



ATMOS 22: ULTRASONIC ANEMOMETER

DESCRIPTION

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.



ATMOS 22

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

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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.

SPECIFICATIONS

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°
COMMUNICATION SPECIFICATIONS	
Output	SDI-12 communication
Data logger compatibility (not exclusive)	METER ZL6, Em50, and EM60 data loggers or any data acquisition systems capable of 3.6- to 15.0-VDC excitation and SDI-12 communication
PHYSICAL CHARACTERISTICS	
Dimensions	Diameter 10 cm (3.94 in). Height 16 cm (6.30 in)
Operating temperature range	Minimum: -50 °C. Maximum: 60 °C
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
ELECTRICAL AND TIMING CHARACTERISTICS	
Supply voltage (VCC to GND)	Minimum 3.6 VDC continuous. Maximum 15.0 VDC continuous NOTE: The ATMOS 22 must be continuously powered to work properly. NOTE: For the ATMOS 22 to meet digital logic levels specified by SDI-12, it must be excited at 3.9 VDC or greater.
Digital input voltage (logic high)	Minimum 2.8 V. Typical 3.0 V. Maximum 5.5 V
Digital input voltage (logic low)	Minimum -0.3 V. Typical 0.0 V. Maximum 0.8 V
Digital output voltage (logic high)	Typical 3.6 V NOTE: For the ATMOS 22 to meet digital logic levels specified by SDI-12, it must be excited at 3.9 VDC or greater.
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
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)
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Contact info



Monitoring MENA

Insight into instrumentations

(962) 5353-2091

PO Box 1100 Salt

Post Code 19110 JORDAN

sales@monitoring-mena.com

www.monitoring-mena.com

This Instrument is manufactured by our principle company

METER Environment - USA