We often need to incorporate measurement values from power analysers in “foreign” visualisation systems but the existing visualisation system does not support the protocol which is contained in the measuring instrument. OPC servers serve as an interface between the measuring instrument and the central building control system or PLC in these cases.

OPC drivers, therefore, offer a standardised interface for easy data exchange without exact knowledge about the communication options in the counterpart system.

The OPC can be used to link the measurement data with the data from other trades and archive it in the database structures for process control techniques. OPC drivers for process control techniques are used by almost all renowned manufacturers of building automation systems.

Modbus Suite TOP Server

Janitza electronics® GmbH has been recommending the proven payable OPC Top server with Modbus suite from Software Toolbox (www.softwaretoolbox.com) for years. Support is also provided in connection with UMG measuring instruments and power analysers.

Functions of the OPC server

The OPC server is a software driver and must be installed on a PC in the network. If the existing automation software is already running on a computer with sufficient power reserves and if the operating system is compatible with the OPC server, installation is possible on this computer. If sufficient power reserves are available, the OPC server also runs on systems in which PSW professional/PAS 510 or GridVis is already installed. The software driver contains a Modbus TCP/IP or a Modbus over TCP/IP Master and an OPC server. The data (e.g. measurement values) is read out using the Ethernet interface (port 502 or port 8000) and is passed on to the OPC server. The OPC server then passes on the data to the OPC client of the external program. Access can be simultaneously gained to up to 6 software applications on port 502 of the UMG 507E/EP and UMG 604E/EP. Another two applications can be simultaneously accessed on downstream measuring instruments using the RS485 (Ethernet encapsulation). This means that measurement data can be simultaneously read with PSW/GridVis and the OPC server.

Configuration of the OPC server

The OPC server is configured using a convenient operating area but does require some basic knowledge of the data types (Word, float etc) and bus technology. Communication settings can be individually adapted for each channel.

Following data types are supported:
Char, Byte, Long, Float, Word and Double as big-endian and little-endian. The OPC server also contains an OPC Quick Client for quick online control of the data. This means that the data is automatically taken from the configuration table and displayed. The statistics function assists fault detection.

The meaning of OPC

OPC is an abbreviation for “OLE for process control” and is a standardised interface in the field of automation technology. This term is frequently used in the field of building automation. OPC was created to provide industrial bus systems and protocols with a universal communication possibility. An OPC driver can be integrated into any size control and monitoring system without any major adaptation efforts.

Screenshots