ATMOS 41: ALL-IN-ONE WEATHER STATION

DESCRIPTION

Our solution is an all-in-one weather station …plus one. The all-new ATMOS 41 weather station is the first affordable all-in-one weather station that fulfills all your weather monitoring needs but doesn't restrain you when you want to do more.

The ATMOS 41 weather station packages 12 weather sensors into a single, compact device for atmospheric conditions. It was designed for continuous deployment in harsh climates, such as Africa, which means there are no moving parts to fail. Installation and maintenance have been simplified to the maximum because there's never any mechanical wear. No oiling or replacing bearings. Just reliability you can continue to count on.

Most all-in-one weather stations give you the option to measure solar radiation or precipitation, but not both. The ATMOS 41 weather station provides both measurements in one device, so you never have to compromise.

ATMOS 41
FEATURES

- Measures 12 weather variables including: air temperature, relative humidity, vapor pressure, barometric pressure, wind speed, gust and direction, solar radiation, precipitation, lightning strike counter and distance
- Easy installation
- No moving parts
- All weather station data transmitted over a single wire
- Digital SDI-12 communication
- Connect to ZL6 for data capture and management
- Designed for continuous deployment in harsh climates
- No louvered radiation shield to attract bugs
- Accurate at low wind speeds because no moving parts will cause friction or fail
- Detects fine-scale wind speed variations with 0.01 m/s resolution
- Integrated weather station accelerometer detects if sensor is off-level
- Integrated spring acts as a rain gauge filter to keep out large particles but still allow enough water flow
- Optional bird deterrent fits perfectly on the weather station funnel.

ATMOS 41

ACCESSORIES

ATMOS 41 weather station is accurate. Unlike any other weather station, specialized pins made of real gold measure every single drop of rain. The 0.017 mm resolution means it can accurately measure small rainfall and even heavy dew events that other rain gauges miss. And, no moving parts means the ATMOS 41 anemometer is accurate at low wind speeds. It even has an accelerometer, so you'll always know the sensor is level and you're getting accurate data.

SPECIFICATIONS

Solar radiation	Range: 0 to 1750 W/m^2. Resolution: 1 W/m^2. Accuracy: ± 5% of measurement typical
Precipitation	Range: 0 to 400 mm/h. Resolution: 0.017 mm. Accuracy: ± 5% of measurement from 0 to 50 mm/h
VAPOR PRESSURE	
Range	0 to 47 kPa
Resolution	0.01 kPa
Accuracy	Varies with temperature and humidity, ±0.2 kPa typical below 40 °C
RELATIVE HUMIDITY	
Range	0 to 100% RH (0.00-1.00)
Resolution	0.1% RH
Accuracy	Varies with temperature and humidity, ±3% RH typical
Air temperature	Range: -50 to 60 °C. Resolution: 0.1 °C. Accuracy: ± 0.6 °C
Humidity sensor temperature	Range: -40 to 50 °C. Resolution: 0.1 °C. Accuracy: ± 1.0 °C
Barometric pressure	Range: 50 to 110 kPa. Resolution: 0.01 kPa. Accuracy: ± 0.1 kPa from -10 to 50 °C, ± 0.5 kPa from -40 to 60 °C
Horizontal wind speed	Range: 0 to 30 m/s. Resolution: 0.01 m/s. Accuracy: the greater of 0.3 m/s or 3% of measurement
Wind gust	Range: 0 to 30 m/s. Resolution: 0.01 m/s. Accuracy: the greater of 0.3 m/s or 3% of measurement
Wind direction	Range: 0° to 359°. Resolution: 1°. Accuracy: ± 5°
Tilt	Range: -90° to +90°. Resolution: 0.1°. Accuracy: ± 1°
Lightning strike count	Range: 0 to 65,535 strikes. Resolution: 1 strike Accuracy: variable with distance, >25% detection at <10km typical
Lightning average distance	Range: 0 to 40 km. Resolution: 3 km. Accuracy: variable
COMMUNICATION SPECIFICATIONS	
Output	SDI-12 communication
Data logger compatibility	METER ZL6 and EM60 data loggers or any data acquisition systems capable of switched 3.6- to 15.0-VDC excitation and SDI-12 communication
PHYSICAL CHARACTERISTICS	
Dimensions	Diameter: 10 cm (3.94 in). Height: 34 cm (13.39 in), includes rain gauge filter
Operating temperature range	Minimum –50 °C. Maximum: 60 °C **NOTE: Barometric pressure and relative humidity sensors operate accurately at a minimum of –40 °C**
Cable length	5 m (standard). 75 m (maximum custom cable length for additional cost) **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 41 weather station must be continuously powered in order to work properly** **NOTE: For the ATMOS 41 weather station 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 41 weather station 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: 0.2 mA. Typical: 8.0 mA. Maximum: 33.0 mA
Current drain (while asleep)	Minimum: 0.2 mA. Typical 0.3 mA. Maximum: 0.4 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
Compliance	Manufactured under ISO 9001:2015 EM ISO/IEC 17050:2010 (CE Mark)

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