NEW

Magee Scientific Weather station Sensors

GMX500 – Compact Weather station

GMX300 –Meteorological sensor

GMX200 – Wind sensor

Aethalometer® & Total Carbon Analyzer accessories

KEY FEATURES

- Air Temperature, Pressure, Relative/Absolute Humidity sensor
- Naturally aspirated UV stable radiation shield
- Protection against wind blown precipitation/dust
- Wind speed and direction sensor
- WMO wind averages and gust
- Wind sensor is equipped with electronic compass providing apparent wind measurements
- Quality, lightweight and robust with compact integrated design
- Real time output
- Automatic integration with Magee Scientific Aethalometer® model AE33 and model AE43 and Total Carbon Analyzer model TCA08
- When connected with Wind speed and direction sensor Magee Scientific Aethalometer® model AE43 can display pollution rose charts of BC data relative to wind speed and direction.

MAGEE SCIENTIFIC

Manufactured in Europe by Aerosol d.o.o., Slovenia

APPLICATIONS

- Air Quality monitoring
- Climate Change research
- Health Effects research

Product descriptions

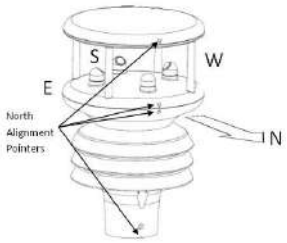
MEASURING PRINCIPLES

1. The GMX300 Ambient Meteorological Sensor is a combined instrument mounted inside three doubled louvered, naturally aspirated radiation shields with no moving parts. It measures air temperature, humidity and pressure.
2. The GMX200 is a Wind speed and direction ultrasonic sensor and with an addition of an electronic compass it provides apparent wind measurements.
3. The GMX500 is a compact weather station (with temperature, pressure, humidity, wind speed and wind direction sensors).

Atmospheric pressure is provided by a solid-state device fitted onto a board inside sensor housing.

Air temperature and humidity is measured with internal solid state sensor circuits contained within the radiation shield that provides digital output signals for Relative Humidity, Temperature and calculated Dewpoint.

Wind speed and direction is measured with ultrasonic wind speed and direction sensor which measures the times taken for an ultrasonic pulse of sound to travel from the north (N) transducer to the south (S) transducer, and compares it with the time for a pulse to travel from S to N transducer. Likewise times are compared between west (W) and east (E), and E and W transducer - see schematics on the right.



PERFORMANCE

GMX 300 Meteorological sensor	GMX200 Wind speed and direction sensor	GMX500 Compact weather station
Temperature *Measurement range:* -40°C to +70°C *Accuracy:* ± 0.3°C @20°C *Resolution:* 0.1	**Wind speed** *Measurement range:* 0.001 m/s to 60 m/s *Accuracy:* ± 3% to 40 m/s; ± 5% to 60 m/s *Resolution:* 0.01	**Temperature** *Measurement range:* -40°C to +70°C *Accuracy:* ± 0.3°C @20°C *Resolution:* 0.1
Relative humidity *Measurement range:* 0 – 100% RH *Accuracy:* ± 2% @ 20°C (10%-90% RH) *Resolution:* 1%	**Wind direction** *Measurement range:* 0-359° *Accuracy:* ± 3°to 40 m/s; ± 5° to 60 m/s *Resolution:* 1°	**Relative humidity** *Measurement range:* 0 – 100% RH *Accuracy:* ± 2% @ 20°C (10%-90% RH) *Resolution:* 1%
Pressure *Measurement range:* 300 – 1100 mbar *Accuracy:* ± 0.5 mbar @ 25°C *Resolution:* 0.1 mbar	/	**Pressure** *Measurement range:* 300 – 1100 mbar *Accuracy:* ± 0.5 mbar @ 25°C *Resolution:* 0.1 mbar
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DATA INTEGRATION

All sensors connect to a COM port on the Magee Scientific Aethalometer® model AE33 and AE43 or Total Carbon Analyzer TCA08 via a 10-meter cable. This cable feeds the meteorological data to instrument and also supplies DC power to the sensor from a USB port on the instrument. The meteorological data is integrated into the files and also displayed on the screen.
The **Pressure** and **Temperature** data may be used in the Aethalometer calculation of Black Carbon, to report concentrations at "ambient conditions", i.e. per local unit volume of air. Wind speed and wind direction data are used for advanced "pollution rose" charting (for Magee Scientific Aethalometer® model AE43).

Scan the code for more info

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