Smart Energy & Power Quality Solutions

Project Brief

REFERENCE
Stadtwerke Trier (SWT)

PRODUCTS
UMG 801, 800-CT8-LP, RD 96

RETROFITTING TO ASSESS GRID CONDITIONS

Janitza

New compact stations are ready for deployment. They are already equipped with Janitza measurement technology at the factory

SECONDARY SUBSTATIONS TURN DIGITAL AND TRANSPARENT

REQUIREMENT

Like many other energy suppliers, Stadtwerke Trier (SWT) is modernizing the measurement technology in its distribution grid for the energy transition. The existing measurement devices did not meet the requirements of Section 14a of the German Energy Industry Act (EnWG - Energiewirtschaftsgesetz) and had to be replaced. SWT needed a solution suitable for both new systems and retrofit projects. At the same time, the retrofit had to be as simple as possible during ongoing operation and require minimal space — a decisive factor in existing secondary substations. Also, all energy monitoring data had to be available both centrally and locally in the station.

SOLUTION

Stadtwerke Trier primarily used the expandable modular power analyzer UMG 801 in combination with the Remote Display RD 96 and the 800-CT8-LP current measuring modules. The new measurement technology records the transformer feeder, the PEN conductor, and all outgoing feeders with high-resolution, 4-phase measurement.
The compact design played a key role, especially for modernizing existing systems. At just 18 mm, the compact modules require only one horizontal pitch (HP), yet provide connections for eight low-power current transformers. This technology also eliminates the need for current transformer disconnect terminals, which saves additional space and wiring effort.

Project location	Year of implementation	Application
Trier, Germany	2025	Energy Monitoring

Space-saving: expandable modular power analyzer UMG 801 with 800-CT8-LP current measuring modules and Remote Display RD 96 in a new station

For larger stations or specific installation requirements, the modules can be installed anywhere in the station. The split-core transformers used made safe retrofitting possible during ongoing operation.
The Remote Display RD 96 was also quick to install. Thanks to its standard 96 x 96 mm dimensions, it can replace older door-mounted devices without additional modifications.
SWT wanted to retain full control over data transmission from the station. The open interfaces of the UMG devices met this requirement. Data retrieval does not require system-based encryption or proprietary software solutions.

ADVANTAGES

Measurements with the UMG 801 allow Stadtwerke Trier to assess power quality quickly and cost-effectively. Irregularities in the grid can be detected before they cause problems. This level of transparency is becoming increasingly important, especially when supplying commercial customers.
The Remote Display RD 96 also stood out for its ease of use. Its clear, intuitive display helps even employees find the information they need quickly, even if they rarely work with the devices. This is especially important for the emergency service team, which must be able to navigate the station quickly as every minute counts.
Beyond the initial assessment, the UMG 801 power analyzers also offer comprehensive functions for power quality analysis. In the future, SWT plans to use these capabilities for detailed analysis of individual grid areas.

Hardware	Software	Service
UMG 801, current measuring module 800-CT8-LP, Remote Display RD 96	GridVis® Expert	Consulting, commissioning

ABOUT JANITZA

Janitza develops comprehensive energy measurement solutions that ensure transparent energy flows and monitor power quality. The global company, headquartered in Germany, provides individual solutions to meet specific customer requirements across a wide range of industries, including data centers, manufacturing, buildings & infrastructure, utilities, and renewable energy.

PRODUCT RANGE

Janitza's portfolio includes innovative measuring devices and the perfectly integrated Power Grid Monitoring Software GridVis®, complemented by high-quality components. Customers worldwide benefit from solutions in energy data management, power quality monitoring, and residual current monitoring, all within a unified system environment – Made in Germany.

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