



Built for Accuracy in Harsh Wind Conditions

Overview

The **BS100-01 Wind Speed Sensor** is engineered for precise and reliable wind velocity measurement, even in challenging environmental conditions. It features advanced digital circuits with strong RFI and EMI resistance, along with automatic temperature compensation. The sensor provides voltage and current signal outputs through electromagnetic induction, maintaining a linear relationship with horizontal wind speed.

Constructed with durability in mind, the shell is made of high-strength aluminum alloy, while the wind cups are crafted from 304 stainless steel. The PCB board is coated with an anti-corrosion layer for added protection.

Designed to withstand harsh conditions, the sensor incorporates waterproof and corrosion-resistant features, with sealing rings at key points to effectively block water, salt fog, and dust intrusion.

With its robust design and dependable performance, the BS100-01 Wind Speed Sensor ensures accurate measurements and long service life in demanding environments.

Features

- ✓ Low Starting Threshold
- ✓ Massive All-Metal Construction
- ✓ Strong Corrosion Resistant Ability
- ✓ Stainless Steel Wind Cup, Anti-Wind Load until 70m/s
- ✓ Double Bearing Design
- ✓ Surge Protection Design
- ✓ Easy Installation

Applications

- ✓ Weather Monitoring Stations
- ✓ Safety Monitoring of High Altitude Equipment
- ✓ Ports
- ✓ Solar and Wind Power Generation
- ✓ Mobile Weather Monitoring Vehicles
- ✓ Marine Vessels
- ✓ Remote Airports and Helipads
- ✓ Road and Rail Tunnels

Technical Specifications

Output	Pulses	4-20mA	RS485	0-5V/0-10V/1-5V
Supply Voltage	5 ~ 24VDC	12 ~ 24VDC	12 ~ 24VDC	12 ~ 24VDC
Load Capacity	>2kΩ	<500Ω(typ 250Ω)		>2kΩ
Range	0 ~ 30m/s, 0 ~ 60m/s	0 ~ 30m/s, 0 ~ 60m/s	0 ~ 30m/s, 0 ~ 60m/s	0 ~ -30m/s, 0 ~ 60m/s
Accuracy	±0.5m/s(<5m/s) ±3%FS(≥5m/s)	±0.5m/s(<5m/s) ±3%FS(≥5m/s)	±0.5m/s(<5m/s) ±2%FS(≥5m/s)	±0.5m/s(<5m/s) ±3%FS(≥5m/s)
Starting Threshold	<0.5m/s			
Limit Wind Speed	70m/s			
Ingress Protection	IP65			
Operating Temperature	-30°C ~ 70°C			
Weight (Unpacked)	240g			
Dimension	Cup Rotor: ø200mm, Height: 126mm			
Main Material	Cup: 304 Stainless Steel, Main Body: Aluminum Alloy			
Finish	Polyester Powder Electrostatic Spraying (Black)			
Storage Condition	10°C ~ 60°C @ 20% ~ 90%RH			

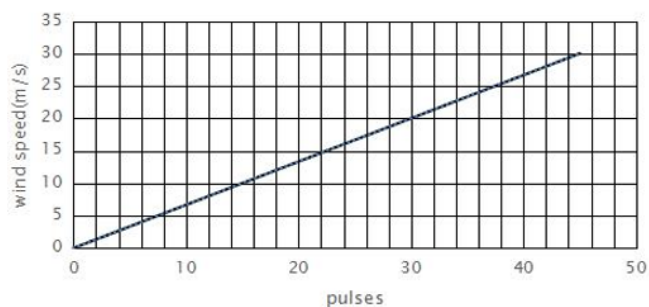
Output Characteristics

• Pulses

Characteristic transfer function: $V=0.667 \cdot F$

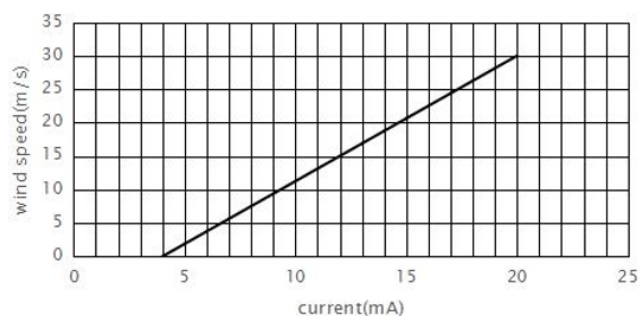
(Where V = Wind Speed (m/s), F = Output Frequency(Hz))

