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Solar Monitoring Solutions

for performance monitoring and asset protection

GILL

Solar PV Plant Performance

Monitoring environmental parameters is essential for optimizing the performance and reliability of solar power plants. The IEC 61724-1 standard provides a globally recognized framework for photovoltaic system performance monitoring, ensuring consistent data quality and enabling accurate benchmarking across sites. Key parameters such as solar irradiance, ambient temperature, wind speed, relative humidity, and precipitation directly influence energy yield and system efficiency. By adhering to IEC 61724-1, solar operators can detect performance issues early, reduce downtime, and maximize return on investment.

The Gill MaxiMet range of compact weather stations offers a robust, all-in-one solution for solar plants seeking compliance with IEC 61724-1 Class A monitoring standards. Designed for durability and precision, MaxiMet sensors deliver high-quality, real-time data across all critical environmental metrics. With easy integration into existing monitoring systems and minimal maintenance requirements, MaxiMet empowers solar operators to meet international standards while enhancing operational insight and long-term performance.

Compact Weather Stations for IEC 61724-1 Compliance

MaxiMet®



		GMX 500	GMX 501	GMX 550	GMX 551	GMX 600
MEASUREMENTS	Wind speed	●	●	●	●	●
	Wind direction	●	●	●	●	●
	Compass	●	●	●	●	●
	GPS	○	○	○	○	○
	Integrated rain sensor					●
	Remote rain sensor connection			●	●	
	Temperature	●	●	●	●	●
	Humidity	●	●	●	●	●
	Pressure	●	●	●	●	●
	Solar radiation		●		●	
	Internal tilt sensor	●	●	●	●	●
FEATURES	Standard Protocols e.g. MODBUS RTU (RS485)	●	●	●	●	●
	High quality integrated sensors	●	●	●	●	●
	Low power eco mode	●	●	●	●	●
	Heating	○	○	○	○	○
	IP66 environmental protection	●	●	●	●	●
	Minimal maintenance	●	●	●	●	●

● Included | ○ Optional

Ultrasonic Wind Sensors for Tracker System Asset Protection

Wind monitoring is a critical component of solar plant operations, especially for facilities utilizing solar tracker systems. These systems, designed to follow the sun's path for maximum energy capture, are vulnerable to high wind events that can cause mechanical stress or damage. By continuously monitoring wind speed and direction, solar plants can implement automated stow protocols to reposition trackers into a safe orientation, protecting valuable infrastructure and minimizing downtime.

Gill WindSonic ultrasonic anemometers offer a compact, rugged, and maintenance-free solution for reliable wind monitoring in solar environments. With no moving parts and a durable design suited for harsh conditions, WindSonic delivers precise, real-time wind measurements essential for tracker control systems. Its easy integration with SCADA and weather monitoring platforms makes it an ideal choice for solar operators seeking to safeguard their assets while maintaining compliance with industry best practices.

	WindSonic	WindSonic M
Wind speed	•	•
Wind direction	•	•
Communications	RS485, RS232, RS422, MODBUS RTU, ASCII, NMEA, 0-5V, 0-20mA, 4-20mA	RS485, RS232, RS422, ASCII, NMEA, 0-5V, 0-20mA, 4-20mA
Heating		•
IP66 environmental protection	•	•
Maintenance free	•	•

WindSonic provides critical wind data to safeguard solar tracking farms

[VIEW APPLICATION](#)

Cost benefit of ultrasonic anemometers vs mechanical wind sensors in solar farms

[VIEW APPLICATION](#)



MaxiMet®

For further information on **MaxiMet** and **WindSonic** including manuals, datasheets and software, please click here:



Technical specifications

Many variants available to meet your monitoring objectives
Measurement accuracy in accordance with IEC 61724-1 Class A
Standard Protocols e.g. MODBUS RTU (RS485)
Minimal Maintenance

WindSonic®

Technical specifications

Models available up to 75m/s (270 km/h) for extreme conditions
Integrated WMO-compliant gust wind speed and direction
Standard Protocols e.g. MODBUS RTU (RS485)
Maintenance free, ensuring low cost of ownership

Where to buy

Gill Instruments products are available directly or through a worldwide network of distributors.

To discuss your need and be put in contact with the most appropriate distributor, contact us at contact.gi@gill.group



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