

# Meteorological Measurement Systems



**MET3 Meteorological Measurement System    MET3A Fan-Aspirated Meteorological Measurement System**

**PERFORMANCE:**

- Pressure Accuracy:  $\pm 0.08$  hPa
- Temperature Accuracy:
 

MET3A	0.1°C
MET3	0.5°C
- Relative Humidity Accuracy: 2%

**FEATURES:**

- Plug & Play Simple Installation
- Integral Environmental Enclosure
- RS-232 Bi-Directional Interface
- Instrument Status LED Indicators

**APPLICATION AREAS:**

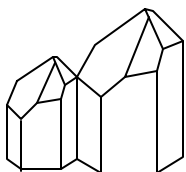
- GPS Meteorology (Precipitable Water Vapor)
- Crustal Observation - Tectonic Research
- Weather and Climate Research Studies
- Surface and Maritime Weather Observation
- Ground Based Altimeter Setting Indicators

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.



**Paroscientific, Inc.**  
Digiquartz® Pressure Instrumentation





# Barometric Pressure, Temperature, Humidity Measurements

## CHARACTERISTICS

### PRESSURE

Performance -  $\pm 0.08$  hPa  
 Stability - Better than 0.1 hPa per year  
 Range - 620 - 1100 hPa (9-16 psia)

### TEMPERATURE

Performance - MET3 : Better than  $\pm 0.5^\circ$  C  
 MET3A : Better than  $\pm 0.1^\circ$  C  
 Stability - Better than 0.1 $^\circ$  C per year  
 Range -  $-50^\circ$ C to  $+60^\circ$ C ( $-58^\circ$ F to  $+140^\circ$ F)

### HUMIDITY

Performance - Better than  $\pm 2\%$  RH  
 Stability - Better than 1% per year  
 Range - 0 to 100% noncondensing  
 Recovery Time- Less than 2 minutes (MET3A)

### ENVIRONMENTAL

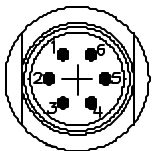
Maximum Pressure .....1240 hPa (18 psia)  
 Calibrated Temperature Range..... $-50^\circ$ C to  $+60^\circ$ C  
 Power Requirements.....Operates from 7 to 16 VDC  
 Nominal current consumption ..... 35mA (MET3)  
 @ 7VDC (Recommended) ..... 120 mA (MET3A)  
 Weight.....MET3 : 4.5 lb (2.1 Kg)  
 MET3A : 9.2 lb (4.2 Kg)

### ORDERING INFORMATION

MODEL NO.	PART NO.
MET3	1477-005
MET3A	1539-004

### ACCESSORIES

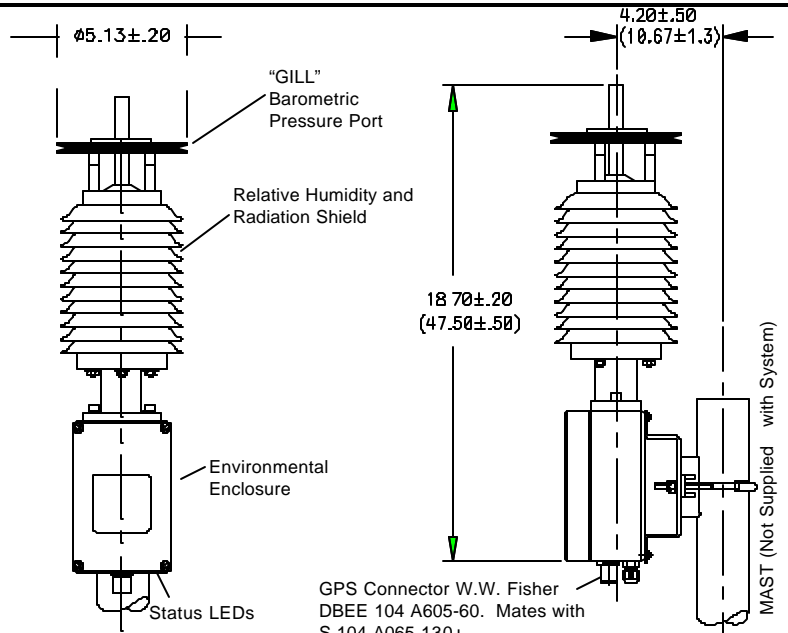
Setup and Configuration Software (included)  
 AC adapter and interface cables (optional)



Connector Pin out

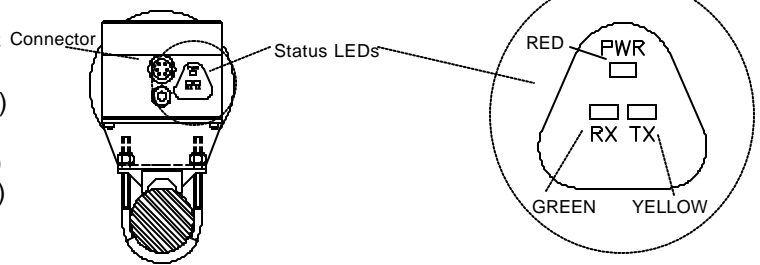
Pin No	Function
1	Power
2,4 & 6	Ground
3	Data From Computer
5	Data to Computer

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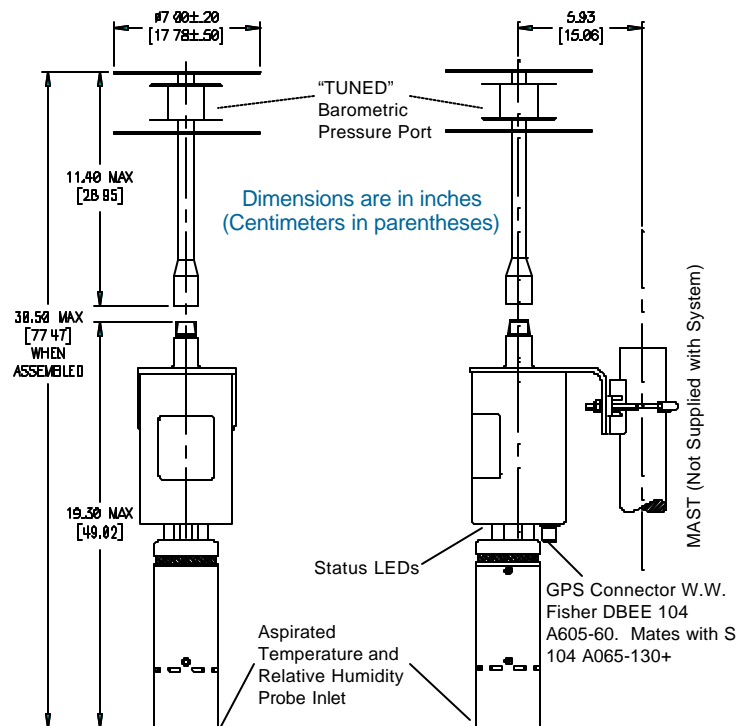
MET3 Front View

MET3 Side View



MET3 Bottom View

MET3/3A Status LEDs



MET3A Front View

MET3A Side View