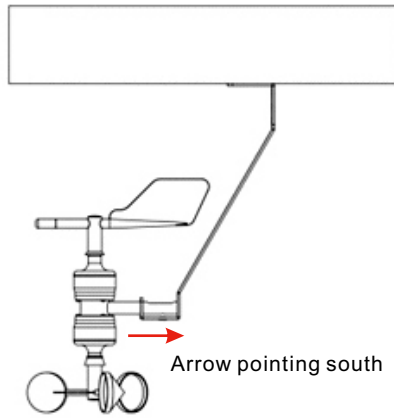
Arrow pointing south
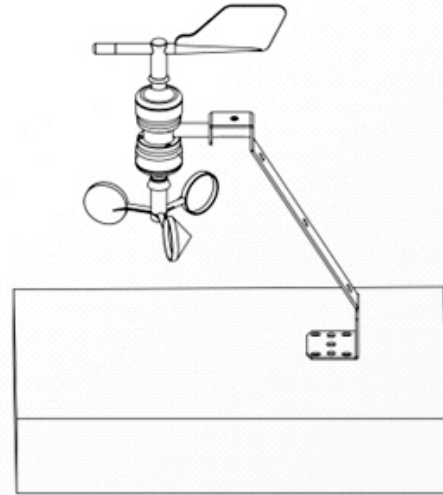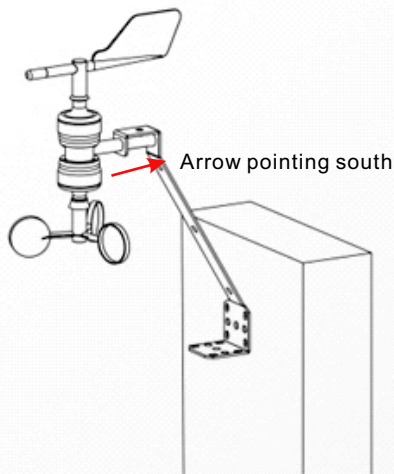
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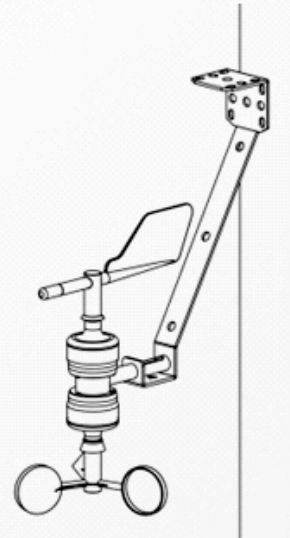
4

Installation diagram

Ensure that the indicator arrow points south during installation

Parameter Selection Table

Remark	Series	Type	Supply	Output	Cable Length	
RK						
	120					
		01				
			A			12-24VDC
			B			5V (only for digital output)
			X			Other
				A		4-20mA(0-45m/s,0-360°)
				B		RS485(0-70m/s,0-360°)
				C		0-5V(0-45m/s,0-360°)
				D		RS232(0-70m/s,0-360°)
				E		Pulse for wind speed Wind direction output is optional(0-70m/s,0-360°)
				X		Other
					2500	Units: mm(typ)
					…	Units: mm

Example: RK120-01AA2500 Supply:12-24V, Output:4-20mA,Cable Length:2.5m.

Revision time	Reviser	Current Version	Remarks
20250401	Lee	V5. 0	