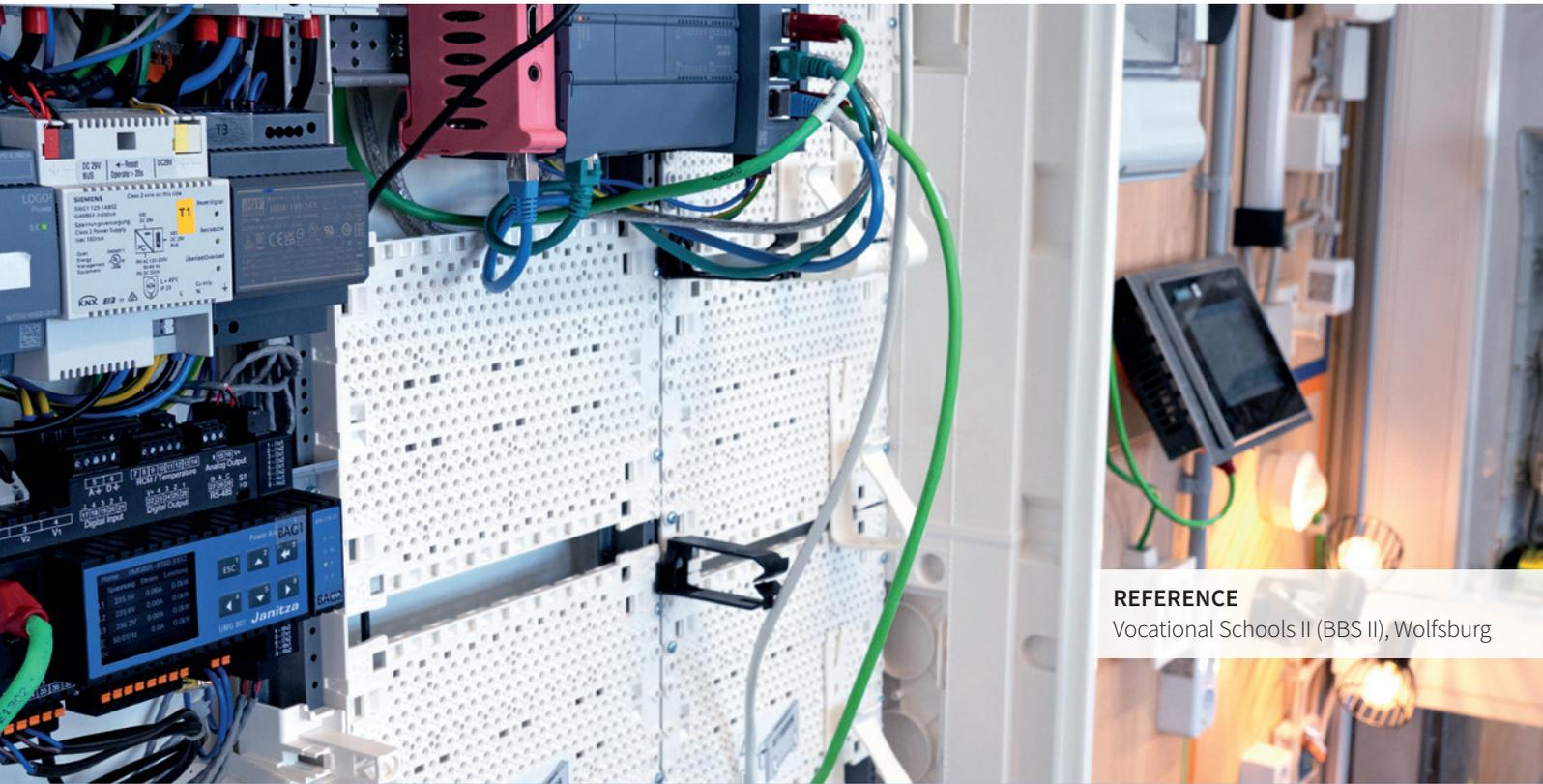


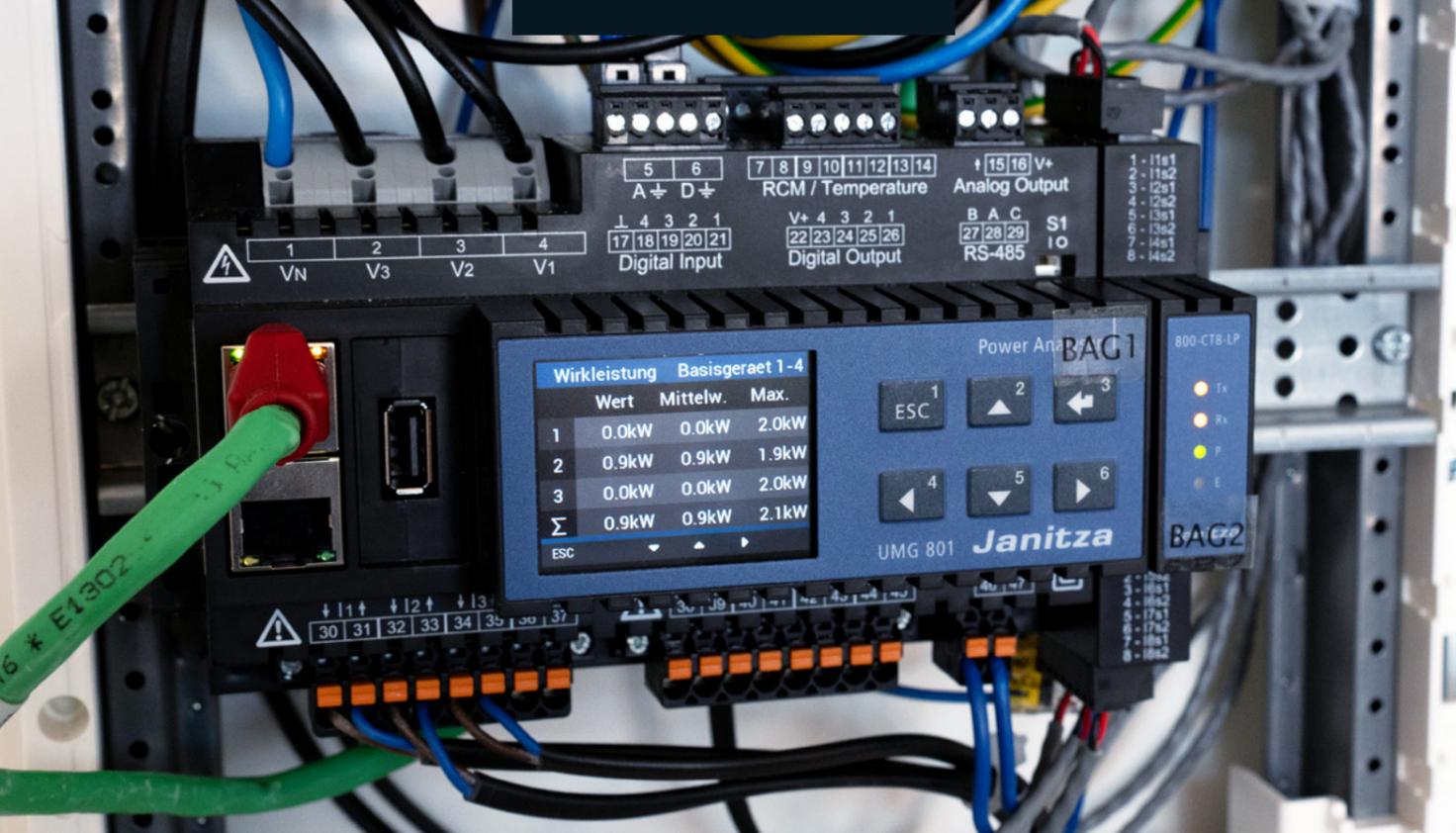
Project Brief



