

## GMX550 Compact Weather Station

High quality, easy-to-use, integrated weather station

MaxiMet compact weather stations are designed to be simple to install, use and maintain. In addition to providing measured parameters, the products derive additional parameters and data is output as a single string and available on a range of communications protocols.

MaxiMet weather stations benefit from the same technology used in Gill's scientific product range, ensuring measurement accuracy, low maintenance and continuous status reporting.

The MaxiMet family includes a range of sensor configurations allowing customers to select the model most appropriate to their needs.



### Typical applications

- Control systems including smart buildings, agriculture and industry.
- Solar farms.
- Road and rail.
- Ports and harbours.
- Reporting systems for transport and safety.
- Low power/solar powered deployments and IoT applications.

### MaxiMet GMX550 key features

- Six measured parameters:  
**Wind speed & direction, temperature, humidity, pressure, rainfall (tipping bucket connector), optional heating, optional GPS function.**
- Multiple additional derived parameters based on combining measured parameters, such as gust, average wind speed and dew point.
- High quality, accurate, solid state sensors.
- 2-axis compass.
- Optional integrated GPS capability available to provide location, GPS timestamp and a calculation of true wind if the platform is moving.
- Optional low power heating

### Benefits

- High quality measurement data due to careful sensor selection and extensive design testing and verification.
- Easy to set-up and integrate using comprehensive software to select the reported and derived parameters and measurement units required.
- Easy to install and long operational life, due to a compact, robust design and the selection of low maintenance sensors.
- Suitable for use with battery or solar systems in low power mode.

**MaxiMet GMX550 measures 6 parameters including precipitation**



**MaxiMet compact weather stations are integrated into systems monitoring gas and particulate concentrations in the air.**

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| WIND SPEED           |  |
|----------------------|--|
| Range                | 0-60 m/s   |
| Accuracy             | 0-10 m/s 0.3m/s RMSE<br>10-40 m/s 3% RMSE<br>40-60 m/s 5% RMSE |
| Resolution           | 0.01 m/s   |
| Starting threshold   | 0.01 m/s   |
| Units of measurement | m/s, km/h, mph, kts, ft/min                                    |

| WIND DIRECTION       |                                       |
|----------------------|---------------------------------------|
| Range                | 0-360°                                |
| Accuracy             | 0.5 m/s - 40 m/s ±3°<br>40-60 m/s ±5° |
| Resolution           | 1°                                    |
| Units of measurement | degrees                               |

| AIR TEMPERATURE      |                             |
|----------------------|-----------------------------|
| Range                | -40°C to +70°C with heating |
| Accuracy             | ±0.3°C                      |
| Resolution           | 0.1°C                       |
| Units of measurement | °C, °F, K                   |

| RELATIVE HUMIDITY    |                                    |
|----------------------|------------------------------------|
| Range                | 0-100% RH                          |
| Accuracy             | typically ±2% RH across full range |
| Resolution           | 0.1% RH                            |
| Units of measurement | % RH, g/m³                         |

| BAROMETRIC PRESSURE  |  |
|----------------------|--|
| Range                | 300-1250 hPa   |
| Accuracy             | Absolute (typically) ±0.4 hPa<br>900-1100 hPa, 25-40°C<br>Relative (typically) ±0.08 hPa |
| Resolution           | 0.1 hPa  |
| Units of measurement | hPa, mbar, mmHg, inHg  |

| PRECIPITATION        |                                  |
|----------------------|----------------------------------|
| Measurement type     | Optical or TBRG                  |
| Range                | See manual                       |
| Resolution           | See manual                       |
| Units of measurement | mm/hr, mm total, in/hr, in total |

| WARRANTY |           |
|----------|-----------|
| Warranty | 24 months |

| OUTPUTS             |   |
|---------------------|---|
| Digital comms modes | RS232, RS422<br>RS485, SDI-12,                          |
| Protocols           | ASCII, SDI-12 v1.3, NMEA 0183<br>MODBUS (RTU and ASCII) |
| Data outputs rates  | 1/s, 1/min, 1/hour, or polled                           |

| POWER SUPPLY                        |   |
|-------------------------------------|---|
| Input voltage                       | 5-30 VDC (10-30 VDC for heated models)  |
| Average current consumption @ 12VDC | 26 mA (or 64 mA with optical rain gauge)<br>continuous mode (std unit).<br>400 mA total with heating option.<br>+9 mA with GPS option.<br>1.3 mA eco-power mode (no GPS, 1/hr). |

| MECHANICAL     |  |
|----------------|--|
| Construction   | UV stabilized thermoplastic            |
| Fittings       | Fit to 44.45 mm (1.75 in) pole or mast |
| Weight         | 0.7 kg                                 |
| Connector type | 9-way clipper connector                |

| ENVIRONMENTAL    |  |
|------------------|--|
| Protection class | IP66   |
| Operating temp.  | -35°C to +70°C<br>-40°C to +70°C with heating option |
| Storage temp     | -40°C to +70°C                                       |

