



AUTOMATION PROCESS & ENERGY



passion⁴energy



ABOUT US



Installation



Automation



Schaltanlagen



Schaltgeräte

Technical processes forward-looking planning and control

Our four specialised areas of expertise:

- Installation
- Protection, control and automation
- Low and medium voltage switchgears
- Switchgear devices

We ensure that processes take place efficiently and safely: For our customers, we automate regulating, control and production processes as required. We ensure a high degree of safety - with highly reliable products and services in the area of protection systems and automation.

Our internationally experienced engineers, technicians and fitters react flexibly to specific requirements and develop tailor-made concepts. With the result that our know-how and systems are used cross-sector and transnationally, including: energy, water, industry, transport, building services - and in the future also in your sector.

The engineering and parameterisation of your individual solutions takes place using the latest technology. We also provide all relevant project documents, such as functional specification documents, specifications, data point lists or tender documents.

To round off the joint project, we prepare training documents and instruct your employees in the use of the new system.





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Our passion

Whether system or energy automation.
We are ready for any challenge.

Our service portfolio at a glance:

- Protection systems
- Energy automation
- Automation, measurement and drive engineering
- Process control system
- ProWin
- Grid automation
- Modernisation
- Documentation
- Service and maintenance





PROTECTION SYSTEMS

Strong solutions for safe power systems

Minimise the risk of incidents in installations and power systems, avoid lengthy and expensive failures and maximise the safety of operating personnel: Our power system protection for high, medium and low-voltage systems ensures fail-safe operation in various sectors, including: energy, water, industry, transport and building services.

With good reason - because for us, reliable protection already starts in the planning phase. Whether switching error protection concepts or protection concepts for diverse power systems: We offer engineering of a very high standard. And ensure transparent project organisation and implementation, comprehensively defined and set out in functional specification documents, specifications as well as tender documents.

Do you want to see hard figures? We calculate short-circuit currents, load flows and voltage drops as well as protection settings for diverse power systems. We can also provide time grading schedules or protection setting charts with the aid of NEPLAN, professional software from ABB.

In addition, our service portfolio also includes parameterisation of protection relays for busbar protection, transformer and line differential protection, motor protection, time-overcurrent protection as well as distance protection devices from diverse manufacturers. The computer-aided secondary and primary testing of activated protective functions takes place using testing equipment from Omicron* – including test report.

Our service portfolio at a glance:

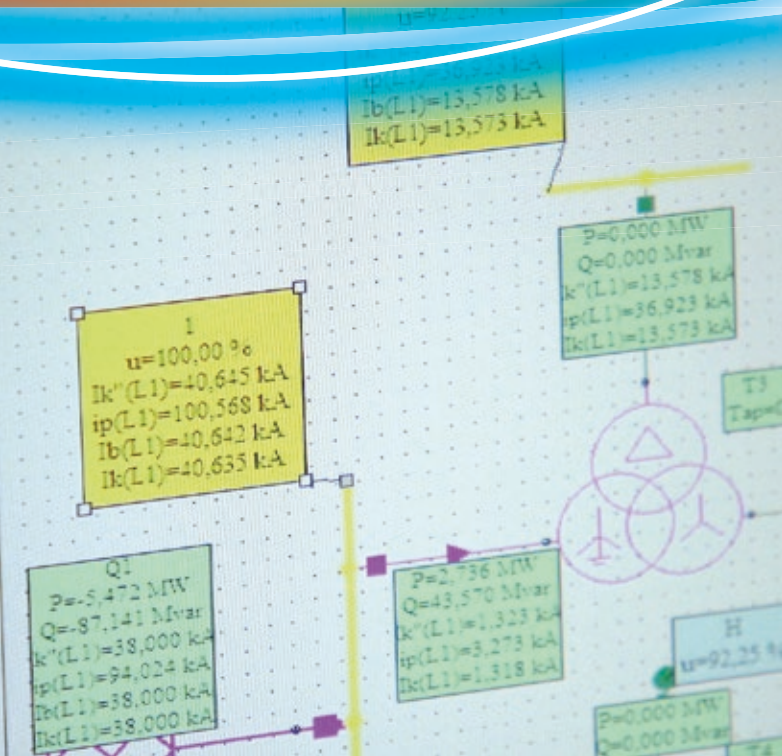
- Delivery/parameterisation/testing of protection relays
- Network calculation, protection dimensioning and selectivity analysis
- Data acquisition "on site" at the customer (reversed engineering)
- Engineering
- Preparation of customer-specific documentation
- Commissioning of protective devices and switchgears
- Training

