

Independent, flexible **performance assessment** for utility-scale solar

The **MetEdge** is a robust, simplified weather station engineered for utility-scale solar applications. Designed for scalability and operational efficiency, the MetEdge offers a dependable environmental monitoring solution that seamlessly integrates into large solar farms. Its flexible design allows for installation on dedicated mounting poles or integration into existing site infrastructure, offering adaptability for a wide range of deployment scenarios.



Redefining Weather Monitoring Data

MetEdge incorporates Proa's proprietary MetProtect automatic cleaning system, which ensures consistent data quality by cleaning pyranometers daily with demineralized water during off-sunlight hours. This automated process reduces the need for manual maintenance and supports long-term reliability. In addition, an integrated rainwater catchment and recovery system minimizes water usage and supports sustainable operations in remote or arid environments.

With a focus on simplicity, durability, and high data accuracy, MetEdge is built to meet the demands of utility-scale solar—efficiently and sustainably.



Specifications

Data sampling, access and storage

| | |
|-------------------------|---|
| Sampling rate | 1s sampling (default) |
| Data averaging | 1-min (default) |
| Data storage | 250 GB, ~ 5 months data storage (1s resolution) |
| MetCloud Service | The MetCloud package offers data visualization, data quality checks, sensor status, and enables the user to back up data from one or more MetCube (data upload every 15s) |

Connection Interfaces

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|----------------------|--|
| Optical Fibre | 2x SFP ports for SCADA connection (Modbus TCP/IP), and access to MetCube Dashboard |
|----------------------|--|

Telemetry and controls

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|-------------------------------|---|
| On-board control | Start/Stop, Enable/Disable and scheduling for instrument washing routines System Scan feature for automatic detection of weather instrument Remote Power Cycling for Data Logger and 24Vdc bus |
| Auxiliary measurements | Battery Voltage and Current, Solar Panel Voltage and Current Electronics/Enclosure Temperature, Supply Voltage for each MetCube module Water Level and Water Purity Level measurements (for MetProtect) |

Power System

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|------------------------------|---|
| Avg Power Consumption | 300W for basic system (excluding weather instruments) |
| Power Supply | 230V (supplied by the client) |

Operating Conditions

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|-----------------------------|--|
| Temperature | -20° to 60°C ambient temperature |
| IP Rating | Electrical Enclosures: IP66 |
| Lightning protection | Earthing connection point for bonding with the site's grounding system Surge arresters (optional) |

Configuration

| | |
|-------------------|---|
| Dimensions | Subject to mounting system |
| Weight | Subject to mounting system |
| Materials | Hot-dipped galvanised steel |
| Mounting | Shipping container attachments Security camera pole attachment Wall mount attachment Stand alone structure |

MetProtect

| | |
|---|---|
| Automatic cleaning system | Automatic cleaning for dome-equipped instruments |
| Bird Deterrent | Wildlife detection and deterring for dome-equipped instruments |
| Water tank and rainwater catchment | 200L water storage, rain catchment, irrigation-grade pump and water filtration (particle and deionization) system |

Available sensors

| | | |
|------------------------------|--|-------------------------|
| Pyranometers | - | Kipp & Zonen SMP10 |
| | - | EKO MS-80 |
| | - | Delta SPN1 |
| Pyrheliometer | - | Kipp & Zonen SHP1 |
| SkyCam | - | Sieltec Sky Camera 502U |
| Multivariable Weather Sensor | - | Luff WS601/60/500 |
| Other sensors | Additional or alternate sensors available on request | |

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