

Product Name: WM-RK100-01 Wind Speed Sensor

The WM-RK100-01 Wind Speed Sensor is specifically designed to accurately and reliably measure wind velocity under the adverse environmental conditions. Digital circuits capable of strong RFI & EMI resistance and automatic temperature compensation are build-in, it output voltage and current signals by electromagnetic induction, The value and horizontal wind speed are linear relation. Shell is made of high-strength aluminum alloy, the wind cup is made of 304 stainless steel, the PCB board is painted with anti-corrosion coating, featured with water proof, corrosion resisting. Inside and turning position have sealing rings with nice sealing function, stop water, salt fog and dust getting in. The WM-RK100-01 Wind speed sensor has good performance in harsh environment.



■ 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 & helipads
- Road & rail tunnels

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■ 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:150mm			
Main material	Cup:304stainless steel, Main Body:Aluminum alloy			
Finish	Polyester powder electrostatic spraying(black)			
Storage Condition	10°C-60°C@20%-90%RH			

■ OUTPUT CHARACTERISTICS

Pulses

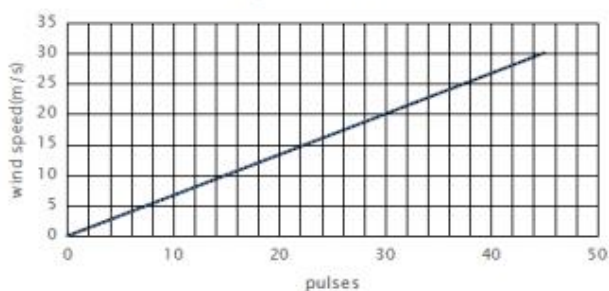
Characteristic transfer function:

$$V=0.667 * F (\text{Range:0-30m/s}),$$

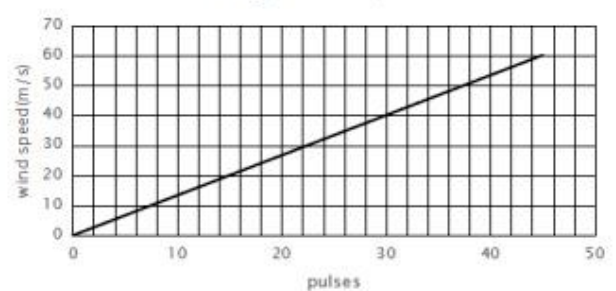
$$V=1.333 * F (\text{Range:0-60m/s}).$$

(where V = wind speed (m/s), F = output frequency(Hz))

Range:0-30m/s

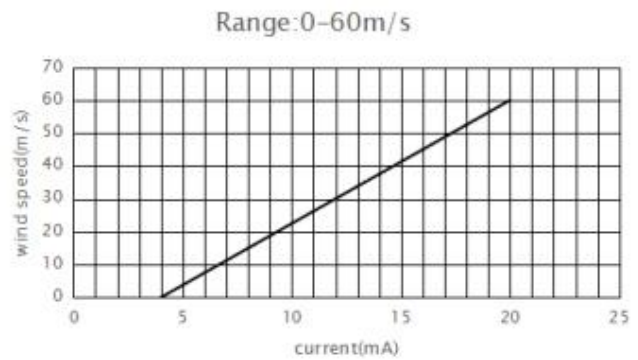
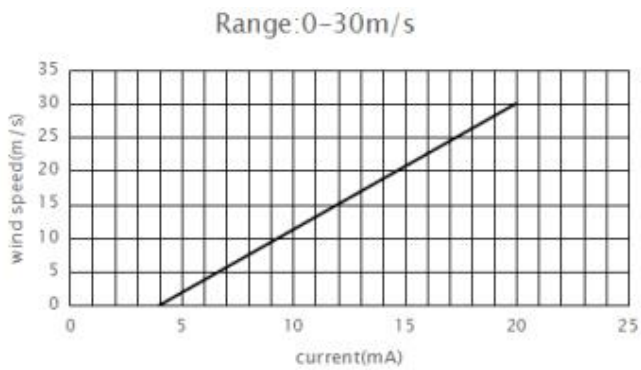


Range:0-60m/s



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Pulses



Voltage

Characteristic transfer function:

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

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

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

RS485

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. Please refer to the modbus communication protocol specification.

■ DIMENSIONS & MOUNTING

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

