MaxiMet®

Datasheet

GMX501 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.



MaxiMet GMX501 measures 6 parameters including solar radiation.

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 GMX501 key features

- Six measured parameters:
  Wind speed & direction, temperature, humidity, pressure, 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



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

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.

1957-009 Issue 12
© 2024 Gill Instruments Limited

GILL

MaxiMet®

Datasheet

GMX501 Compact Weather Station

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

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	300-1250 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

SOLAR RADIATION	
Wavelength sensitivity	300 - 3000 nm
Output range	0-1600 W/m^2
Resolution	1 W/m^2
DIN standard	ISO 9060 Class: spectrally flat Class C
Units of measurement	W/m^2

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 @ 12VDC	27 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	0.8Kg
Connector type	9-way clipper connector

ENVIRONMENTAL	
Protection class	IP66
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

WARRANTY	
Warranty	24 months

gillinstruments.com

1957-009 Issue 12
© 2024 Gill Instruments Limited

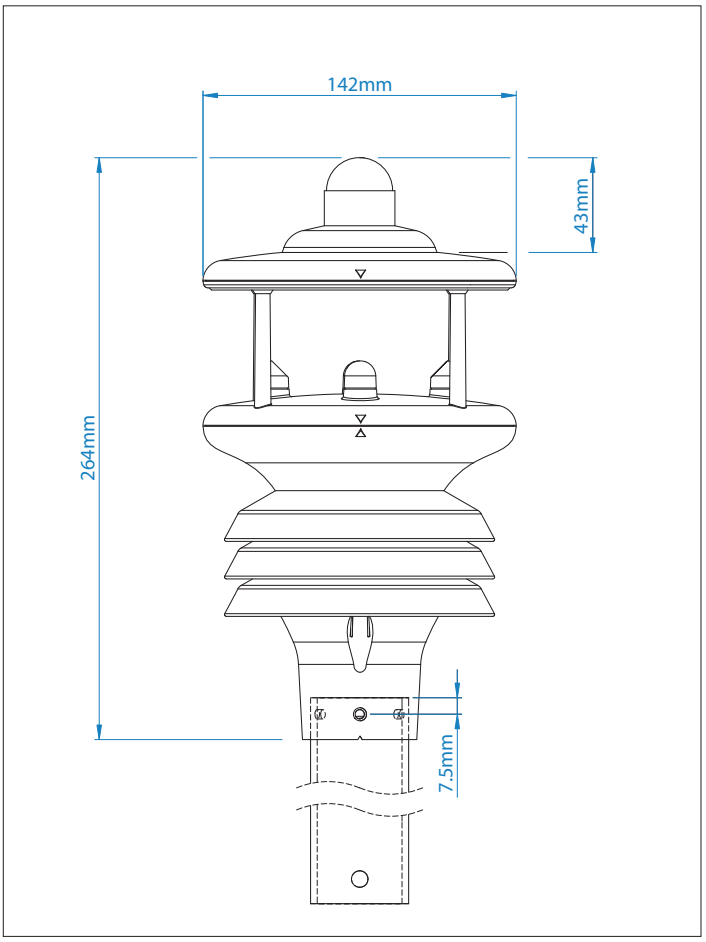
GILL

MaxiMet®

Datasheet

GMX501 Compact Weather Station

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



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®
Accessories Datasheet
Compact Weather Stations
Reliable, high quality compact, integrated weather stations

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
GMX550	Y	Y	Tipping bucket connector		Y, as option	Option
GMX551	Y	Y	Tipping bucket connector	Y	Y, as option	Option
GMX560	Y	Y			Y 6-axis, option	Option
GMX600	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.

1957-009 Issue 12

© 2024 Gill Instruments Limited

OBSERVATOR
instruments

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.

For more information contact Observator Instruments:

Australia
T: +61 3 8706 5000
E: sales.au@observator.com / service.au@observator.com

Germany
T: +49 (0)152 02047306 / +49 (0)152 02047308
E: contact@observator.com

The Netherlands
T: +31 (0)180 463411
E: sales@observator.com / service@observator.com

Poland
T: +48 537 209 665
E: a.miller@observator.com

Singapore
T: +65 68 72 08 63
E: sales@observator.sg

United Kingdom
T: +44 (0)783 346 4884
E: info.uk@observator.com

Welcome to the world of Observator

Since 1924 Observator has evolved to be a trend-setting developer and supplier in a wide variety of industries. Originating from the Netherlands, Observator has grown into an internationally oriented company with a worldwide distribution network and offices in Australia, Germany, the Netherlands, Singapore and the United Kingdom.

www.observator.com

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