Range:0-30m/s

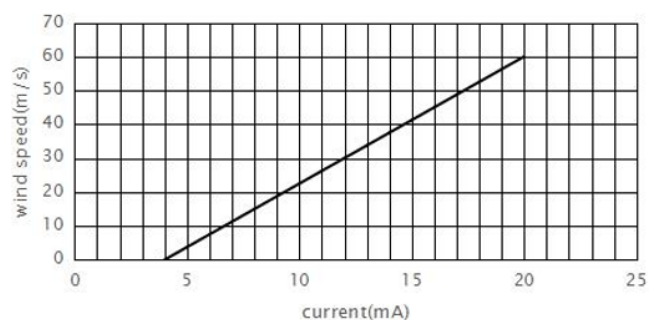


• Current

Range:0-30m/s



Range:0-60m/s



- **Voltage**

Characteristic Transfer Function:

$V=U/(\text{full scale voltage-zero point voltage}) \times 30(\text{Range:0} \sim 30\text{m/s}),$

$V=U/(\text{full scale voltage-zero point voltage}) \times 60(\text{Range:0} \sim 60\text{m/s}).$

(where V = wind speed (m/s), U = output voltage(V))

- **RS-485**

If the transmission distance is over 100m, please add a 120Ω terminal matching resistances on the front end and back end of bus interface respectively. See the modbus communication protocol specification.

Parameter Selection Table

Remark	Series	Type	Output	Range①	Cable Length	
BS						
	100					
		01				
			A			4 ~ 20mA
			B			0 ~ 5V
			C			0 ~ 10V
			D			Pulses
			E			RS-485
			X			Other
				A		0-30m/s (Recommended)
				B		0-60m/s
					1500	Units:mm (typ)
					3000	Units:mm
					...	Units:mm

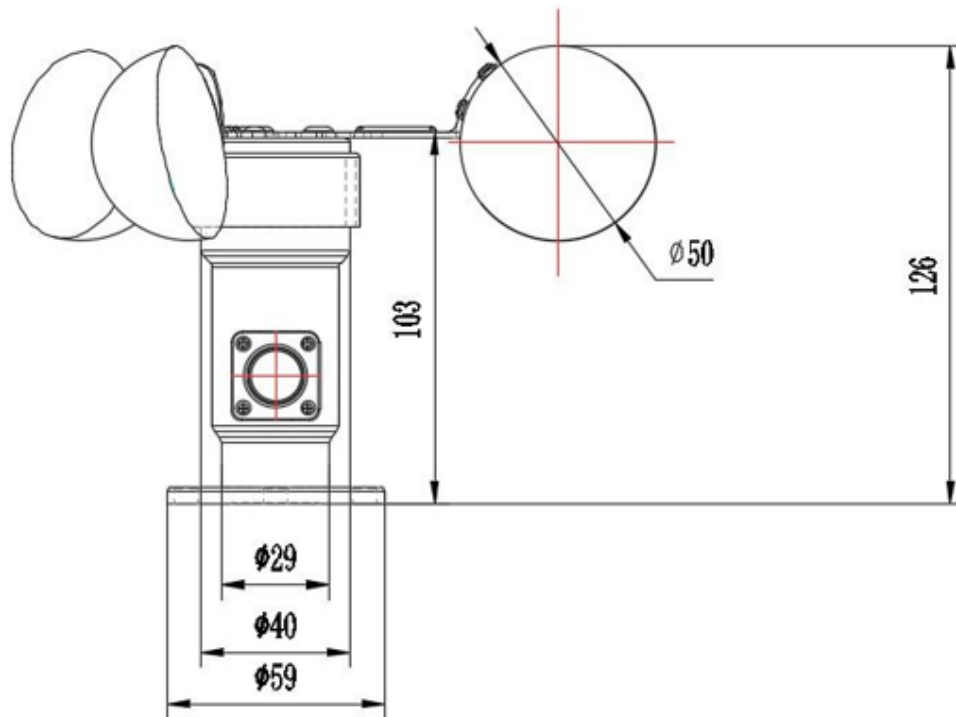
①It is recommended to use 0 ~ 30m/s range, which can get a better measurement accuracy. More than 30m/s wind is rare on mainland;

The default power supply voltage is 12 ~ 24VDC, if you have other requirements please confirm when ordering.

Example: RK100-01AA1500 Output: 4 ~ 20mA, Range:0-30m/s, Cable Length:1.5m.

Dimensions and Mounting

Flange mounted, fix four screws on the bracket and keep the product horizontal.



For comprehensive details, visit: www.buraq.com/BS100-01