

## 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.

## GMX551 Compact Weather Station

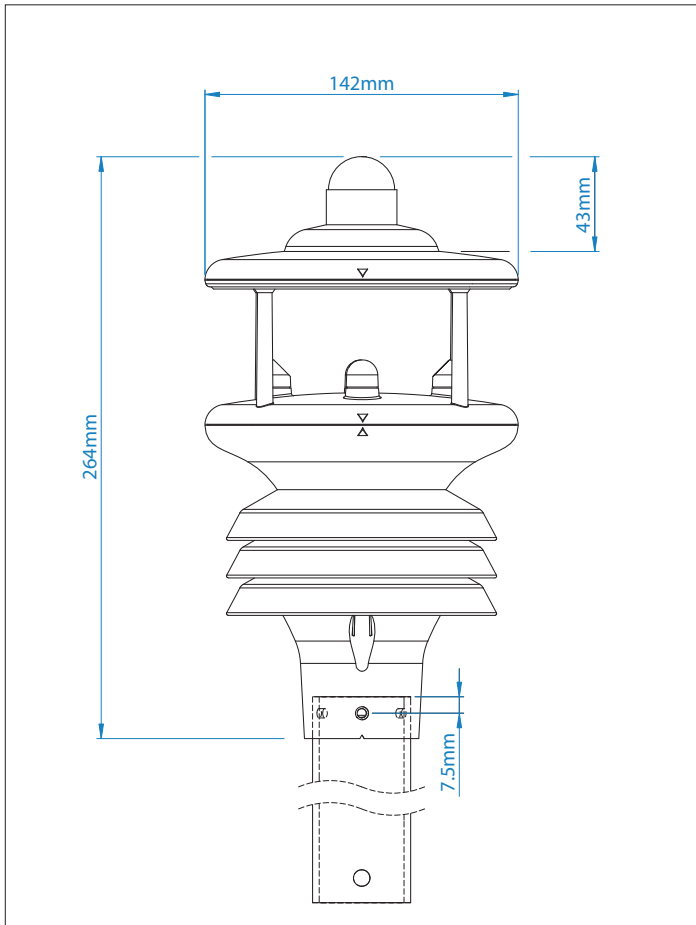
High quality, easy-to-use, integrated weather station

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°C
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/m <sup>3</sup>
BAROMETRIC PRESSURE	
Range	300-1250 hPa
Accuracy	Absolute (typically) ±0.4 hPa 900-1100 hPa, 25-40°C 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 RADIATION	
Wavelength sensitivity	300 - 3000 nm
Output range	0-1600 W/m <sup>2</sup>
Resolution	1 W/m <sup>2</sup>
DIN standard	ISO 9060 Second Class
Units of measurement	W/m <sup>2</sup>

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
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°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

## GMX551 Compact Weather Station

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



### EXAMPLE DERIVED PARAMETERS

A full list of derived parameters is available in the User Manual which can be downloaded 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 and direction	Position of sun
Dew point	Angle of tilt
Wind chill	Pressure at sea level
Absolute humidity	Heat index

### 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®**  
Compact Weather Stations  
Reliable, high quality compact, integrated weather stations

MaxiMet weather stations are supported by a range of accessories. These accessories can be used to connect, install and maintain MaxiMet. The accessories have been designed or selected to ensure the long-term performance of MaxiMet products.

