



METER
ENVIRONMENT



ATMOS 41W

Wireless All-In-One Weather Station

THE TRUTH ABOUT WIRELESS

Most all-in-one remote weather stations claim to be wireless but actually include a wire that connects to telemetry in a bulky enclosure. Add to that a big solar panel and a giant battery, and things start to get costly. We think getting your data shouldn't be complicated—or costly. And we think wireless should actually be wireless. That's why we created the ATMOS 41W.

MEET THE WORLD'S SIMPLEST WIRELESS WEATHER STATION

The ATMOS 41W all-in-one remote weather station is one of the world's few truly wireless weather stations, and it's the most affordable research-grade station in its class. It's robust, reliable, and simple to use. All of the telemetry is enclosed with an integrated cell module. But that's not even the best part. There is nothing on the market that is easier to install. Put it in a backpack, take it to your site, secure it to a post pointing North, and walk away. It's that easy to start broadcasting real-time data directly to the cloud.

FEATURES

- A true wireless weather station ideal for long-term, remote installations
- Incredible 10-minute installation
- Robust design that prevents errors because of wear or fouling
- Integrated sensor leveling mechanism
- Improved wind speed accuracy
- Improved rain funnel filter reduces clogging
- Increased resolution of solar radiation measurement to 0.1 W/m^2 for standards compliance
- Faster sampling interval of solar radiation, water vapor, air temperature, and wind measurements to 3 s for standards compliance
- Output highest and lowest instantaneous temperature measurement for each measurement interval (T_{max} , T_{min}) for standards compliance
- Extended air temperature range (-63 to $+60 \text{ }^\circ\text{C}$) for standards compliance
- Calibrated thermistor to reliably achieve $\pm 0.2 \text{ }^\circ\text{C}$ @ $25 \text{ }^\circ\text{C}$ for temperature sensor accuracy
- Tipping spoon added for dual rainfall measurement
- Addition of electrical conductivity measurement for rainfall

SPECS

Width	16.5 cm (6.5 in)
Height	31.8 cm (12.5 in)
Memory Type	Nonvolatile flash
Data Storage	8 MB (more than 100,000 records)
Battery type	6 AA NiMH or alkaline batteries
Battery Life	NiMH rechargeable: 3+ years in sun, alkaline: 4-7 months
Operating Temperature	-40 °C to 60 °C
Upload frequency	Hourly upload (default) to ZENTRA Cloud
Measurement Interval	5 min to 12 h
Solar Radiation Range	0-1,500 W/m ² , ±5%
Relative Humidity (RH) Range	0-100% RH (0.00-1.00) ±1.5-2% 0.1% RH resolution
Air Temperature Range	-63 to 60 °C, ±0.2 °C @ 25 °C
Humidity Sensor Temperature Range	-63 to 80 °C, ±0.2 °C
Vapor Pressure Range	0-47 kPa
Barometric Pressure Range	1-120 kPa, ±0.05 kPa @ 25 °C
Horizontal Wind Speed	Range: 0-30 m/s, ±0.3 m/s or 3% of measurement
Wind Direction	Range: 0°-359.9°, ±5°
Tilt	Range: 0° to 180° ±1°
Precipitation Range	0-2000 mm/h ±5% from 0 to 1000 mm/h, 0.017 mm resolution
Precipitation EC	0-3 mS/cm, ± 0.005 mS/cm or 15%
Cellular/data plan	provided by METER through global partner carriers
3G Specifications	UMTS 3G 5-band cellular module with 2G fallback
4G Specifications	4G LTE-M and NB-IoT cellular (available in USA, Canada, and select other countries)
Bluetooth 5.2	Bluetooth Low-Energy protocol w/ Zentra Utility Mobile.
GPS	Integrated 56-channel GPS/QZSS receiver, ±4 m