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Meteorological Sensor System MSS-1000

GENERAL

Applied Technologies, Inc., proudly presents our newest instrument, a Meteorological Sensor System. Originally designed and developed to meet the challenging requirements of a military application, the system is manufactured to the highest quality standards for reliability and accuracy

This system combines the most frequently required meteorological sensors into a single easy-to-use package. A single processor, controls all sensors, provides for synchronized measurements, and all the data are output in a single packet.

Additionally, this high quality sensor package has the added benefit of a 2-Axis Accelerometer to provide tilt, but can also be used to provide the two axes of acceleration. With the GPS and accelerometers, this is a great platform for a mobile application.

FEATURES

- Basic Sensors
  - Unit ID
  - Wind Speed & Direction
  - Temperature
  - Barometric Pressure
  - Relative Humidity
  - GPS Position & Timing & Altitude
  - Sea Level Pressure (calculated)
  - Dew Point (calculated)
- State-Of-The-Art Processor
- RS-232 Output can be continuous, or timed
- Compact Size
- Light Weight
- Low Power
- Internal Status Monitor
- Solid-State sensors – no moving parts
- Power Saving Modes
- All parameters in Engineering Units
- Standard Output in ASCII Format
- Comma Delimited Serial Output

OPTIONS

- Data Telemetry – spread spectrum transceivers at 915 MHz or 2.45 GHz
- Other output formats available
- NiMH Rechargeable Batteries
- Backup Battery
- Compass Heading
- 2-Axis Accelerometer for Tilt
- Ruggedized Tripod (1.8m height)

SPECIFICATIONS

Sensors

Wind Speed	**0 – 60 m/s**
Accuracy	**± 2%**
Resolution	**0.1 m/s**
Wind Direction	**0 – 359 degrees**
Accuracy	**± 3 degrees for wind speeds > 0.5 m/s**
Resolution	**1˚**
Wind Gust	**Capable of reading >60 m/s**
Temperature	**-40˚C to 70˚C**
Accuracy	**±0.4˚C**
Resolution	**0.1˚C**
Response Time	**5 seconds**
Pressure	**600 – 1200 mb**
Accuracy	**±2.0 mb**
Resolution	**0.1 mb**
Relative Humidity	**0 – 100%**
Accuracy	**±2%**
Resolution	**0.1%**
Dew Point (calculated)	
Accuracy	**±0.5˚C**
Resolution	**0.1˚C**
Sea Level Pres. (calculated)	
Accuracy	**±0.1" Hg**
Resolution	**0.1" Hg**
GPS Position	
Accuracy	**±3 to 10 meters**
Resolution	**0.1 degree (or better)**
GPS Timing	
Accuracy	**±10mSec**
Update Rate	**3 seconds**
GPS Altitude	
Accuracy	**<20 meters**
Resolution	**0.1 meters**
Compass Heading (magnetic)	
Accuracy	**±1 degrees**
Resolution	**1.0 degrees**
2-Axis Accelerometer	
Accuracy	**±1 degree**
Resolution	**1.0 degrees**

Operational

Power Requirements	**+12 VDC**
Quiescent	**20 mA**
Transmitting	**200 mA**
Power Modes	**Sleep**
	Hibernate
Sample Rate (Selectable)	**5 sec. to 9999 sec.**
Analog Conversion	**10 bits (Standard)**
	12, 16 bits (Optional)
Output BAUD Rate	**9600**
Operating Temp	**-40˚C to 70˚C**
Size	**19" tall x 6" diameter (including sonic)**
Weight	**Approx. 6 lbs.**