Accessories	Part Number
1. 10m cable for connection to a computer or data logger	10000000
2. 10m cable for connection to a data logger or computer	10000001
3. 10m cable for connection to a data logger or computer	10000002
4. 10m cable for connection to a data logger or computer	10000003
5. 10m cable for connection to a data logger or computer	10000004
6. 10m cable for connection to a data logger or computer	10000005
7. 10m cable for connection to a data logger or computer	10000006
8. 10m cable for connection to a data logger or computer	10000007
9. 10m cable for connection to a data logger or computer	10000008
10. 10m cable for connection to a data logger or computer	10000009
11. 10m cable for connection to a data logger or computer	10000010
12. 10m cable for connection to a data logger or computer	10000011
13. 10m cable for connection to a data logger or computer	10000012
14. 10m cable for connection to a data logger or computer	10000013
15. 10m cable for connection to a data logger or computer	10000014
16. 10m cable for connection to a data logger or computer	10000015
17. 10m cable for connection to a data logger or computer	10000016
18. 10m cable for connection to a data logger or computer	10000017
19. 10m cable for connection to a data logger or computer	10000018
20. 10m cable for connection to a data logger or computer	10000019
21. 10m cable for connection to a data logger or computer	10000020
22. 10m cable for connection to a data logger or computer	10000021
23. 10m cable for connection to a data logger or computer	10000022
24. 10m cable for connection to a data logger or computer	10000023
25. 10m cable for connection to a data logger or computer	10000024
26. 10m cable for connection to a data logger or computer	10000025
27. 10m cable for connection to a data logger or computer	10000026
28. 10m cable for connection to a data logger or computer	10000027
29. 10m cable for connection to a data logger or computer	10000028
30. 10m cable for connection to a data logger or computer	10000029
31. 10m cable for connection to a data logger or computer	10000030
32. 10m cable for connection to a data logger or computer	10000031
33. 10m cable for connection to a data logger or computer	10000032
34. 10m cable for connection to a data logger or computer	10000033
35. 10m cable for connection to a data logger or computer	10000034
36. 10m cable for connection to a data logger or computer	10000035
37. 10m cable for connection to a data logger or computer	10000036
38. 10m cable for connection to a data logger or computer	10000037
39. 10m cable for connection to a data logger or computer	10000038
40. 10m cable for connection to a data logger or computer	10000039
41. 10m cable for connection to a data logger or computer	10000040
42. 10m cable for connection to a data logger or computer	10000041
43. 10m cable for connection to a data logger or computer	10000042
44. 10m cable for connection to a data logger or computer	10000043
45. 10m cable for connection to a data logger or computer	10000044
46. 10m cable for connection to a data logger or computer	10000045
47. 10m cable for connection to a data logger or computer	10000046
48. 10m cable for connection to a data logger or computer	10000047
49. 10m cable for connection to a data logger or computer	10000048
50. 10m cable for connection to a data logger or computer	10000049
51. 10m cable for connection to a data logger or computer	10000050
52. 10m cable for connection to a data logger or computer	10000051
53. 10m cable for connection to a data logger or computer	10000052
54. 10m cable for connection to a data logger or computer	10000053
55. 10m cable for connection to a data logger or computer	10000054
56. 10m cable for connection to a data logger or computer	10000055
57. 10m cable for connection to a data logger or computer	10000056
58. 10m cable for connection to a data logger or computer	10000057
59. 10m cable for connection to a data logger or computer	10000058
60. 10m cable for connection to a data logger or computer	10000059
61. 10m cable for connection to a data logger or computer	10000060
62. 10m cable for connection to a data logger or computer	10000061
63. 10m cable for connection to a data logger or computer	10000062
64. 10m cable for connection to a data logger or computer	10000063
65. 10m cable for connection to a data logger or computer	10000064
66. 10m cable for connection to a data logger or computer	10000065
67. 10m cable for connection to a data logger or computer	10000066
68. 10m cable for connection to a data logger or computer	10000067
69. 10m cable for connection to a data logger or computer	10000068
70. 10m cable for connection to a data logger or computer	10000069
71. 10m cable for connection to a data logger or computer	10000070
72. 10m cable for connection to a data logger or computer	10000071
73. 10m cable for connection to a data logger or computer	10000072
74. 10m cable for connection to a data logger or computer	10000073
75. 10m cable for connection to a data logger or computer	10000074
76. 10m cable for connection to a data logger or computer	10000075
77. 10m cable for connection to a data logger or computer	10000076
78. 10m cable for connection to a data logger or computer	10000077
79. 10m cable for connection to a data logger or computer	10000078
80. 10m cable for connection to a data logger or computer	10000079
81. 10m cable for connection to a data logger or computer	10000080
82. 10m cable for connection to a data logger or computer	10000081
83. 10m cable for connection to a data logger or computer	10000082
84. 10m cable for connection to a data logger or computer	10000083
85. 10m cable for connection to a data logger or computer	10000084
86. 10m cable for connection to a data logger or computer	10000085
87. 10m cable for connection to a data logger or computer	10000086
88. 10m cable for connection to a data logger or computer	10000087
89. 10m cable for connection to a data logger or computer	10000088
90. 10m cable for connection to a data logger or computer	10000089
91. 10m cable for connection to a data logger or computer	10000090
92. 10m cable for connection to a data logger or computer	10000091
93. 10m cable for connection to a data logger or computer	10000092
94. 10m cable for connection to a data logger or computer	10000093
95. 10m cable for connection to a data logger or computer	10000094
96. 10m cable for connection to a data logger or computer	10000095
97. 10m cable for connection to a data logger or computer	10000096
98. 10m cable for connection to a data logger or computer	10000097
99. 10m cable for connection to a data logger or computer	10000098
100. 10m cable for connection to a data logger or computer	10000099

**Accessory Descriptions**

- Connector (1405PK069)**  
A replacement connector is available if required. The connector is compatible with all MaxiMet models and is supplied with pins.
- Cables for operational use**  
The 10m cables can be used to connect MaxiMet to power and communication. The cable can be supplied as a 10m cable with pins fitted (1405PK069) or by the meter (1405PK070).
- Cable for setup configuration (1405PK065)**  
The cable can be used to connect a MaxiMet to a USB port on a computer. Using this method, the setup of the MaxiMet can be updated to suit a particular requirement. The cable is 10m long and is supplied with a MaxiMet connector on one end and a USB connector on the other end.

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

### OTHER MAXIMET MODELS

	Wind	Temperature, humidity, pressure	Rain	Solar	Compass, GPS	Low power heating
<b>GMX200</b>	Y				Y, as option	
<b>GMX240</b>	Y		Integrated optical rain sensor		Y, as 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	Y, as option
<b>GMX501</b>	Y	Y		Y	Y, as option	Y, as option
<b>GMX550</b>	Y	Y	Tipping bucket connector		Y, as option	Y, as option
<b>GMX560</b>	Y	Y			Y, as option	Y, as option
<b>GMX600</b>	Y	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](http://gillinstruments.com)

1957-013 Issue 10  
© 2024 Gill Instruments Limited