* CMC 256 and 356, CPC 100 (2000A)

Advanced Partner

Protection

SIEMENS





ENERGY AUTOMATION

Flexible supply precisely when needed

With our energy automation solutions, we ensure an efficient and reliable supply of electrical power in various sectors, including: energy, water, industry, transport and building services. Precisely when it is needed.

Tailored to your specific application, we plan energy automation systems and telecontrol stations, deliver and integrate the appropriate devices. Our engineers realise the integration of input and output devices as well as the connection to higher-level control systems, control centres as well as operating control and monitoring systems.

We also take care of the parameterisation of operator control and monitoring systems: from the creation and dynamisation of images via the provision of server and client configurations through to energy management systems.

After successful testing at our factory, we come to you and commission the system. We also provide on-going maintenance and service.

Our service portfolio at a glance:

- System planning
- Parameterisation of energy automation systems
- Planning of telecontrol stations
- Preparation of info point lists and documentation
- Station control systems including Ritter Multiprog, Siemens SICAM PAS/PQS, SICAM AK/TM, Sprecher Sprecon-E, SAE setIT
- Operator control and monitoring systems including Ritter ProWin, Siemens SICAM SCC, Sprecher V460
- Testing, commissioning and acceptance
- IT Security (including: VPN Tunnel, anomaly detection, IPsec, Firewall)
- Planning, configuration, documentation and hardening of communication networks
- Document preparation
- Preparation of training documents and training

Advanced Partner

Substation Automation

SIEMENS

Advanced Partner

Power Quality

SIEMENS





AUTOMATION, MEASUREMENT AND DRIVE ENGINEERING

Precise control and protection of technical processes

Whether drinking water and sewage management, energy supply, food or fodder industry, refrigerating plants, conveying and handling systems, building services or commissioning systems:

We provide industry-specific solutions from engineering through to the appropriate equipment.

Do you require process automation for your application? We are your ideal partner! We plan fault-tolerant and fail-safe systems. Including measurement and drive engineering via bus system or conventional methods. We can subsequently parameterise and commission the respective equipment.

Our service portfolio at a glance:

- Engineering
- Programming using Ritter Multiprog, Siemens Simatic Software and Codesys, etc.
- Parameterisation of measurement, drive and building services engineering
- Connection of the individual components via Ethernet, Profinet, Profibus, Modbus, AS-i-Bus, iWLAN
- Testing, commissioning and acceptance
- Document preparation
- Preparation of training documents and training





PROCESS CONTROL SYSTEM

Your processes in control

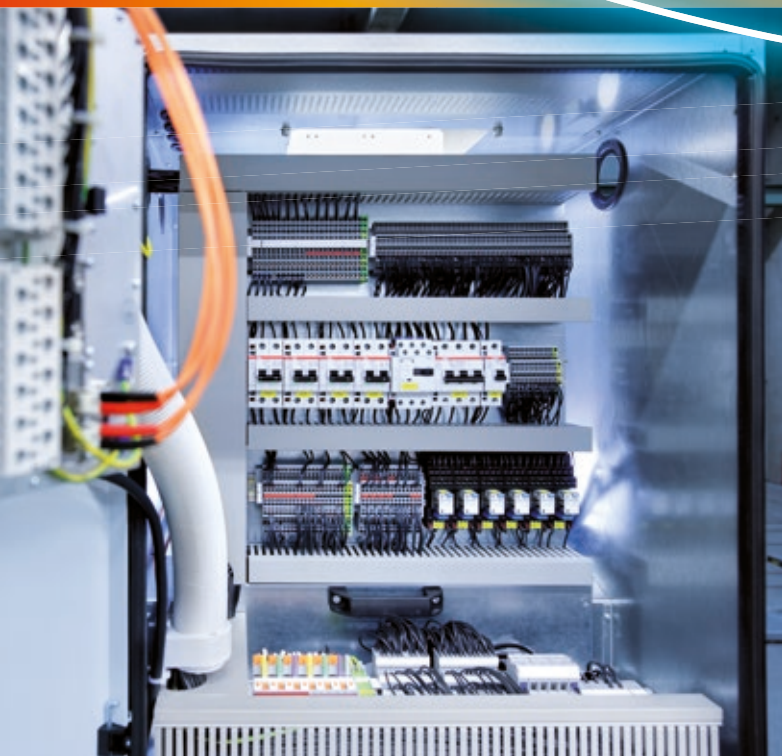
Today, more and more processes are being automated in order to operate economically. Outage times must be kept to a minimum or avoided altogether. Error messages and measured data must be recorded for the purpose of analysis as and when required. Large amounts of data must be converted to manageable information for further use. We also specialise in seamless IT/OT integration.

