# **Broadband Meteorological Measurement Systems**



MET4

MET4A Fan-Aspirated

#### **PERFORMANCE:**

- Pressure Accuracy: Better than ±0.08 hPa
- Temperature Accuracy:

MET4A (Fan-Aspirated) Better than ±0.2°C MET4 Better than ±0.5°C

Relative Humidity Accuracy: ±2% at 25°C

#### **STANDARD FEATURES:**

- Simple Plug & Play Installation
- Integral Environmental Enclosure
- RS-232/485 Bi-Directional Interface
- Instrument Status LED Indicators

#### **OPTIONAL CONFIGURATIONS:**

- Data Logging
- Barometric Functions

#### **QUALITY AND STANDARDS:**

- CE Compliant
- NIST Traceable
- ISO 9001:2000 Quality System

#### **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 MET4 and fan-aspirated MET4A 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 better than ±0.08 hPa over the extended barometric range of 500 to 1100 hPa. Temperature resolution is better than 0.01 degrees C.

These fully-integrated systems are housed in environmental enclosures allowing indoor or outdoor mounting. Installation hardware and software are included and optional interface cabling is available. 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 dynamic pressure errors caused by wind.

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.

Optional configurations include special barometric functions and an internal data logger. The 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 System includes a limited one-year warranty. The RH and temperature probe is field replaceable and barometer performance can be verified in the field using the Paroscientific Model 765-16B Portable Pressure Standard and DigiPort High-Performance Pressure Port.





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## CHARACTERISTICS

PR	ES	SI	JR	E

Accuracy ''/	Better than ±0.08 hPa
Stability	Better than 0.1 hPa per year
Range	500 - 1100 hPa (7-16 psia)
Maximum Pressure	1240 hPa (18 psia)

#### **TEMPERATURE**

Performance	MET4	: Better than ±0.5° C
	MET4A (Fan-Aspirated)	: Better than ±0.2° C
Resolution		0.01° C
Range	50°C to +60°	C (-58 °F to +140 °F)

#### **HUMIDITY**

Performance	Better than ±2% RH at 25°C
Range	0 to 100% non-condensing
Recovery Time	≤ 20 seconds (MET4A)

#### **ENVIRONMENTAL**

Calibrated Temperature Range	50°C	to +60°C
Power Requirements Operates from	5 to 16 VDC	(MET4)
Operates from	11 to 14 VDC	(MET4A)
Typical Current Consumption	35 mA	MET4)
	225 mA	(MET4A)
Weight	MET4: 7.3 lb	(3.31 Kg)
N	1ET4A: 9.4 lb	(4.26 Kg)

#### **ORDERING INFORMATION**

Model No.	Part No.	Description	
MET4	1560-001	Standard Configuration (Non-Aspirated)	
MET4-B	1560-101	MET4 w/ Barometric Functions	
MET4-D	1560-201	MET4 w/ Data Logging	
MET4-BD	1560-301	MET4 w/ Barometric Functions & Data Logging	
MET4A	1561-001	Standard Configuration (Fan-Aspirated)	
MET4A-B	1561-101	MET4A w/ Barometric Functions	
MET4A-D	1561-201	MET4A w/ Data Logging	
MET4A-BD	1561-301	MET4A w/ Barometric Functions & Data Logging	

#### **ACCESSORIES**

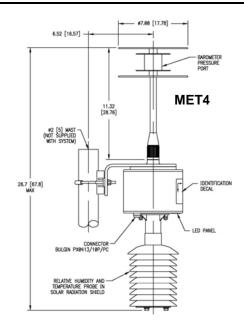
- Setup and Configuration Software (included)
- AC adapter and interface cables (optional, P/N 2637-0XX)
- Model 715 Display (optional, P/N 1554-00X)
- Field Replacement Kits (optional):
  - MET4/4A RH & Temperature Probe Replacement Kit P/N 1777-001
  - MET4A Fan Replacement Kit P/N 1776-001
- Accuracy relative to the primary standard includes pressure hysteresis, repeatability, linearity and temperature conformance.

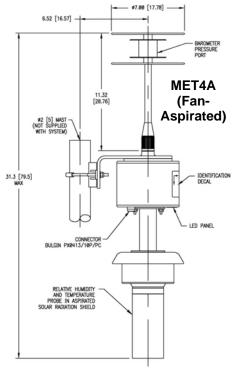
# Digiquariz<sup>®</sup> Technology

### Paroscientific, Inc.

4500 148th Ave. N.E. Redmond, WA 98052 http://www.paroscientific.com E-Mail:support@paroscientific.com

Tel: (425) 883-8700 Fax: (425) 867-5407





Dimensions are in inches (cm)

#### **Connector & Pin Out**



LED Panel

		-		
	RX	PWR	RX	
(	RS-232		RS-485	
	TX		TX	/

Pin No	Function
1	RS-485 TX+
2	RS-485 TX-
3	RS-485 RX+
4	RS-485 RX-
5	RS-232 TX
6	RS-232 RX
7	Power
8	Chassis Ground
9 & 10	Ground