UltraSonic Anemometer

metergroup.com/environment/products/atmos-22-sonic-anemometer

Accurate. Dependable. Affordable. You can have everything.

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ATMOS 22

Measuring into stiff headwinds

When it comes to measuring wind, trade-offs have always been involved. Cup anemometers can't measure both wind speed and wind direction (or low wind speeds, for that matter). They're also prone to malfunction since they all contain moving parts. Meanwhile, sonic anemometers have always been too costly. Until now.

The best of both worlds

The wind-tunnel-tested ATMOS 22 ultrasonic anemometer delivers the best of both worlds. It's accurate at low wind speeds because there aren't any moving parts that cause friction or fail. And it's inexpensive, especially when you consider the low-energy design. Accuracy. Dependability. Affordability. You get all three with the ATMOS 22.

Accuracy that will blow you away

If you want accurate wind profiling, a sonic anemometer is the obvious choice. Designed with canopies in mind, the ATMOS 22 registers even the lowest thresholds of wind speed (0 m/s) with the added ability to detect fine-scale variations within 0.01 m/s resolution.

Contrast the ATMOS 22's advanced technology to a cup or propeller wind anemometer. Neither will spin if wind speed is too low. Cup anemometers also don't indicate wind direction, unless you combine them with a wind vane. And both are prone to additional inaccuracies due to worn out moving parts. But with the ATMOS 22, you can accurately measure wind speed anywhere, every time, with total confidence.

Wind measurement is now a breeze

The ATMOS 22 was designed without moving parts, meaning there's never any mechanical wear. No oiling or replacing bearings. And no recalibration required. Just reliability you can continue to count on.

Not only does its ultra-low power consumption make it ideal for long-term, remote installations, but its compact size makes it small enough to deploy inside canopies. And instead of having to make field visits to collect data and check sensor and system functions, you can monitor information in real time and download data using any internet-connected device by connecting the ATMOS 22 to a ZL6 data logger. Which not only saves you time, but provides worry-free operation and peace of mind.

A low-cost sonic anemometer. Yes, you heard right.

The ATMOS 22 is not only far more affordable than other sonic anemometers but also uses 100 to 1,000 times less power. Running on less than 100 uA, the ATMOS 22 frees you to make wind measurements in multiple locations without having to constantly change batteries.

Sounds like a smarter way to measure wind. Because it is.

The precise accuracy, yet low-maintenance of sonic measurement. The low-cost of a regular anemometer, plus even lower power consumption. The ATMOS 22 was engineered to offer a wide range of advantages across the widest range of wind speed, all for an affordable price.

Request a quote Contact us Knowledge base ATMOS 22
Features Specifications Support / Downloads

Features

Wind speed and direction

- Easy installation
- No moving parts
- All data transmitted over a single wire

- Digital SDI-12 communication
- Connect to ZL6 for data capture and management

Specifications

MEASUREMENT CHARACTERISTICS	
Horizontal wind speed	Range: 0–30 m/s Resolution: 0.01 m/s Accuracy: the greater of 0.3 m/s or 3% of measurement
Wind gust	Range: 0–30 m/s Resolution: 0.01 m/s Accuracy: the greater of 0.3 m/s or 3% of measurement
Wind direction	Range: 0°–359° Resolution: 1° Accuracy: ±5°
Tilt	Range: -90° to 90° Resolution: 0.1° Accuracy: ±1°
PHYSICAL CHARACTERISTICS	
Dimensions	Diameter 10 cm (3.94 in) Height 16 cm (6.30 in)
Cable length	5 m (standard) 75 m (maximum custom cable length) **NOTE: Contact Customer Support if a nonstandard cable length is needed.**
Connector types	3.5-mm stereo plug connector or stripped and tinned wires
Data logger compatibility (not exclusive)	METER ZL6, Em50, and EM60 data loggers or any data acquisition system capable of 3.6- to 15-VDC power and serial or SDI-12 communication
MEASUREMENT CHARACTERISTICS	

Supply voltage (VCC to GND)	Minimum 3.6 VDC continuous Maximum 15.0 VDC
Digital input voltage (logic high)	Minimum 2.8 V Typical 3.0 V Maximum 3.9 V
Digital input voltage (logic low)	Minimum –0.3 V Typical 0.0 V Maximum 0.8 V
Digital output voltage (logic high)	Minimum NA□ Typical 3.6 V□ Maximum NA
Power line slew rate	Minimum 1.0 V/ms
Current drain (during measurement)	Minimum 0.050 mA Typical 0.125 mA Maximum 0.500 mA
Current drain (while asleep)	Minimum 0.050 mA Typical 0.125 mA Maximum 0.150 mA
Operating temperature range	Minimum –50 °C Maximum 60 °C
Power up time (SDI Ready)—aRx! commands	Typical 10 s
Power up time (SDI Ready)—other commands	Typical 800 ms
Measurement duration	Typical 110 ms Maximum 3,000 ms
Compliance	Manufactured under ISO 9001:2015 EM ISO/IEC 17050:2010 (CE Mark)

California requires the following notice:

WARNING: This product may contain chemicals including ethylene glycol, lead, nickel, styrene and cadmium, which are known to the State of California to cause cancer, birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov

Support

Have a question or problem? Our support team can help.

We manufacture, test, calibrate, and repair every instrument in-house. Our scientists and technicians use the instruments every day in our product testing lab. No matter what your question is, we have someone who can help you answer it.

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