The MaxiMet range of compact weather stations is designed and manufactured by Gill Instruments. MaxiMet products use reliable, high quality instruments to provide accurate meteorological information in a wide variety of applications.

**GMX541 Features**

**Temperature, humidity, pressure.** A combined instrument mounted inside three double louvered, naturally aspirated radiation shields with no moving parts. The results are high performance across each measurement over long periods of time.

**Solar radiation.** An integrated solar radiation sensor/pyranometer. This highly accurate instrument uses a thermal sensor mounted at its base and protected by a single glass dome to record the amount of light in watts per metre². It is widely used in agro-meteorological applications and for monitoring the performance of solar panels.

**Wind.** Wind speed and direction measurements are provided via an ultrasonic sensor and the addition of an electronic compass provides apparent wind measurements. Average speed and direction together with WMO averages and gust data is also provided. Add GPS (optional) to provide true wind and other features.

**Precipitation.** The Optical rain gauge supplied provides excellent performance in a low maintenance package. The Optical RG connects via a 20m cable (included).

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**TEMP, HUMIDITY & PRESSURE**
- Air Pressure / Temperature
- Relative / Absolute humidity
- Naturally aspirated UV stable Radiation shield
- Protection against wind-blown precipitation/dust

**SOLAR RADIATION**
- Complies with ISO 9060 and WMO Guidelines
- Output in watts per metre²
- 180° hemispherical field of view
- Records sunshine hours
- Integrated Hukseflux LP02 pyranometer
- Glass dome

**WIND**
- Wind speed & direction
- Apparent and true wind (with GPS)
- WMO wind averages and gust
- Compass

**PARAMETERS**
- Solar radiation W/m²
- Sunshine hours hrs
- Solar Noon
- Temperature °C / °F / °K
- Relative humidity % Rh,
- Barometric pressure hPa, mbar, mm Hg, in Hg
- Wet bulb temperature °C / °F / °K
- Absolute humidity g/m³
- Air density kg/m³
- Precipitation mm/hr, mm/total, in/hr, in/total
- Wind speed m/s, km/hr, mph, kts, ft/min
- Wind chill °C / °F / °K
- True/apparent wind
- Angle of Tilt
- Outputs RS232, 422, 485 (ASCII), SDI-12, NMEA, MODBUS, Analogue (option)

**GPS (OPTION)**
- Height above sea level m
- Sunrise/sunset
- Position of the sun
- Twilight
- Solar Noon
- MSL pressure

**PRECIPITATION (INPUT)**
- 0.08 mm tip Optical rain gauge (customer selectable)
- 20m Cable

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**All MaxiMet Models Feature**
- Quality Measurements
- Lightweight and Robust
- Low Power Mode
- Free of Charge Software
- Gill Proven Reliability
- Compact Integrated Design
- Real Time Output
- Easy Installation
- Gill Customer Support
- 2 Year Warranty
The MaxiMet range of compact weather stations is designed and manufactured by Gill Instruments. MaxiMet products use reliable, high quality instruments to provide accurate meteorological information in a wide variety of applications.

Optical Rain Gauge Features

Precipitation. An integrated optical rain gauge that automatically senses water hitting its outside surface and provides tip measurement.

Algorithms in the GMX541 interpret this tip data and simulate the output of a tipping bucket rain gauge as part of the serial output from the GMX541. The optical rain gauge has no moving parts associated with tipping bucket gauges.

Output and power to the GMX541 is via a 20m cable (included) that the user can cut to length.

**SPECIFICATION**

<table>
<thead>
<tr>
<th>Measurement type</th>
<th>Optical RG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>0 to &gt; 300 mm/hr</td>
</tr>
<tr>
<td>Precipitation Resolution</td>
<td>0.08 mm (Customer Selectable)</td>
</tr>
<tr>
<td>Repeatability</td>
<td>3%</td>
</tr>
<tr>
<td>Sampling Rate</td>
<td>1 Hz</td>
</tr>
<tr>
<td>Units</td>
<td>mm/hr, mm/total, in/hr, in/total</td>
</tr>
<tr>
<td>Heating</td>
<td>N/A</td>
</tr>
<tr>
<td>Output</td>
<td>Contact closure via 20m cable to GMX</td>
</tr>
<tr>
<td>Power Supply</td>
<td>12Vdc via above 20m cable to GMX</td>
</tr>
</tbody>
</table>
GMX

Compact Weather Station

MaxiMet

WIND SPEED

Range 0.01 m/s to 60 m/s
Accuracy ± 3% to 40 m/s, ± 5% to 60 m/s
Resolution m/s 0.01
Starting Threshold 0.01 m/s
Sampling Rate 1 Hz
Units m/s, km/hr, mph, kts, ft/min

WIND DIRECTION

Range 0-359°
Accuracy ± 3° to 40 m/s, ± 5° to 60 m/s
Resolution 1°
Starting Threshold 0.05 m/s
Sampling Rate 1 Hz
Units Degrees

TEMPERATURE

Range -40°C to +70°C
Resolution 0.1
Accuracy ± 0.3°C @ 20°C
Sampling Rate 1 Hz
Units °C, °F, °K

HUMIDITY

Range 0-100%
Resolution 1%
Accuracy ± 2% @ 20°C (10%-90% RH)
Sampling Rate 1 Hz
Units % Rh, g/m³

PRECIPITATION

Measurement type Optical RG
Range 0 to > 300 mm/hr
Resolution 0.08 mm (Customer Selectable)
Repeatability 3%
Sampling Rate 1 Hz
Units mm/hr, mm/total, in/hr, in/total
Heating N/A
Output Contact closure via 20m cable to GMX

PRESSURE

Range 300 to 1100 hpa
Resolution 0.1 hPa
Accuracy ± 0.5 hPa @ 25°C
Sampling Rate 1 Hz
Units hPa, mbar, mmHg, inHg

DEW POINT

Range -40°C to +70°C
Resolution 0.1
Accuracy ± 0.3°C @ 20°C
Units °C, °F, °K

GLOBAL SOLAR RADIATION

Wavelength Sensitivity 300 to 3000 nm
Output Range 0 to 1600 W/m²
Resolution 1 W/m²
DIN Standard ISO 9060 Second Class
Sampling Rate 1 Hz
Units W/m²

OUTPUTS

Output rate 1/s, 1/min, 1/hr
Digital Comms Modes Serial RS232, RS422, RS485, SDI-12, NMEA, MODBUS, ASCII
Analogue Outputs Available via separate optional device

POWER

Power Supply 5 to 30 Vdc
Power (Nominal) 12 Vdc
64mA continuous high mode. 0.7mA eco-power mode (1 hour polled)

ENVIRONMENTAL CONDITIONS

IP Rating 66
Operational Temperature Range: -40°C to +70°C
CE Marking YES
RoHS compliant YES
Weight 0.8 Kg (+ 1.1 kg Rain Gauge inc 20m Cable)
Origin UK

Applications

- Building and Industrial Controls
- Coastal
- Agricultural
- Safety
- Educational
- Commercial
- Energy

Specifications may be subject to change without prior notice

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