MET-SET 5600-MOMP-1

MEASUREMENTS

WIND SPEED & WIND DIRECTION

Sutron's Met-Set uses a three cup anemometer, for accuracy, sensitivity, and durability. The cups are connected to a shaft, which turns a sensing element that converts the rotation into a series of electronic pulses. The basic operation is based on the proven 014 Wind Speed Sensor.

A lightweight vane tail provides the motive power for the wind direction portion of the sensor. As the vane tail moves it turns a shaft on a pair of bearings. That shaft turns a sensing element that converts the rotation into analog voltage.

- Wind Speed Range 0 – 50 m/sec
- Wind Speed Resolution 0.1 m/sec
- Wind Speed Accuracy ± 2%
- Wind Direction Range 0 – 360°
- Wind Direction Resolution 1°
- Wind Direction Accuracy ± 5°
- Threshold, both Speed & Direction 1 m/sec

TEMPERATURE & HUMIDITY

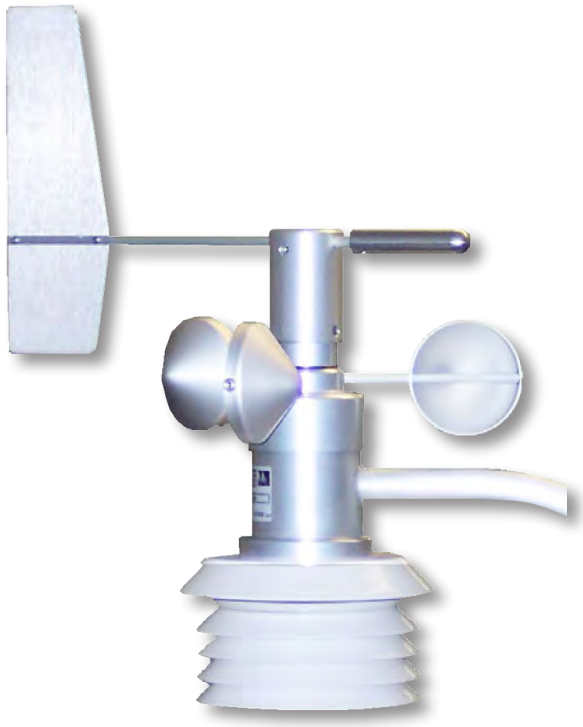
Both Temperature and Humidity are built into the temperature shield at the bottom of the sensor. The integral shield limits errors due to solar radiation. The RH sensor is a capacitive element enclosed in a protective membrane.

- Temperature Range -40°C to +60°C
- Temperature Resolution 0.1°C
- Temperature Accuracy ± 0.5°C
- Relative Humidity Range 0-100%
- Relative Humidity Resolution 1%
- Relative Humidity Accuracy ± 4%

BAROMETRIC PRESSURE

A solid state pressure sensor built into the sensor electronics provides accurate measurement of barometric pressure changes over a wide range. Electronic temperature compensation is included for highest accuracy over the operating temperature of the sensor.

- Measurement Range 500 – 1100 mbars
- Measurement Resolution 0.1 mbar
- Measurement Accuracy ± 2 mbars



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EASY INSTALLATION

SITING

- Find suitable location within cable length of recording electronics / display.
- Locate true north.

MOUNTING

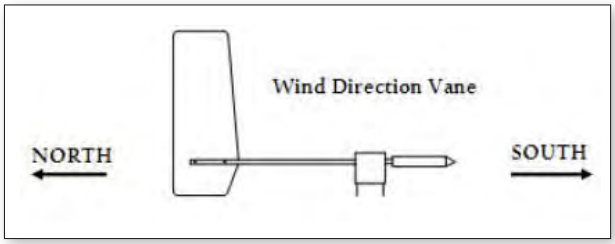
- Use quick mount u-bolts to install on vertical or horizontal mast, pole or pipe.
- Tighten nuts, keeping sensor level.

DIRECTION ALIGNMENT

- Install alignment shoulder screw into wind direction vane hub.
- Align sensor so wind direction counterweight is to the South, vane tail is to true North

CHECK OPERATION

- Check that the vane and cups rotate freely.



SIMPLE SERIAL CONNECTIONS

RS-232 CONFIGURATION

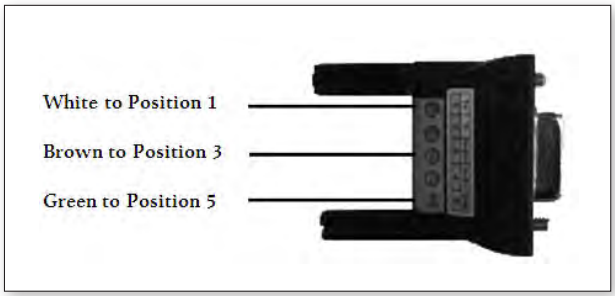
- 9600 baud, 8 data bits, no parity, 1 stop bit, and no flow control

SDI-12 CONFIGURATION

- Default address 0
- Conforms to SDI-12 V1.3

OUTPUT STRING FORMAT:

- SSS.S, DDD, +TTT.T, HHH, PPP.P, RRR.RR, XXXX, VV.VV, *CCCC<CR><LF>
- SSS.S = Wind Speed
- DDD = Wind Direction
- +TTT.T = Temperature
- HHH = Relative Humidity
- PPP.P = Barometric Pressure
- RRR.RR = Rain (Optional)
- XXXX = Solar (Future Option)
- VV.VV = Battery Voltage
- *CCCC = Message Checksum

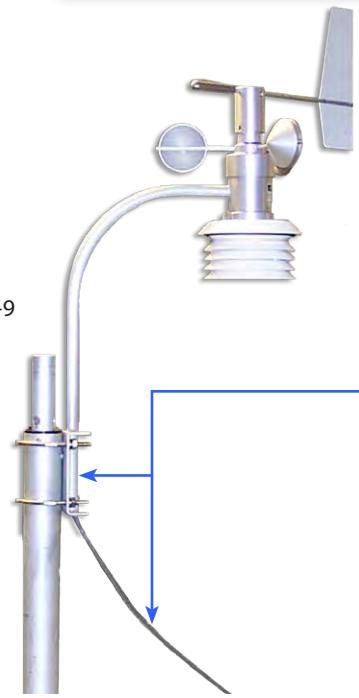


CONNECTIONS

- Run cable to recorder or computer
- Connect using included screw-terminal DB-9 adaptor or solder DB-9 or DB-25.

WIRING

- RED +9 TO +17 VOLTS DC @ 4mA
- BLK POWER COMMON
- WHT RS-232 TX
- BRN RS-232 RX
- GRN RS-232 / SDI-12 COMMON
- BLU SDI-12
- WHT/BRN SHIELD (must be grounded for transient protection to function)



ORDERING

5600-MOMP-1 3 meteorological sensors *(wind direction, wind speed, air temperature, relative humidity & barometric pressure)* integrated into 1 instrument for use in a variety of met applications when connected to data collection platforms (dcp).

Includes mounting plate, u-bolts, 50 foot cable

The Met Set platform comes **standard with serial RS-232 & SDI-12 outputs.** RS-485 & RS-422 are available upon request.

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