MeteoWind Compact IoT

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- POLAR AND WINTER
- SHIPS
- SKI LIFT & SNOW MAKING
- SMART CITIES
- WEATHER STATIONS

IoT Wind speed & direction per WMO requirements

Compact anemometer and wind direction vane sensor with ultra-low power & no dead spot. **Meets all World Meteorological Organization measurement standards** of measurement. No wires to connect or batteries to change. No connectors to break.

Designed for SigFox & LoRaWAN wireless low-power networks. NB-IoT coming soon.

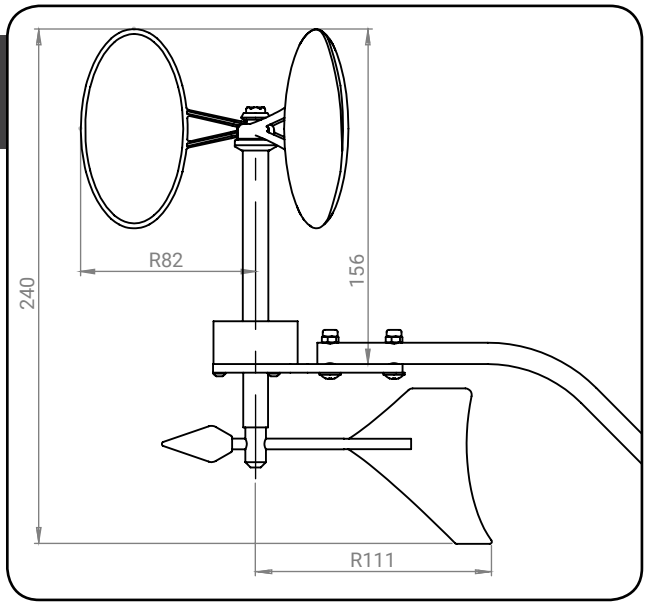
Featuring the elliptical cup design of MeteoWind 2, this anemometer offers superb aerodynamics in a more compact and cost effective form with an anodized aluminum body suitable for most environments. Offers **long-term wind measurement stability, serviceable ball bearings & reliability** in all environments.

Elliptic cups offer high snow resistance and high accuracy exceeding WMO standards

- Fast response rate to accurately capture wind gusts.
- Minimal over-speeding for accurate wind energy measurement.
- Robust two arm reinforced rotor cups.
- Flat elliptical cup shape offers superb snow shedding and very good hail resistance
- All-metal anodized-aluminum body and wind vane design

Open IoT-Wind wireless protocol for universal connectivity in IoT applications

- Uses **IoT-Wind**, an open communication protocol which permits direct connection to any **Internet-of-Things (IoT)** application and cloud platform.
- Magnetic wind vane sensor offers better than 3° accuracy.
- Anodized aluminum body and wind vane guarantee robustness, corrosion protection and longevity.
- Patented design of flat elliptic cups offers high-linearity aerodynamics and superb winter snow shedding even without heating.
- High response, linearity and accuracy with a very low < 1.5m distance constant.



For applications where Internet-of-Things (IoT) ease-of-use in all-weather conditions is important, along with WMO accuracy & reliability

COMPACT WIND PRECISION

all metal body, all-metal wind vane, replaceable cups, wireless/connector-less ease-of-use.

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Measurement standards of anemometer & wind vane				
	Range	**Resolution**	**Accuracy**	**Sampling rate**
Wind speed	0-100 m/s	0.1m/s	< 2% of measured value (0.3 - 50 m/s) or < ±0.3 m/s ±0.05m/s (4-16m/s) with MEASNET CALIBRATION	2 pulses per revolution
Wind direction	0-360°	1°	3° (no dead-spot)	4Hz
Linearity	R^2 > 0.99990			
Tilt angle sensitivity	Cosine response, see graph. (Horizontal wind speed measurement)			
Starting wind speed	<0.2m/s			
Default linearity constants (Calibration equation coefficients)	Defaults: Slope = 0.65 m/s | Offset = 0.2 m/s *(m/s = 0.65*freq(Hz) + 0.2)*			
Distance constant (Delay distance)	less than 1.5m (est.) (per ASTM D 5096-96)			
Wireless specifications				
LoRaWAN	Open IoT-Wind communication protocol, Available for all LoRaWAN regions. Customer needs to specify Region, Network and Gateway information for correct region specific configuration.			
Sigfox	Available for RC1, RC2, RC3, RC4 regions where Sigfox coverage is available.			
Battery life without sun	Continuous operation for over 4 months without sun. (1 day of sunshine = 20 days of operation)			
Environmental rating of anemometer & wind vane				
Operating temperature	-30°C to +80°C			
Operating humidity range	0% to 100% RH			
Survival wind speed	>85m/s (306kph, 190mph)			
IP – Protection rating	IP55W (DIN 40050) anemometer, IP67W wireless module.			
General anemometer & wind vane specifications				
Heater (optional)	N/A			
Weight (mass)	Anemometer = aprox. 150g, wireless module = aprox. 100g			
Dimensions	Anemometer rotor diameter = Ø164mm, Wind vane radius =111mm, Total height = 240mm			
Patented / Registered	OHIM 002153882-0001, 002153882-0002, 002153882-0003			
Mounting	Two supplied M4 screws			

Reach your Gold Standard of measurement with BARANI sensors. ISO:9001 quality.