



## **GMX551 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 GMX551 key features

• Seven measured parameters:

Wind speed & direction, temperature, humidity, pressure, rainfall (tipping bucket connector), solar radiation, 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 GMX551 measures 7 parameters including precipitation and solar radiation.



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 10-40 m/s 3% RMSE 40-60 m/s 5% RMSE				
Resolution	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° 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℃				
Units of measurement	°C, °F, K				
RELATIVE HUMIDITY					
Range	0-100% RH				
Accuracy	typically ±2% RH across full range				
Resolution	1% RH				
Units of measurement	% RH, g/m³				
BAROMETRIC PRESSUF	RE				
Range	300-1250 hPa				
Accuracy 900-1100 hPa, 25-40°C	Absolute (typically) ±0.4 hPa 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				
GLOBAL SOLAR RADIA	TION				
Wavelength sensitivity	300 - 3000 nm				
Output range	0-1600 W/m <sup>2</sup>				
Resolution	1 W/m²				
DIN standard	ISO 9060 Second Class				

OUTPUTS						
Digital comms modes	RS232, RS422 RS485, SDI-12, NMEA 0183, MODBUS					
Protocols	ASCII, SDI-12 v1.3, 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)					
Current spec @ 12VDC	25 mA (or 64 mA with optical rain gauge) continuous mode (std unit). 400 mA total with heating option. +10 mA with GPS option. 0.7 mA eco-power mode.					
MECHANICAL						
Construction	UV stabilized thermoplastic					
Fittings	Fit to 30mm to 58mm pole or mast					
Weight	0.8Kg					
Connector type	9-way clipper connector					
ENVIRONMENTAL						
Protection class	IP66					
Operating temp.	$-35^{\circ}$ C to $+70^{\circ}$ C $-40^{\circ}$ C to $+70^{\circ}$ 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					
WARRANTY	WARRANTY					

24 months

Warranty



 $W/m^2$ 

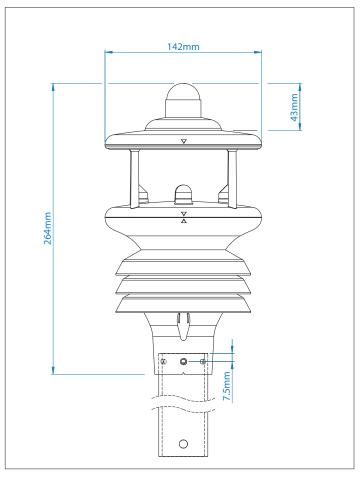


Units of measurement



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<b>EXAMPLE DERIVED PARAMETERS FOR MAXIMET RANGE</b> A full list of derived parameters is available in the User Manual which can be downloaded from gillinstruments.com						
Average wind speed	Sunrise					
Average wind direction	Solar noon					
Corrected wind speed	Twilight					
Corrected wind direction	Sunset					
Gust wind speed and direction	Position of sun					
Dew point	Angle of tilt					
Wind chill	Pressure at sea level					
Absolute humidity	Heat index					

	MaxiMet* Accessories Datasheet Compact Weather Stations Reliable, high quality compact, integrated weather stations		
ACCESSORIES	MadMet weather stations are supported by a range of accessories. These accessories can be used to cornect, install and maintain MasMet. The accessories have been designed, or selected, to ensure the long term performance of MadMet products.		
A list of the accessories available to support MaxiMet is provided on the MaxiMet Accessories Datasheet, which can be downloaded from gillinstruments.com	Consideration for the death of places.  When the second of		
	gillinstruments.com  Widebard Stationermontered		

OTHER MAXIMET MODELS								
	Wind	Temperature, humidity, pressure	Rain	Solar	Compass, GPS	Low power heating		
GMX200	Υ				Y, as option			
GMX240	Υ		Integrated optical rain sensor		Y, as option			
GMX300		Y						
GMX301		Y		Y				
GMX400		Y	Integrated optical rain sensor					
GMX500	Υ	Y			Y, as option	Y, as option		
GMX501	Υ	Y		Υ	Y, as option	Y, as option		
GMX550	Υ	Y	Tipping bucket connector		Y, as option	Y, as option		
GMX560	Υ	Y			Y, as option	Y, as option		
GMX600	Υ	Y	Integrated optical rain sensor		Y, as option	Y, as option		

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

Designed and manufactured in the UK by Gill Instruments Limited.

gillinstruments.com

