

# Broadband Meteorological Measurement Systems



## PERFORMANCE\*

Pressure Accuracy Better than  $\pm 0.08$  hPa  
Temperature Accuracy:  
- MET4A (Fan-Aspirated) Better than  $\pm 0.1^\circ\text{C}$   
- MET4 Better than  $\pm 0.5^\circ\text{C}$   
Relative Humidity Accuracy  $\pm 1\%$  at  $25^\circ\text{C}$

## FEATURES

Data Logging  
Airport Barometric Functions  
Simple Plug & Play Installation  
Integral Environmental Enclosure  
Instrument Status LED Indicators  
RS-232/485 Bi-Directional Interface  
Parts-per-billion Nano-resolution Mode

## QUALITY AND STANDARDS

NIST Traceable  
3-Year Stability Warranty

## APPLICATION AREAS

Infrasound Measurements  
GPS-MET (Precipitable Water Vapor)  
Weather and Climate Research Studies  
Surface and Maritime Weather Observations

\*Products defined by specification control drawing, temperature and humidity probe Rotronic HC2-S3

The MET4 and fan-aspirated MET4A Meteorological Measurement Systems provide high accuracy data from barometric pressure, temperature, and relative humidity sensors. In the Nano-resolution mode, the MET4 and MET4A have a pressure resolution of parts-part-per billion (nano-bars). Overall accuracy is better than  $\pm 0.08$  hPa even under harsh environmental conditions. The high pressure resolution and accuracy permit measurements of infrasound signals over an extended frequency spectrum including signals from microbaroms, tornadoes, severe weather, tsunamis, volcanic eruptions, avalanches, explosions, and sonic booms. Excellent stability permits long-term measurements used for weather and climate studies as well as GPS-MET sensing of precipitable water used in flash flood warning networks.

These fully-integrated systems are housed in environmental enclosures allowing indoor or outdoor mounting. The MET4 solar radiation shield protects the temperature and humidity sensors from precipitation and solar radiation. Both the MET4 and fan-aspirated MET4A utilize a high performance pressure port to reduce the dynamic pressure errors caused by wind. Temperature resolution is better than 0.01 degrees C. Installation hardware and software are included and optional interface cabling is available.

Microprocessor-based electronics provide fully temperature compensated and linearized outputs via a bi-directional RS-232/485 interface. This serial interface allows complete remote configuration and control of all operating parameters including resolution, sample rates, choice of engineering units, integration time, and sampling commands. The airport barometric functions include field pressure, station pressure, altimeter setting, sea-level pressure, density altitude, pressure altitude, Q Codes - QNH & QFE and WMO pressure tendency codes. The internal data logger can store over 200,000 high resolution data points.

The Digiquartz<sup>®</sup> Barometer used in the MET4 and MET4A has a 3-year stability warranty of better than 0.1 hPa per year and includes a limited 5-year warranty with the first 2-years covered at 100%. The total system includes a limited one-year warranty. The RH and temperature probe is field replaceable. The barometer performance can be verified and recalibrated in the field using the Paroscientific Model 765-16B Portable Pressure Standard.



**Paroscientific, Inc.**  
**Digiquartz<sup>®</sup> Pressure Instrumentation**