MaxiMet® Marine

Datasheet

GMX560 Compact Weather Station

High quality, easy-to-use, integrated weather station for marine applications

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 communication 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.



MaxiMet Marine GMX560 combines IP68 environmental protection with high quality sensors for marine environments

Typical applications for MaxiMet Marine GMX560

- Marine environments including:
  - Marine buoys.
  - Unmanned surface vessels.
- Helidecks.
- Offshore wind farms.
- Low power deployments and IoT applications.



(photo: Xylem DB1250 buoy) MaxiMet Marine's IP68 rating enhances performance in harsh weather conditions encountered by buoys and unmanned surface vessels

MaxiMet Marine key features

- MaxiMet Marine GMX560 provides 5 measured parameters:
  Wind speed & direction, temperature, humidity, pressure, optional heating, optional GPS function.
- IP68 and IP66 environmental protection.
- 6-axis compass.
- High quality, accurate, solid-state sensors.
- Compact design with robust construction.
- Multiple additional derived parameters.
- Optional integrated GPS capability available to provide location, GPS timestamp and calculation of true wind if the platform is moving.
- Commonly available connector suitable for corrosive environment.
- Optional low power heating.

Benefits

- Based on the GMX500, highly deployed in harsh marine applications, and now with additional environmental protection including temporary submersion.
- 6-axis compass compensates for tilt and provides pitch & roll data.
- No moving parts increases reliability and reduces maintenance requirements.
- Multiple output protocols offer a range of integration options.
- Easy to set up, integrate and install.

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WIND SPEED	
Range	0 - 60 m/s
Accuracy	0-10 m/s 0.3 m/s RMSE 10-40 m/s 3% RMSE 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° 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/m^3

BAROMETRIC PRESSURE	
Range	300 to 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

WARRANTY	
Warranty	24 months

OUTPUTS	
Digital comms modes	RS232, RS422 RS485 SDI-12,
Protocols	ASCII, SDI-12 v1.3, NMEA 0183 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 @ 12 VDC	28 mA continuous mode (std unit) 400 mA total with heating option +9 mA with GPS option 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	M12 8-way

ENVIRONMENTAL	
Protection class	IP66 & IP68
Operating temp	-35°C to +70°C -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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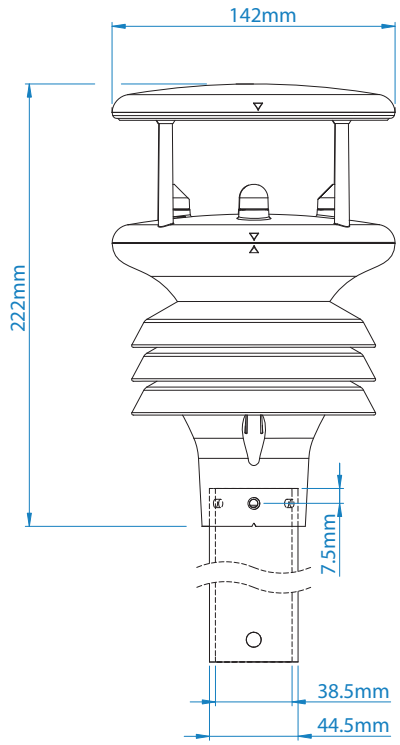
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EXAMPLE DERIVED PARAMETERS FOR MAXIMET RANGE (model dependent) A full list of derived parameters is available in the User Manual, downloadable from **gillinstruments.com**

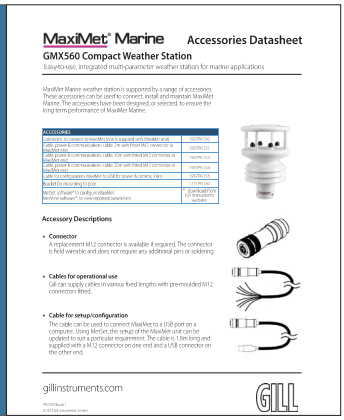
Average wind speed *	Sunrise
Average wind direction *	Solar noon
Corrected wind speed	Twilight
Corrected wind direction	Sunset
Gust wind speed & direction *	Position of sun
Dew point	Angle of tilt
Wind chill	Pressure at sea level
Absolute humidity	Heat index

* 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


MaxiMet® Marine Accessories Datasheet
GMX560 Compact Weather Station
Easy-to-use, integrated multi-parameter weather station for marine applications

OTHER MAXIMET MODELS

	Wind	Temperature, humidity, pressure	Rain	Solar	Compass, GPS	Low power heating
GMX200	Y				Y, as option	
GMX240	Y		Integrated optical rain sensor		Y, as option	
GMX260	Y				Y 6-axis, option	
GMX300		Y				
GMX301		Y		Y		
GMX400		Y	Integrated optical rain sensor			
GMX500	Y	Y			Y, as option	Option
GMX501	Y	Y		Y	Y, as option	Option
GMX550	Y	Y	Tipping bucket connector		Y, as option	Option
GMX551	Y	Y	Tipping bucket connector	Y	Y, as option	Option
GMX600	Y	Y	Integrated optical rain sensor		Y, as option	Option

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

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OBSERVATOR
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As a representative of this supplier, we – from Observator – distribute these products. Originating from the Netherlands, Observator has grown into an internationally oriented company with a worldwide distribution network.

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The Observator range is in continuous development and so specifications may be subject to change without prior notice.