



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	$\pm(0.3+0.03V)$ m/s, V is current wind speed	$\leq\pm3^\circ$
Starting wind speed	$\leq 0.5\text{m/s}$	
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°C - $+70^\circ\text{C}$	
Ingress protection	IP65	
Main material	Aluminum alloy and ABS	
Storage	$10-60^\circ\text{C}$ @ 20%-90%RH	
Cable length	Default 2.5m, other length is optional	
Installation bracket	attached	
Weight(unpacked)	1200g(with bracket)	

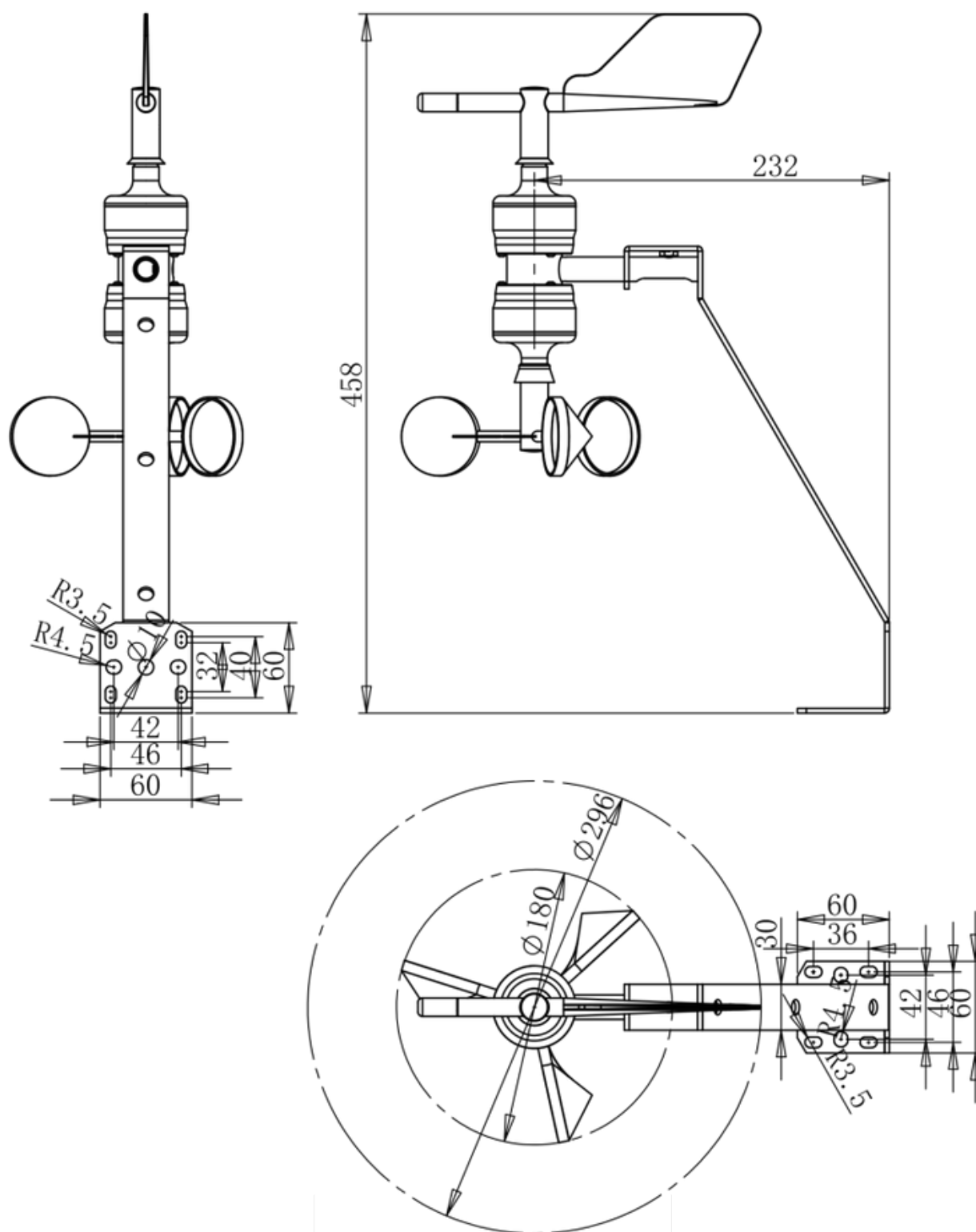


RK120-01 Combined Wind Speed & Direction Sensor



Dimension

Unit:mm

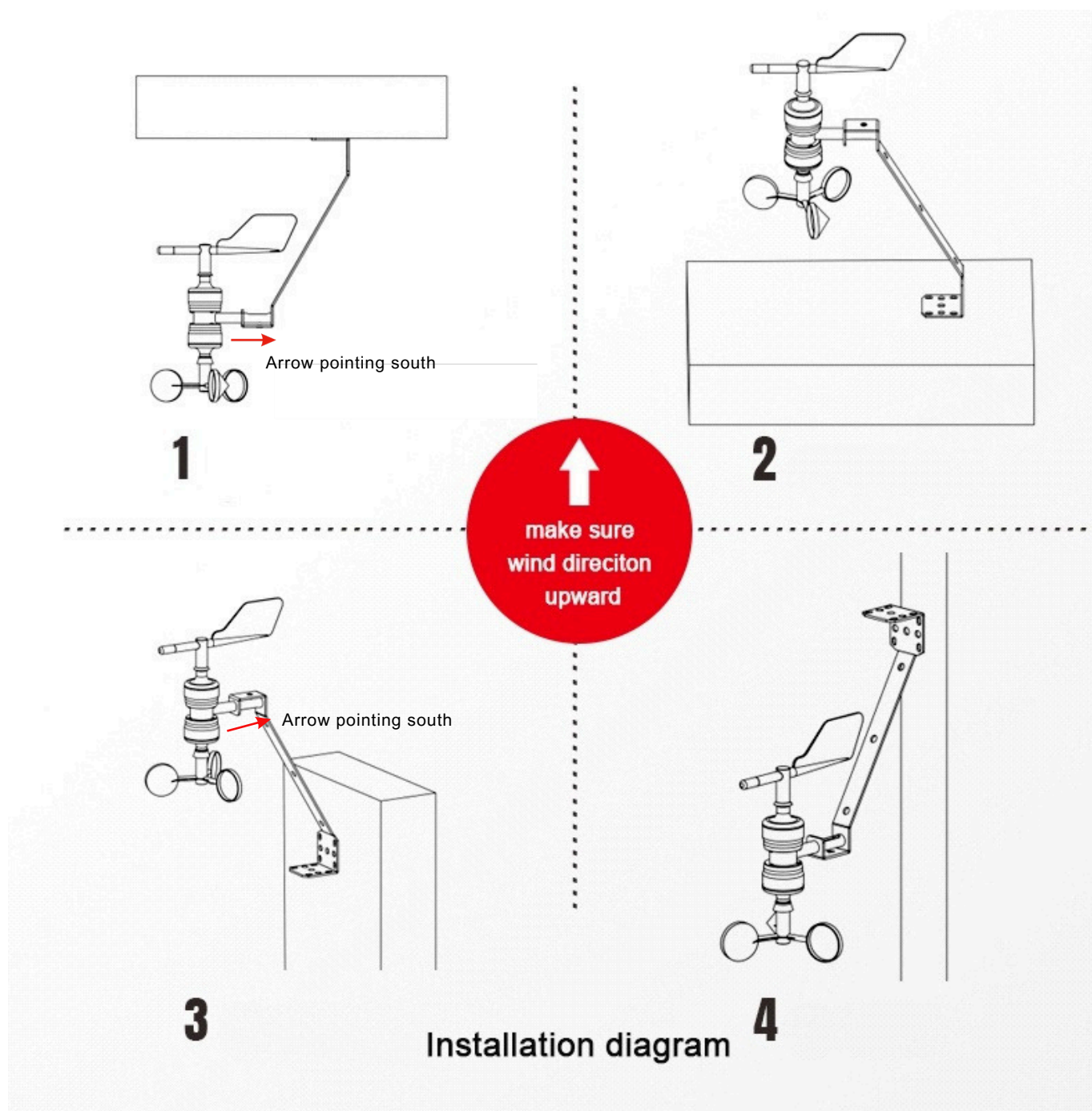




RK120-01 Combined Wind Speed & Direction Sensor



Mounting



Ensure that the indicator arrow points south during installation



RK120-01 Combined Wind Speed & Direction Sensor



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	