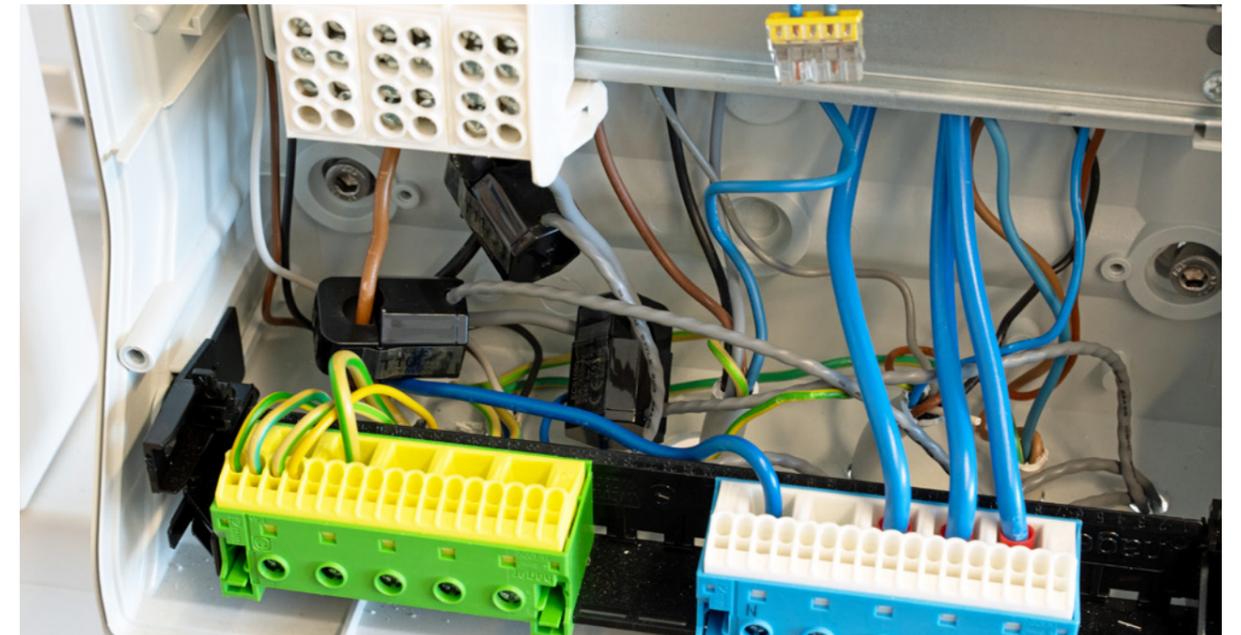
REFERENCE  
Vocational Schools II (BBS II), Wolfsburg

