



PQM 1588 now with OPC UA interface

In many companies, the prudent and cost-effective stewardship of resources to minimize the consumption of utilities, such as electricity, water, gas, oil, compressed air, technical gases and other media or energy vectors, is already governed by energy management systems. All the relevant plant and components must be equipped with meters and measuring instruments in order to provide a detailed overview of energy use, with a breakdown by cost centre. These field devices communicate with a central data collector through various bus



connections, the data thus being made available for analysis by evaluation software.

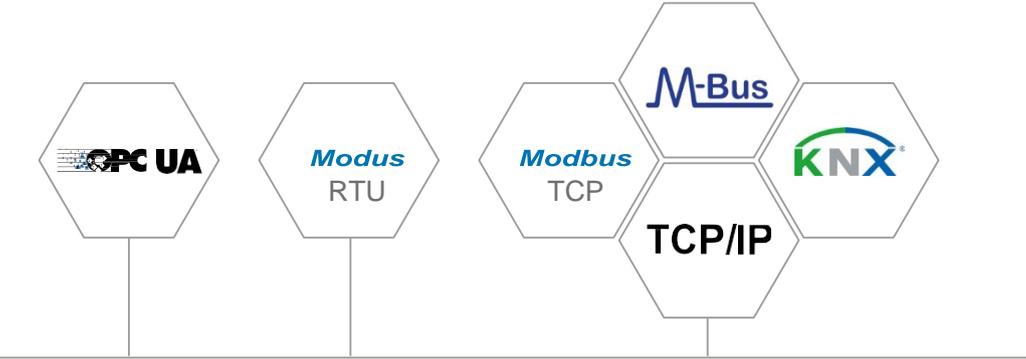
Any company recording utilities consumption in this detail will have thus created the basis for gaining certification to ISO 50001 and claiming fiscal incentives, such as exemption from the surcharge on power costs levied under Germany's Renewable Energy Sources Act to

subsidize electricity generation from sustainable resources. It is a particular advantage if the acquired data can also be made available via universal interfaces to other in-house systems or special evaluation tools.

The PQM 1588 communicates eye to eye at management level.

With its PQM 1588 Power Quality Manager, FRAKO offers a modular data collector with which a whole host of measurement and metering devices can communicate via bus systems such as Ethernet, Modbus, Modbus/TCP, M-Bus, KNX, FRAKO's proprietary Starkstrombus and now also via OPC UA. Set limits can be specified for every measured variable in order to trigger alarms when necessary. The associated software EMVIS 3000 evaluates the data in a standard or customized form and provides a visualization function.

EMVIS 3000 has been certified by the German Federal Office for Economic Affairs and Export Control (BAFA), thus offering a basis for applying for state incentives in Germany. The PQM 1588 is the successor to the EMIS 1500 Central Unit, an instrument with a track record of reliable operation over many years in a multitude of companies. To stay up to date in this technology, however, it is not necessary to replace all the instrumentation already in place. If the existing infrastructure is still in good working order, it is possible to install an additional device, for example a PQM 1588. This instrument then works in parallel, only acquiring those data points that are necessary for communication via OPC UA. The OPC UA server functionality enables higher-level control structures, building management systems, alarm installations, etc. to acquire these data when necessary and evaluate them.



Evaluating available data more comprehensively



Landesbank Baden-Württemberg (LBBW) has for years operated an extensive energy management system with twelve FRAKO EMIS 1500 data collectors. A large number of utility meters record all energy- and consumption-related data within the bank, including the UPS systems, emergency diesel generators and other subsystems

from various manufacturers, especially those relevant to security and reliability. These data are transmitted through interfaces to the data collectors and the associated EMVIS 3000 software. The results of the evaluation are required not only in the LBBW building management systems but also in various specialist departments. Until now, they could only be transmitted via the FRAKO system, since a universal interface was lacking. This meant they had in some cases to be acquired and evaluated several times over.

As the control systems already installed have an OPC interface, simplifying the lines of communication by using the OPC UA open communication protocol was an obvious step to take.

OPC UA is the key to Industry 4.0.

FRAKO installed a PQM 1588 with a new OPC UA interface alongside the existing system at Landesbank Baden-Württemberg. Only those data points required by individual departments for evaluation purposes or that need to be transmitted to the building management system are logged in at this data collector. And only these data points, which are distributed throughout the entire business, require the OPC UA connection.

The PQM 1588 together with OPC UA is a completely self-sufficient arrangement installed in parallel with the existing system.



The LBBW facility manager thus receives certain information, for example concerning the maintenance of the UPS units; the chief accountant is supplied with data on the utilities consumption of specific sections of the installation; the purchasing manager then optimizes energy procurement. In this way, the various specialists gain access to a common source of data without requiring separate data acquisition facilities. In addition, two further benefits arise: firstly, the stringent security regulations at LBBW for the processing of data are complied with. Secondly, the exchange of data regardless of device manufacturer is made possible, one of the main requirements for the successful implementation of Industry 4.0.

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