



Management of water networks

Monitoring and control

Experience and expertise

Over the years we have implemented numerous large projects in the field of water and wastewater applications with sometimes more than 100 telecontrol stations. We have learned a great deal from these projects, for example how important uninterrupted data recording and archiving is for the creation of operation logs.

Of course, data exchange between a water tower and the associated pump station is essential. Therefore, our telecontrol units allow direct routing of data between individual telecontrol stations without having to take a "diversion" via the control system.

Our systems can implement control and regulation tasks independently. However, any PLCs present can also be coupled without problems thanks to various interfaces such as Modbus, Profibus or MPI.

As well as the procurement costs of the systems, their continuous operating costs also play an essential role in the monitoring and control of springs, waterworks, water towers and pressure booster stations in large catchment areas. Therefore the choice of the right communication channels is particularly important.

We would be glad to assist you in the planning and building of a suitable data transmission system. We take into account the geographical situation of the stations as well as the existing dedicated infrastructure, future security and cost-effectiveness of the communication channels. From permanent connections via dial-up and radio links to TCP/IP-based communication channels, our products offer a wide range of possible implementations, also available in redundant configurations if required.

Water is an essential resource

Regional suppliers usually provide quality and security of supply. These tasks can hardly be carried out successfully and safely these days without automated monitoring with telecontrol technology. The specific demands of water and wastewater applications can be met exactly with our net-line FW-5 and FW-50 telecontrol units.

Secure supply thanks to reliable standards

An important aspect is ensuring security of supply. Not only secure communication with the standardised telecontrol protocols of IEC 60870-5, but also easy integration of local PLC programs according to IEC 61131-3 help to provide this.

PLC programming to IEC 61131-3

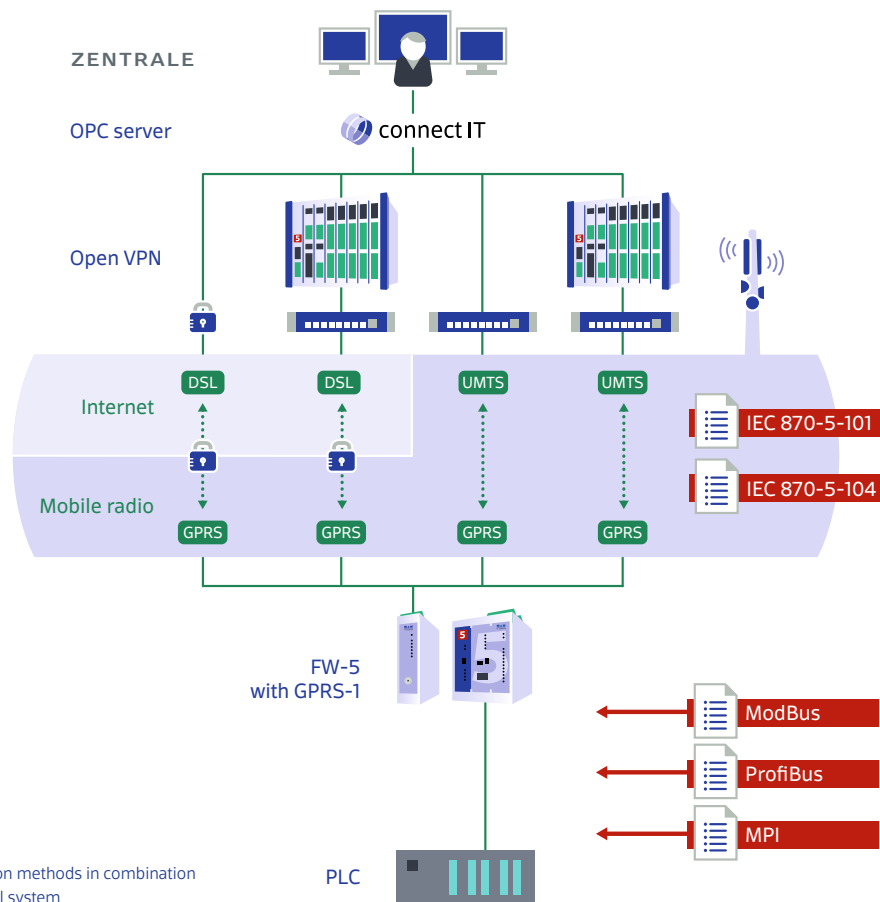
These programs are stored in the stations and ensure secured and defined continuation of the water supply, and not only in the event of faults, for example by:

- Management of tanks
- Pump control and replacement
- Regulation of pressure booster stations
- Automated filter cleaning
- Valve control
- Delivery of the necessary minimum quantities

Functions of telecontrol technology

All functions which allow secure monitoring and communication in water/wastewater technology and sewer/sewage plant monitoring are realised in our telecontrol stations:

- Reliable detection of faults from signals and limit monitoring
- Prioritised transmission of fault signals
- Integrating hystereses for creeping measurands
- Four alarm and warning limits
- Remote fault alarm generation directly from the station
- Autonomous data routing in the telecontrol network
- Operating time and switching cycle detection
- Recording of quantities from measurands and meters
- Minimum, mean and maximum value detection
- Autonomous detection of archives with variable recording depths from 1 minute to 1 hour
- Delta event recording e.g. for knock-off detection at storm water overflow tanks and sewers
- Coupling of battery-operated data loggers



Recommended connection methods in combination with the FlowChief control system

Good partners

The advantages of our close cooperation with control system manufacturer FlowChief are obvious. Thanks to products matched optimally to each other, there is nothing to stop problem-free construction of new systems or fast integration of additional components into existing structures.

Combining strengths

Synergies result from the combination of our very successful telecontrol technology with the flexible FlowChief control system:

- Scalable solutions which meet demands exactly thanks to free module structures
- Complete independence thanks to the browser-based design
- Tools for simple creation of bespoke plant and process images
- High database compatibility thanks to the SQL standard
- Secure and fast transmission solutions
- Connection of telecontrol technology using the standard OPC interface

FlowChief process control system

FlowChief's browser-oriented PLS technology is supported by tried and tested functions in Java, works in a very user-friendly manner and requires hardly any training. The user interface is appropriately Windows®-orientated, with a modern design and great looks. The FlowChief process control system receives the data from the OPC server, archives and manages it in a Microsoft® SQL database, and allows extensive visualisation of the plant, trends and analyses.

The advantages for you

- Problem-free data exchange via all communication protocols
- Standard protocols for telecontrol technology IEC 60870-5-101, IEC 60870-5-104
- An extremely high degree of data security and power
- Inclusion of setIT projects in the configuration
- Fully automatic buffering and archiving
- Backup of communication by redundant systems
 - Stand-by transmission routes
 - Twinned telecontrol interfaces
 - Twinned control systems



SAE IT-systems GmbH & Co. KG
Im Gewerbegebiet Pesch 14
50767 Köln (Cologne, Germany)
Phone: +49(0)221/59808-0
Fax: +49(0)221/59808-60
info@sae-it.de
www.sae-it.de