# TRAINING PANEL FOR VOCATIONAL SCHOOLS

**Janitza**



UMG 801 power analyzer together with an 800-CT8-LP expansion module



Even in confined spaces, the low-power converters can be easily installed in the sub-distribution board

## MEASUREMENT TECHNOLOGY IN SCHOOL FINAL PROJECTS

### CHALLENGE

Due to the energy transition and mandatory efficiency measures, skilled technicians are in greater demand than ever in industry and commerce. A technical instructor at the vocational school "Berufsbildende Schulen II (BBS II)" in Wolfsburg has recognized this and is addressing current developments in the final projects of his classes. The graduates develop training panels where future students can gain practical experience. The construction instructions are also freely available online. Janitza supported the project with hardware and expertise.

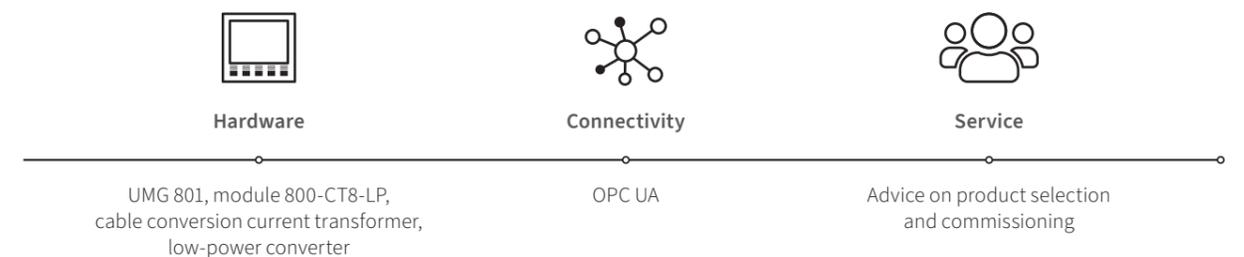
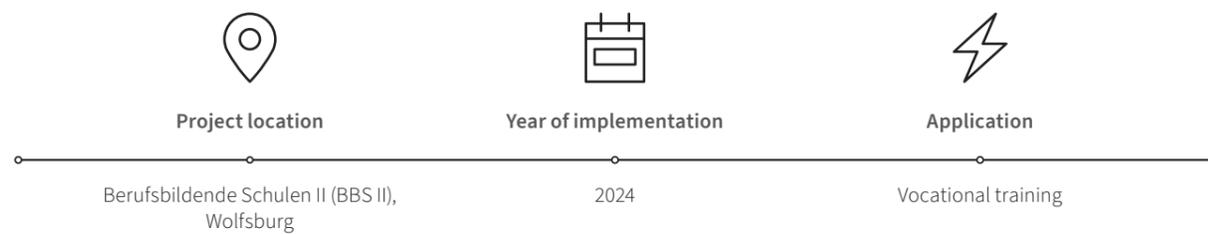
### SOLUTION

One example of a final project is the training panel for measuring energy and power in buildings. It can be used to simulate a small industrial plant with distributors, consumers, and measuring and control devices. The simulation includes a supply room with the main distribution board, an office wing, and a production hall, each with a sub-distribution board and a wall box for electric vehicles. The consumers are simulated by individual lights, electric blinds, etc. For larger loads, a 1 kW infrared heating panel is installed above the training panel. A total of three measuring devices were to be installed in the existing system, one in the main distribution board and one in each sub-distribution board. The recorded

### BENEFIT

data was to be displayed both locally on a Siemens Simatic HMI display and globally via a web-based interface in the form of charts and figures. At the heart of the installation is the expandable modular power analyzer UMG 801 together with an 800-CT8-LP expansion module. In addition, there are three split-core and six low-power current transformers. The expansion module eliminates the need for the separately planned measuring devices for the sub-distribution boards. The UMG 801 can also perform these measurements. Trainees can use the model to learn how to parameterize and program such a system, how to implement communication with the modules, and finally how to query the relevant data.

In the realistic implementation, Janitza offered easy integration into the existing system and required only minimal wiring effort. The training panels provide an a high degree of practical relevance, which benefits the trainees. However, the development of prototypes by the teacher is time-consuming. That is why BBS II publishes the projects. Other schools can download circuit diagrams, parts lists, programming, etc. from the [xplora-dna.net](http://xplora-dna.net) website. The offer has been well received, as evidenced by the hundreds of thousands of visitors and replicas.



## 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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