If necessary, we can make your existing system fit for the future.

Our process control engineering services include project planning and parameterisation using the latest systems.

Our service portfolio at a glance:

- Connection of subsystems also via Ethernet, VPN, RDP, DSL, SHDSL, IWLAN, GPRS, GSM, LTE, PowerLine and ISDN
- Communication with other systems also via OPC, ICCP, TASE 2 up to MODBUS
- Engineering also via ProWin, WinCC, iFix, Intouch or PCS7
- Data backup and archiving via Acron and Acronis
- Setup and parameterisation of the complete hardware
- Testing, commissioning and acceptance
- Document preparation
- Preparation of training documents and training





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Installation



Automation



Schaltanlagen

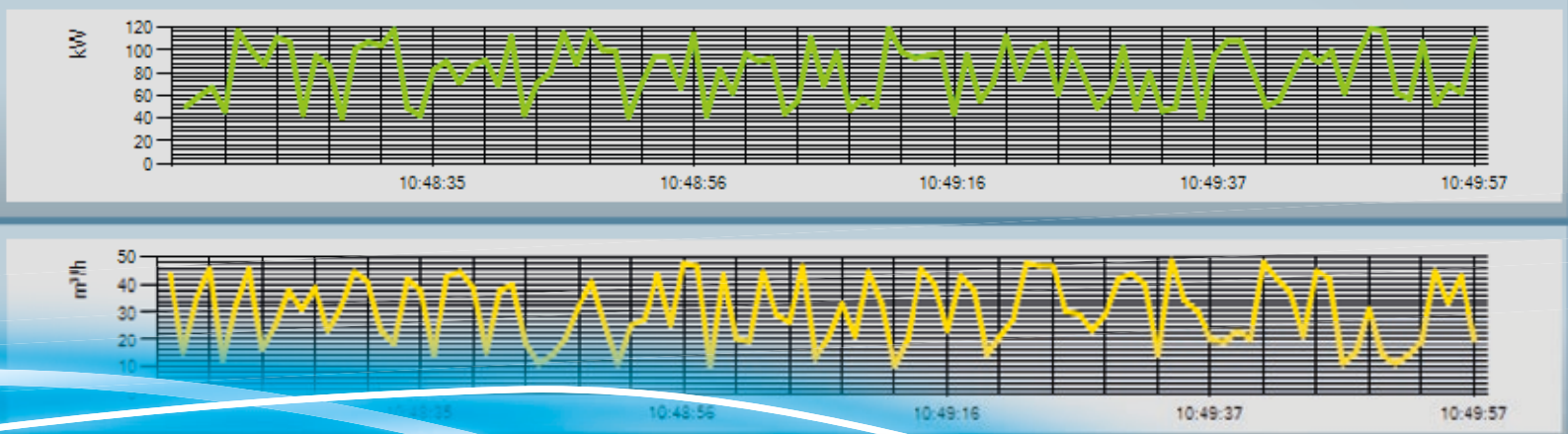
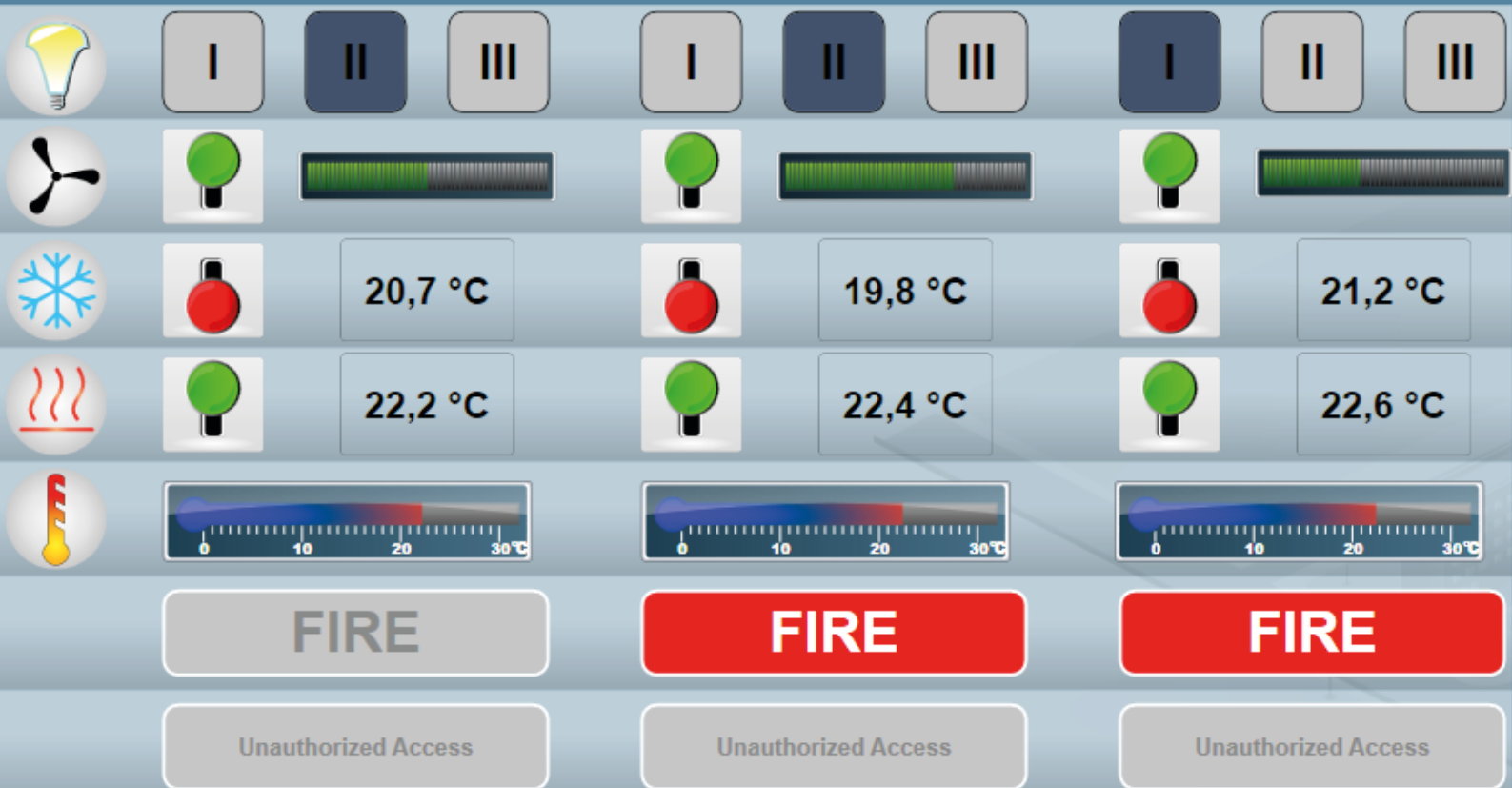


