

## RANGES

Pressure: 620 to 1100 hPa  
 Temperature: -50 to +60 Degrees C  
 Relative Humidity: 0 to 100 Percent R.H.

## FEATURES

Weatherproof Enclosure  
 Fan Aspirated Probe System  
 RS-232 Bi-Directional Interface  
 3 Year Warranty on Barometer Stability  
 NIST Traceable - ISO 9001 Quality System - CE Certified

## PERFORMANCE

$\pm 0.08$  hPa Over Full Barometric Range  
 $\pm 0.1$  Degree C Over Full Temperature Range  
 $\pm 2$  Percent Relative Humidity at 25 Degrees C

## APPLICATION AREAS

GPS Meteorology  
 Environmental Monitoring  
 Laboratory and Field Portable Calibrators  
 Automated Surface Observation Systems  
 Ground-Based Altimeter Setting Indicators

The Paroscientific MET3A, Aspirated Meteorological Measurement System, provides the ultimate in precision meteorological measurements. Pressure resolution is better than 1 microbar with a total accuracy of  $\pm 0.08$  hPa over the extended barometric range of 620 to 1100 hPa. Temperature resolution is  $0.01^\circ\text{C}$  with a total accuracy of  $\pm 0.1^\circ\text{C}$  over the full temperature range of -50 to +60 degrees C. Relative humidity performance is better than  $\pm 2\%$  at 25 degrees C and the recovery time after sustained saturation at 100% RH is less than 2 minutes.

Fully temperature compensated and linearized pressure data is provided by a Paroscientific Digiquartz<sup>®</sup> Barometer which has unsurpassed resolution, accuracy, and long-term stability. Temperature information is provided by a precision, thin-film platinum 1000 ohm RTD sensor. A monolithic IC capacitance sensor provides humidity measurements. These sensor signals are processed digitally to provide fully compensated linearized outputs on the two-way RS232 interface.

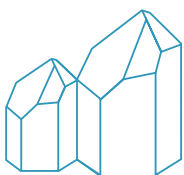
The user may retrieve individual sensor outputs or a complete data word containing all measurement parameters. Diagnostic modes identify configuration, output status and correct fan operation.

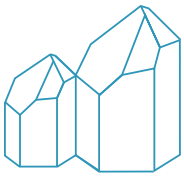


The MET3A utilizes a high performance, tuned, barometric pressure port to reduce dynamic pressure errors caused by wind. The Fan-Aspirated Radiation Shield protects the temperature and humidity sensors from precipitation and solar radiation. Temperature compensated, contamination resistant sensors and NEMA 4X packaging allow the systems to be installed indoors or outside. Mounting hardware is included and interface cabling is available for easy system integration. Other desirable features include weatherproof packaging, no warm-up time, and high accuracy, reliability, and excellent long-term stability.

The serial interface allows complete remote configuration and control of all operating parameters including resolution, sample rate, choice of engineering units, integration time, and sampling commands. The MET3A interfaces directly with computer systems, GPS receivers, and data loggers. Configuration and data acquisition are easy with our PC-based software programs. Digiquartz<sup>®</sup> Assistant and Digiquartz<sup>®</sup> Interactive are supplied at no additional cost.

The MET3A comes with a limited one year warranty. The Digiquartz<sup>®</sup> barometer comes with a limited 5 year warranty with the first two years covered at 100% and a 3 year stability warranty of better than 0.1 hPa per year.





## PERFORMANCE

### PRESSURE

Range: .....620 to 1100 hPa (9 to 16 psia)  
 Resolution: .....Better than 0.001 hPa  
 Accuracy, Including  
 Pressure Hysteresis,  
 Repeatability, Linearity, &  
 Temperature Conformance:.....Better than  $\pm 0.08$  hPa  
 Stability: .....Better than 0.1 hPa per year

### TEMPERATURE

Range: .....-50 to +60 Deg C  
 Resolution: .....Better than 0.01 Deg C  
 Accuracy: .....Better than  $\pm 0.1$  Deg C  
 Stability: .....Better than 0.1 Deg C Per Year

### HUMIDITY

Range: .....0 to 100%  
 Accuracy: .....Better than  $\pm 2\%$  RH at 25°C  
 Saturation Recovery Time:.....2 Minutes or Less.

Sampling Modes - Single sample, Individual commands for pressure, temperature and humidity and NEMA 0183 unified output word.

Conformance and temperature compensation equations and calibration coefficients are factory installed and provided with each meteorological system.

### ENVIRONMENTAL

Maximum Pressure: .....1240 hPa (18 psia)  
 Operating Temperature Range: .....-50 to +60 Deg C  
 Power Requirements:  
 Input voltage ..... 7 to 16 Vdc  
 Current .....105 mA - Nominal  
 200 mA - Maximum  
 Aspiration Flow Rate .....4.5 meters/second  
 Weight ..... 4.2Kg (9.2 lb.)

### OUTPUT

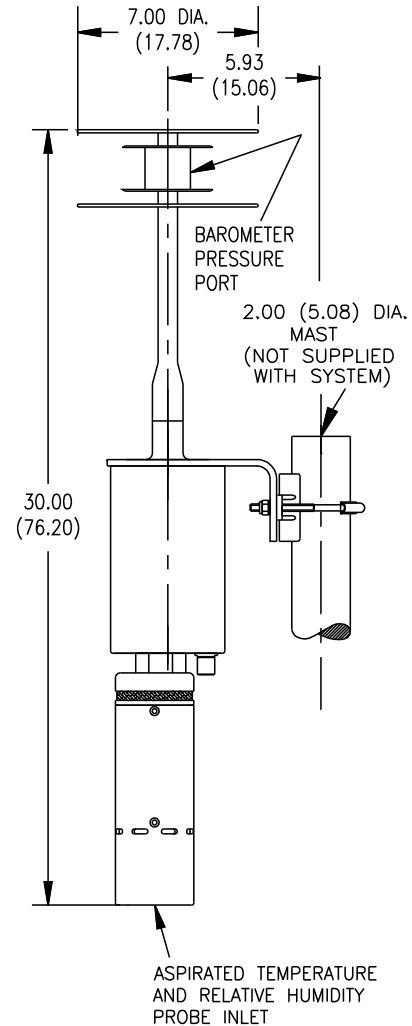
RS-232 Bi-Directional Interface

### ORDERING INFORMATION

MODEL NO. MET3A PART NO. 1539-001

AC adapter and GPS / computer interface cables are available.

For more information contact the sales/application engineers at Paroscientific Inc, or your local Paroscientific representative.



**Model MET3A**

Dimensions are in inches - centimeters in parentheses.

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