MAN(GPSS)-005.000



# **Meteorological Measurement Systems**



0.5°C



MET3 Meteorological Measurement System MET3A Fan-Aspirated Meteorological Measurement System

### **PERFORMANCE:**

• Pressure Accuracy: ±0.08 hPa

• Relative Humidity Accuracy: 2%

 Temperature Accuracy: MET3A

MET3

Plug & Play Simple Installation

**FEATURES:** 

- Integral Environmental Enclosure
- 0.1°C RS-232 Bi-Directional Interface
  - Instrument Status LED Indicators
  - Instrument Status LED Indicators

### **APPLICATION AREAS:**

- GPS Meteorology (Precipitable Water Vapor)
- Crustal Observation Tectonic Research
- Weather and Climate Research Studies
- Surface and Maritime Weather Observation
- Ground Based Altimeter Setting Indicators

The MET3 and MET3A Meteorological Measurement Systems provide high accuracy data from barometric pressure, temperature, and relative humidity sensors. Pressure resolution is better than 1 microbar with a total accuracy of 0.08 hPa over the extended barometric range of 620 to 1100 hPa. Temperature resolution is 0.01 degree C. The fan-aspirated MET3A has a total temperature accuracy of 0.1 degree C over the full temperature range of -50 to +60 degrees C. Relative humidity performance is better than 2% at 25 degrees C, and humidity recovery time for the MET3A after 100% water saturation is less than 2 minutes.

These fully-integrated systems are housed in environmental enclosures allowing stand-alone, indoor or outdoor mounting. Installation hardware and software are included, and optional interface cabling is available for easy system integration. The MET3 radiation shield protects the temperature and humidity sensors from precipitation and solar radiation. The MET3A utilizes a high performance, tuned barometric pressure port to reduce dynamic pressure errors caused by wind.

Microprocessor-based electronics provide fully temperature compensated and linearized outputs via a two-way RS-232 interface. The 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. Individual measurement parameters or a "unified" data word with all sensor outputs are easily interfaced with computer systems, GPS receivers, and data loggers.

The Digiquartz® barometer used in the MET3 and MET3A has a 3 year stability warranty of better than 0.1 hPa per year. It includes a limited 5-year warranty with the first 2 years covered at 100%. The System includes a limited one year warranty.







# **Barometric Pressure, Temperature, Humidity Measurements**

#### 4.20±.50 **CHARACTERISTICS** ¢5.13±.20 | (10.67±1.3) "GILL" PRESSURE Barometric Performance - ±0.08 hPa Pressure Port Stability -Better than 0.1 hPa per year Range -620 -1100 hPa (9-16 psia) Relative Humidity and Radiation Shield **TEMPERATURE** Performance - MET3 : Better than ±0.5° C MET3A : Better than ±0.1° C 18 70±.20 (47.50±.50) Stability -Better than 0.1° C per year System) -50°C to +60°C (-58 °F to +140 °F) Range with HUMIDITY Performance -Better than + 2% RH Supplied Environmental Stability -Better than 1% per year Enclosure 0 to 100% noncondensing Range -(Not Recovery Time-Less than 2 minutes (MET3A) MAST GPS Connector W.W. Fisher **ENVIRONMENTAL** Status LEDs DBEE 104 A605-60. Mates with Maximum Pressure ......1240 hPa (18 psia) S 104 A065-130+ **MET3 Front View** MET3 Side View Calibrated Temperature Range.....-50°C to +60°C Power Requirements......Operates from 7 to 16 VDC Connector RFD FWR Status LEDs Nominal current consumption 35mA (MET3) @ 7VDC (Recommended) 120 mA (MET3A) RX TX Weight......MET3: 4.5 lb (2.1 Kg) MET3A : 9.2 lb (4.2 Kg) GREEN YELLOW **ORDERING INFORMATION** MODEL NO. PART NO. **MET3/3A Status LEDs MET3 Bottom View** 1477-005 MET3 MET3A 1539-004 e7 aa+ 20 5.93 [15.06] [17 78±.50] **ACCESSORIES** "TUNED" Setup and Configuration Software (included) Barometric AC adapter and interface cables (optional) Pressure Port 11.40 NAX [28.95] Dimensions are in inches Pin No **Function** (Centimeters in parentheses) 1 Power (Not Supplied with System) 2,4 & 6 Ground 30.50 MAX [77 47] WHEN **Connector Pin out** 3 Data From Computer ASSEMBLED 5 Data to Computer Paroscientific, Inc. MAST ( 19.30 NAX 4500 148th Ave. N.E. [49.02] шhг TTİTE Redmond, WA 98052 Status LEDs Tel: (425) 883-8700 GPS Connector W.W. ajauai Fisher DBEE 104 (425) 867-5407 Fax: Aspirated A605-60 Mates with S http://www.paroscientific.com Temperature and 104 A065-130+ Technology Relative Humidity E-Mail:support@paroscientific.com Probe Inlet

MET3A Front View

MET3A Side View

Product defined by Specification Control Drawing. Specifications subject to change without prior notice. Manufactured under one or more of the following U.S. Patents: 4,454,770 - 4,455,874 - 4,592,663 - 4,724,351 - 4,751,849 - 4,757,228 - 4,764,244 - 4,831,252 - 4,872,343 - 4,912,990 Other patents pending. @ Registered Trademark of Paroscientific, Inc. © Copyright November 2001 by Paroscientific, Inc.