Schaltgeräte

Administration

Office

Storage



**RITTER ProWin, OUR
VISUALISATION SOFTWARE**

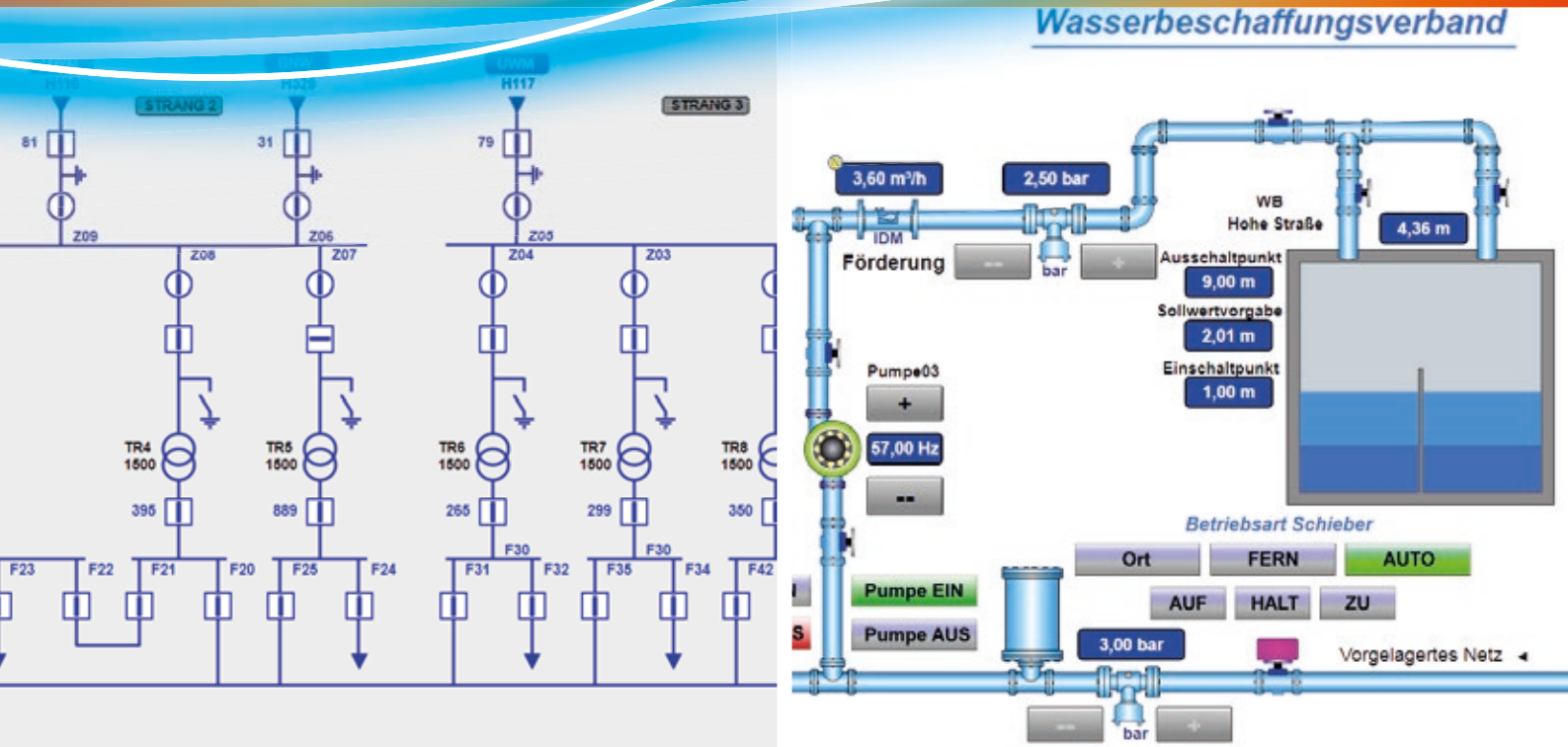
ProWin, our visualisation software for all applications and the answer to ISO 50001

Our ProWin visualisation software is a tried and tested, high-performance process control software for use in energy and sewage management, sewage treatment and environmental as well as industrial applications. ProWin offers in addition to wide-ranging standard SCADA functions, numerous industry-related function modules and sector-specific special solutions that can be combined to an integrated system.

We provide support according to ISO 50001 – DIN EN 16247

Our service portfolio at a glance:

- Flexible process control system for any application
- Active energy management to ISO 50001 and DIN EN 16247
- Non-discriminatory EEG feed-in management
- Visualisation in the sectors: power, water, transport, industry, building services, etc.
- Client software at distributed workstations in the network
- Topological network colouring
- Training and simulation mode for employees
- Integrated load flow calculation
- Programming of operating sequences