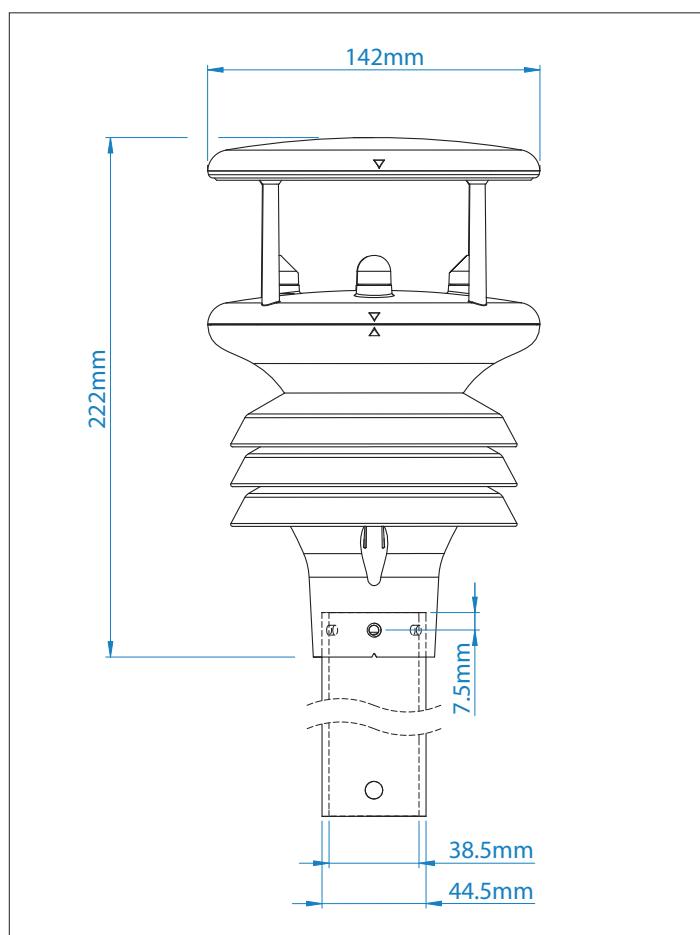
| STANDARD EQUIPMENT (supplied with product)   |  |
|--|--|
| MaxiMet product  |  |
| Mating connector   |  |
| MetSet software*, to set-up and configure MaxiMet (comms mode, measurement units, reporting intervals, derived parameters, etc.) |  |
| MetView software*, to view reported parameters   |  |
| MaxiMet User Manual*   |  |
| * downloadable from Gill Instruments website   |  |

| OPTIONS |   |
|---------|---|
| GPS     | Available as an option. Enables reporting of location, height, real time clock, true wind (for vehicle mounting applications) |
| Heating | Available as an option for operation in extremely low temperatures  |

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## EXAMPLE DERIVED PARAMETERS FOR MAXIMET RANGE

(model dependent) A full list of derived parameters is available in the User Manual, downloadable from [gillinstruments.com](http://gillinstruments.com)

|                               |                       |
|-------------------------------|-----------------------|
| Average wind speed *          | Sunrise               |
| Average wind direction *      | Solar noon            |
| Corrected wind speed          | Twilight              |
| Corrected wind direction      | Sunset                |
| Gust wind speed & direction * | Position of sun       |
| Dew point                     | Angle of tilt         |
| Wind chill                    | Pressure at sea level |
| Absolute humidity             | Heat index            |

\* WMO compliant

## ACCESSORIES

A list of the accessories available to support MaxiMet is provided on the MaxiMet Accessories Datasheet, which can be downloaded from

[gillinstruments.com](http://gillinstruments.com)

MaxiMet®

Accessories Datasheet



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## OTHER MAXIMET MODELS

|               | Wind | Temperature,<br>humidity,<br>pressure | Rain                           | Solar | Compass,<br>GPS  | Low power<br>heating |
|---------------|------|---------------------------------------|--------------------------------|-------|------------------|----------------------|
| <b>GMX200</b> | Y    |                                       |                                |       | Y, as option     |                      |
| <b>GMX240</b> | Y    |                                       | Integrated optical rain sensor |       | Y, as option     |                      |
| <b>GMX260</b> | Y    |                                       |                                |       | Y 6-axis, option |                      |
| <b>GMX300</b> |      | Y                                     |                                |       |                  |                      |
| <b>GMX301</b> |      | Y                                     |                                | Y     |                  |                      |
| <b>GMX400</b> |      | Y                                     | Integrated optical rain sensor |       |                  |                      |
| <b>GMX500</b> | Y    | Y                                     |                                |       | Y, as option     | Option               |
| <b>GMX501</b> | Y    | Y                                     |                                | Y     | Y, as option     | Option               |
| <b>GMX551</b> | Y    | Y                                     | Tipping bucket connector       | Y     | Y, as option     | Option               |
| <b>GMX560</b> | Y    | Y                                     |                                |       | Y 6-axis, option | Option               |
| <b>GMX600</b> | Y    | Y                                     | Integrated optical rain sensor |       | Y, as option     | Option               |

For more information about MaxiMet®, please contact Gill Instruments.

**Designed and manufactured in the UK by Gill Instruments Limited.**

[gillinstruments.com](http://gillinstruments.com)