Smart Energy & Power Quality Solutions

Short reference



RENEWABLE ENERGIES IN OPENCAST MINING

Automation, energy monitoring, and load management





The MID-certified UMG 96-PA-MID+ records legally compliant measured values in the PV park's transformer station (in accordance with Directive 2014/32/EU)



The GridVis® provides a complete overview of the entire plant from the office

AUTOMATION, ENERGY MONITORING, AND LOAD MANAGEMENT

CUSTOMER REQUIREMENT

The company Quarzwerke extracts high-quality sand in open-cast mining in order to prepare it for the processing industry at the Frechen site. With power peaks of a good 4.5 MW, this is an energy-intensive process. For some years now, the company has been increasingly using renewable energies, including a PV park. To this end, a comprehensive energy monitoring and load management system is currently being developed that is closely linked to the automation. The site is highly automated. Around 40 PLC controllers, the largest with up to 400-500 EAs, ensure smooth operation. Indepth knowledge of the plant control system is therefore essential for the transition to climate-neutral operation.

THE SOLUTION

Quarzwerke benefited from Janitza's expansion of its portfolio to include industrial automation in order to offer even better service in its project business. This allows the data obtained from the measurement technology to be fed back into the control system without any detours.

In addition to load and peak load management, monitoring, and system control, this also enables operating data acquisition, i.e., the correlation of energy data with production data, batch logs, etc. A central element in energy supply is GridVis®, which can also be used to integrate third-party measuring devices.

The operators want to make the best possible use of the sometimes considerable yields from the PV park. This is not about selling energy, but about energy-optimized operation. The aim is to achieve a self-consumption rate of around 75% during the week. GridVis[®] will also help with this.

There are many other options, such as a report editor for analyzing and presenting your own performance data in more detail, a mask for alarms, user management, etc. Special All locations are gradually being converted to renewable encustomer requirements can also be implemented. For examergies. With GridVis[®] and Janitza hardware, Quarzwerke has ple, a mask displays the status of the inverters for the PV sysa system that can be used and evaluated across all plants. All tem and triggers a maintenance alarm if necessary. sites can then benefit from the experience gained.



CUSTOMER BENEFIT

In Frechen, development is progressing in leaps and bounds. Various options such as battery storage, additional PV systems and wind power are being discussed. Initial tests are even underway to convert the truck fleet for intralogistics to e-drives. Charging posts are already in place and equipped with load management and energy management controllers from Janitza.



Service

Consulting, commissioning, and training

COMPANY PORTRAIT

Janitza develops complete solutions for energy measurement technology that ensure transparent energy flows and monitor the quality of the energy supply. The globally active company, headquartered in Germany, offers individual solutions for customers from various industries, such as data centers, the manufacturing industry, buildings and infrastructure as well as energy supply companies and renewable energies.

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