GRID AUTOMATION

Intelligent solutions for your DIGITAL GRID

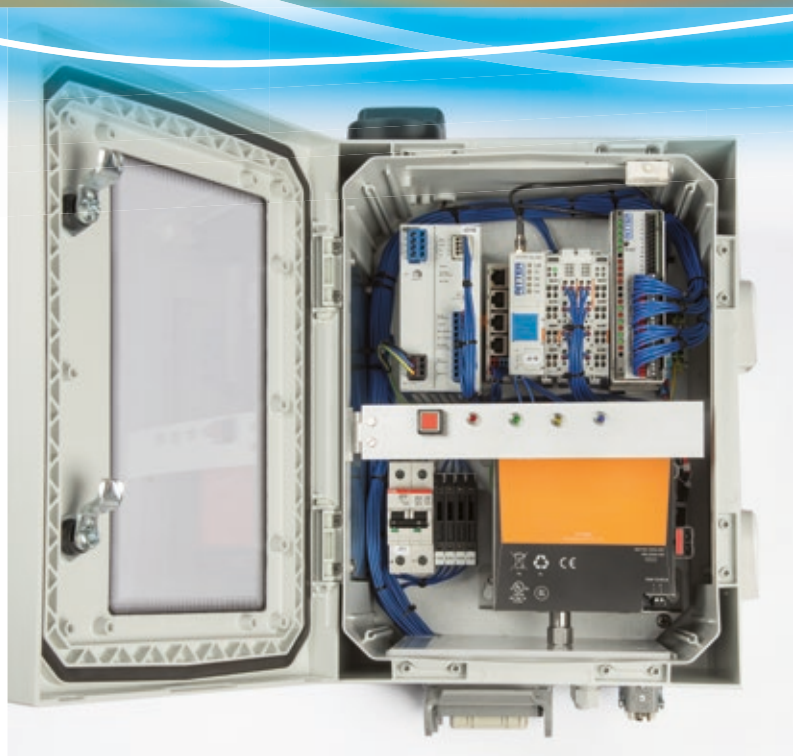
With our intelligent solutions, we enable the optimisation of your grids in various sectors, including: energy, water, industry, transport, building services.

We implement tailor-made solutions in your systems. Our engineers realise the integration of input and output devices as well as connection to higher-level systems up to energy management systems.

For example, as part of the energy transition, the dimensioning and operation of power grids is becoming more and more complex and poses new challenges to grid operators. With our customised automation solutions, we can help to make your grid fit for the future. Automation gives rise to new possibilities, e.g. reduction of outage times, remote control capability, grid capacity detection/quality and reduction of network expansion.

Our service portfolio at a glance:

- Control, protection, monitoring, reporting
- FISR (Fault Isolation Service Restoration)
- Power quality detection
- Remote control capability of, e.g. power grids
- Compact design
- Future-oriented technology
- Simple installation (plug and play)
- Tailored to your requirements
- IT Security: VPN Tunnel, IPsec
- Wireless data transmission (3G, LTE), Powerline or FOC/RJ45





UPGRADE

Make something new out of something old

There are many reasons for upgrading an older system. The products used were discontinued, no longer available or susceptible to faults, expansion of the system is no longer possible or the system is not efficient.

Whatever the reason, we will be happy to help you upgrade your system. Whether complete or in parts, whether individual components or entire sections.

We can advise you directly on site and jointly prepare a concept to convert your system as efficiently as possible with minimum outage times.

Our service portfolio at a glance:

- Appraisal (Reversed Engineering)
- Engineering
- Migration planning from the actual to the required situation
- Network calculation of the new situation
- Integration of the new system into your system
- Hardware setup and parameterisation
- Software translation and enhancement
- Testing, commissioning and acceptance
- Amendment of existing and preparation of new documentation

Prepared for the energy audit?
We provide support according to ISO 50001 – DIN EN 16247





