

Substation Automation with zenon

zenon controls substations as a control system on site, as process visualization in the control room, or serves as a gateway to higher-level control systems.



Move to automated substation ergonomically with zenon

Use zenon Energy Edition for effective and secure operation of substations – be it completely automated or in local manual operation. You benefit from quick project configuration, simple operation and maximum security.

zenon Energy Edition is the ideal software for the control of individual or several switching stations at substations. You can use the system as:

- An on-site control system (human-machine interface, HMI)
- Process visualization in the control room (SCADA)
- Gateway (interface to higher-level control systems).

OPTIMAL SAFEGUARDING AGAINST FAILURES

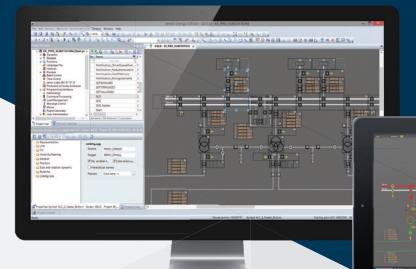
Many criteria determine the planning and operation of substations. However, it is above all a matter of fault-free

operation in order to guarantee the energy supply. zenon is robust software and guarantees seamless redundancy in several different ways including support for the Parallel Redundancy Protocol (PRP).

Operating errors are prevented by interlocking; use of the Command Sequencer automates recurring command sequences. You can thus actively increase operating security.

COMPLETELY AUTOMATED OPERATION OR ON-SITE OPERATION

zenon is a flexible system for all conceivable degrees of automation. You can use the software for both unmanned, completely automated operation of substations, as well as



with ergonomic user interfaces for on-site operation. In all cases, control is made easier by means of clear visualization.

EFFICIENT ENGINEERING – CREATE PROJECTS BY MEANS OF DRAG AND DROP

Configure your substation quickly and without errors, without having to write a single line of programming code. zenon is structured in a completely object-orientated manner – you can use an object that has been defined once at another place at any time. Integrate components, processes and functions easily with the click of a mouse. You can thus also configure and maintain extensive projects efficiently and quickly. Even complex functions such as interlockings or redundancies are integrated into zenon as standard and are configured without programming work. As a result, projects can be integrated quickly and without errors.

IEC 61850 AND MORE

zenon supports all common communication protocols in the energy industry. Configure your system with pre-prepared functions and connect to various types of hardware. You thus enable communication quickly and easily. The following protocols are supported, among others:

- IEC 61850 Client/Server and GOOSE
- ▶ IEC 61850 Edition 2 (certified by TÜV Süd)
- ▶ IEC 61400-25
- ▶ IEC 60870-5 (101/103/104)
- DNP3
- ▶ IEC 62056-21
- ▶ OPC UA
- Modbus
- ▶ IEEE C37.118 (Synchrophasor)
- ▶ IEC 61850-90-5

EXPLOIT THE ADDITIONAL POSSIBILITIES

Further functions of zenon that simplify the operation of substations are, among other things, diverse visualization possibilities, the Process Recorder, easy-to-use reporting, legally-compliant archiving and well-thought-out process simulations.



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