DOCUMENTATION PREPARATION

Knowing where it is

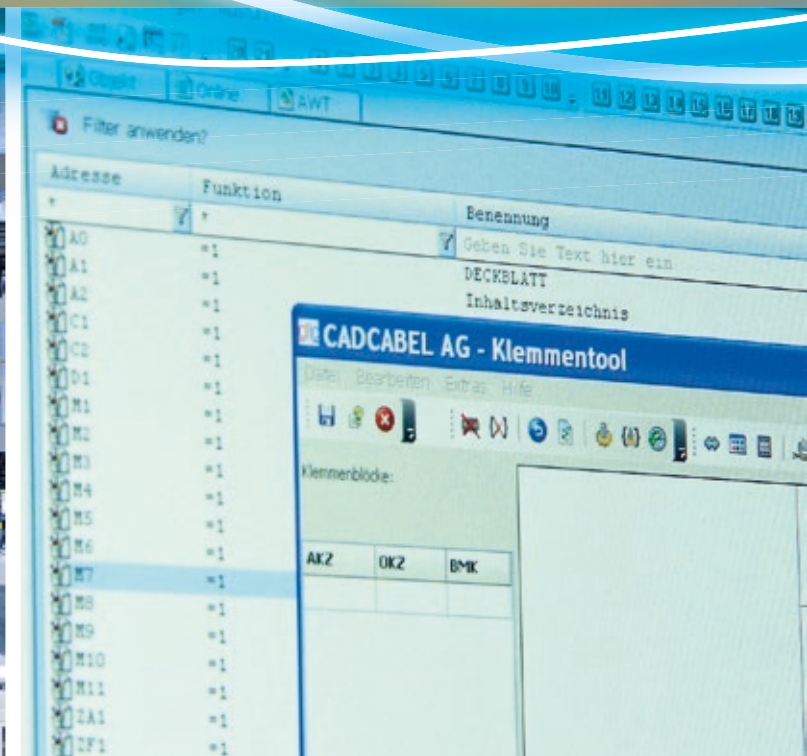
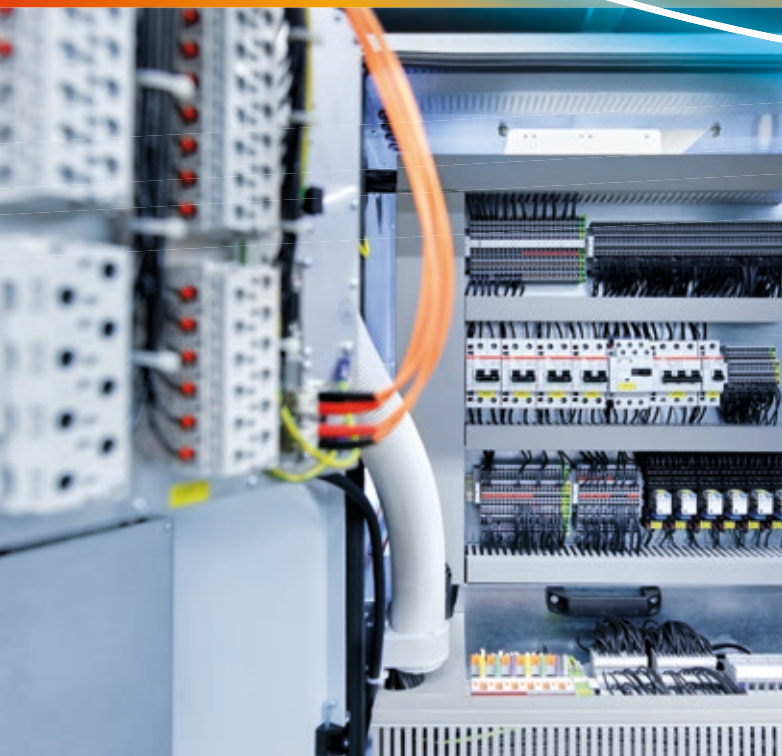
In the event of an incident, it is particularly important to have up-to-date documentation of the system so that every employee is able to access the correct and complete documents quickly and efficiently as and when required. We compile your documentation of our joint project to suit your requirements.

Whether descriptions, data sheets, drawings or reports, everything has its place and can be provided in duplicate in paper and digital form as required.

If appraisal documents are available, these can be included in the documentation.

Our service portfolio at a glance:

- Preparation of functional specification documents, specifications, data point lists and tender texts
- Preparation of test and commissioning reports
- Preparation of operating manuals
- Preparation and inclusion of plans for cable routes, installations, fire protection systems using AutoCAD + Add-ons
- Preparation and inclusion of circuit diagrams for MS/NS systems using CAD systems Ruplan EVU module, EPLAN 5.7 or P8





SERVICE AND MAINTENANCE

Trouble-free operation

Our primary aim is to ensure that your systems operate trouble-free. We provide a professional inspection and maintenance service including continuous testing of operating and protective equipment, visual control during operation and preparation of associated test reports.

Our service portfolio at a glance:

- Appraisal
- Regular protection testing
- Replacement of faulty components
- Maintenance and servicing of systems
- Maintenance and servicing of networks
- Straightforward service on site
- Remote maintenance via a secure connection

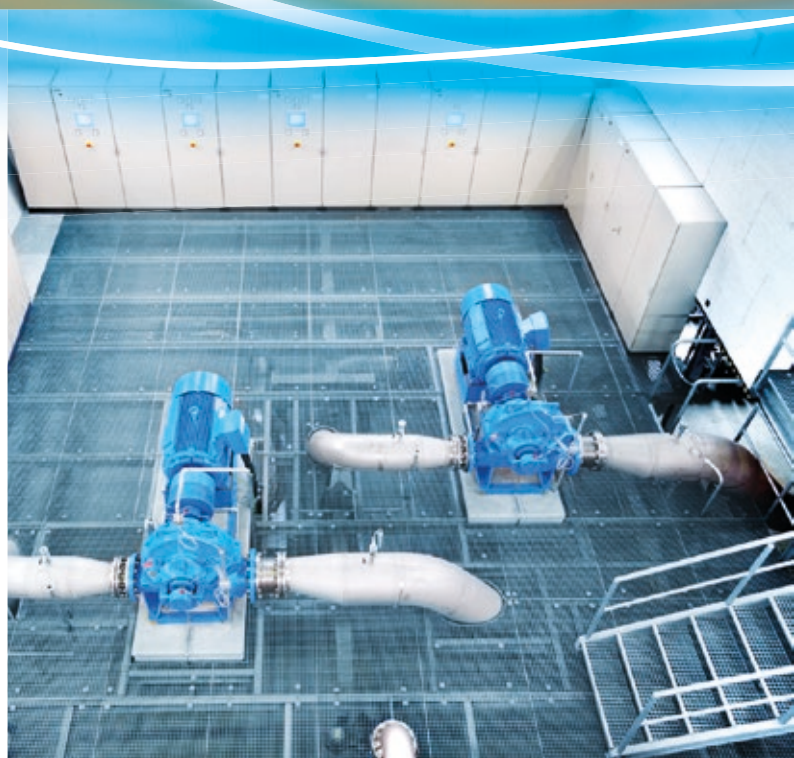




REFERENCES

An extract from our reference list

- Lippeverband: Sewage plants, pump stations, catchment area control centres and operations monitoring centre
- tse AG: BHKW
- BUBI Frischdienst eG: Commissioning system
- Deuka: Soya bean oil storage tank and small quantity dosing
- District Government Düsseldorf: Sluice management
- Ruhrverband: Sewage plants and pump stations
- Emschergenossenschaft: Sewage plants, pump stations, catchment area control centre and operations monitoring centre
- E.ON Kraftwerke: Protection systems
- Evonik Belgium: Substation Automation and protection Systems
- Evonik Germany: Substation Automation and protection Systems
- Følsgaard Denmark: Substation Automation and protection Systems
- Fresenius KABI: CHP plant
- Energieversorgung Oelde: Protection systems
- InfraServ: Protection systems
- Wacker Chemie Burghausen: Protection systems
- Perstorp Chemicals GmbH: Automation and protection Systems
- Dokom21: Energy management
- FUJIFILM Netherlands: Energy management
- Volkswagen: Substation Automation and protection Systems
- Stedin Netbeheer B.V. Netherlands: Grid automation
- Stedin Netbeheer B.V. Netherlands: Substation Automation and protection Systems
- Currenta GmbH & Co. OHG: Substation Automation and protection Systems
- Oerlikon Barmag: Block-type thermal power station connection



About us

We are a leading specialist in the area of electrical engineering.

Our four specialised areas of expertise:

- Installation
- Protection, control and automation
- Low and medium voltage switchgears
- Switchgear devices

We are a modern, medium-sized company with traditional values: Flexibility, fairness, commitment.

Our company group has 550 employees at six locations in Germany and our products are used worldwide.

We offer a broad service spectrum worldwide, particularly in the area of protection, process control and automation.

How to find us

Would you like to know more? We will be happy to help. Please contact us by phone or e-mail (olfen@ritter.info).

Or visit us at www.ritter-starkstromtechnik.de

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