Elektrometal Energetyka SA

Control System e²YANKEE

K-6.2.2 Catalogue EN

Energizing ideas!

Backed by a team of experienced specialists, ELEKTROMETAL ENERGETYKA SA offers services in the field of solutions for the power industry.

We employ professional engineers with great practical knowledge and years of industry experience. Combining the synergy of our competences with openness to innovative ideas and leading edge practices that guarantee the highest quality of services, we strive for harmonious, dialogue-based partnership with Customers, building trust by immediately responding to their needs.

Apart from manufacturing medium-voltage switchgears and switching devices as well as digital protective relays, we offer additional services that maximize efficiency and minimize costs. Customers will benefit from our innovative proposition, integrating the finest, proven solutions for the energy industry and customising them based on individual needs.

We constantly increase our potential and improve our offer. We are a rapidly growing business that stays on top of industry trends.

At Elektrometal Energetyka SA, our golden rule is clarity of procedures and documentation. We prioritise our Customers' needs, such as reliability, simplicity of use, problem-free operation, and intuitive design of devices. We believe that with positive energy in relations, both sides can achieve much more, and that is why our team remains fully dedicated to the partnership.

Our company is built on a belief that Customer trust and satisfaction are the cornerstones of success. That is why the high quality of our solutions is one of ELEKTROMETAL ENERGETYKA SA's most distinctive features.

We operate an Integrated Management System that comprises: an ISO 9001 Quality Management System, an ISO 14001 Environmental Management System, and an OHSAS 18001 Occupational Health and Safety Management System. Our implemented systems conform to the highest standards of management and dictate the daily practices in our operations, which aim at offering professional services to our Customers while maintaining the highest standards in terms of health and environmental protection. Our products hold certificates confirming full type testing performed by bodies such as the Institute of Power Engineering and the Electrotechnical Institute in Warsaw.

Mariusz Maślany
President of the Board
Elektrometal Energetyka SA

FEATURES

e²YANKEE is a state-of-the-art, user friendly and intuitive SCADA class control system designed for monitoring power stations. Its main functions are to visualise current switchgear statuses, control switching devices, display and archive measured values, read and manage event, fault and criterion recorders of individual safety devices, and access and analyse historical data with the ability to create reports. In a typical implementation, the system comprises a hub cabinet containing a server to gather and archive data, communication devices, and a local/service station as well as external operator stations. The system's scope of functionality is customised on a case-by-case basis.
e²YANKEE can be managed from traditional operator stations (local or remote), mobile devices (laptops and tablets) or through the internet (web browsers). The system offers alarm status notifications via e-mail or text message and supports multiple displays and numerous languages.

APPLICATION

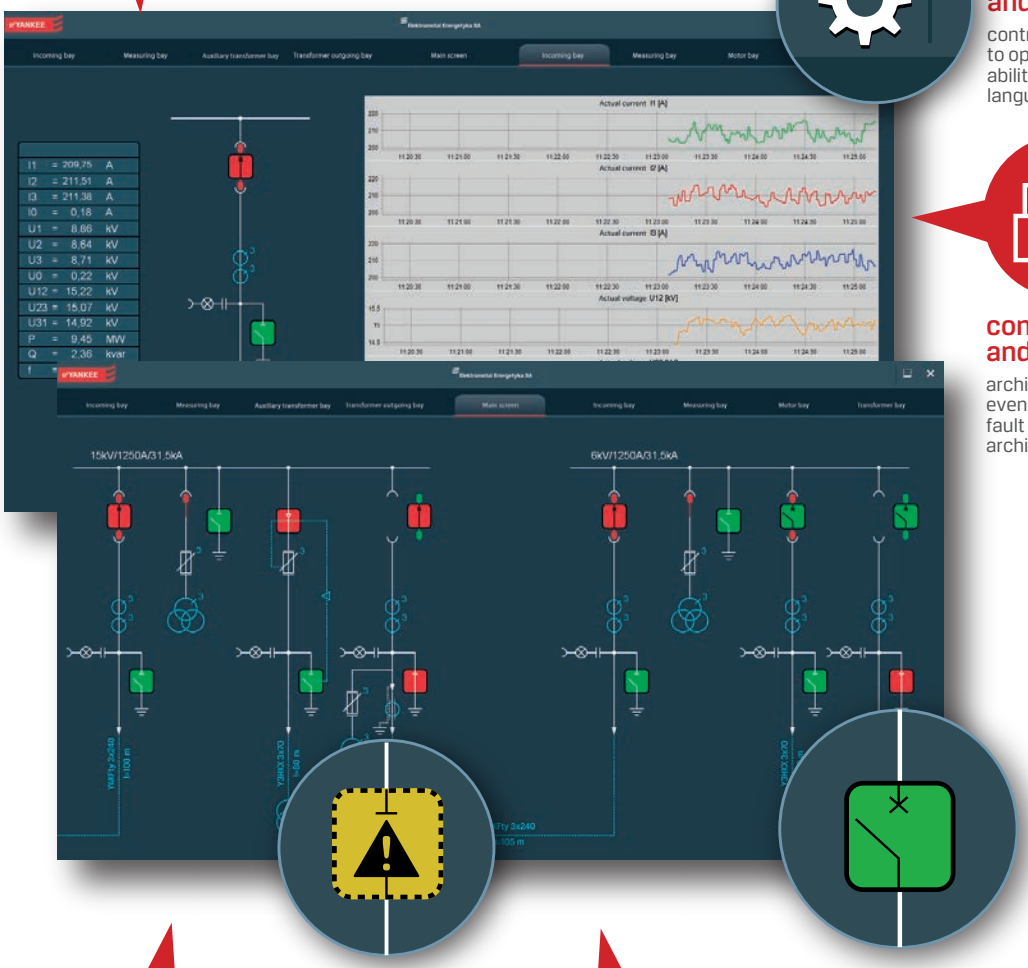
e²YANKEE's modular design makes it the choice for both small and complex sites. The system can be used to control sites running multiple devices as well as multi-device substations (transformer, distribution stations). e²YANKEE is ideal for dispersed systems collecting data from multiple sites (e.g. stations located within an administrative region). It can operate and control complex systems (a single system running the switchgear, CCTV, other devices such as pumps, belt conveyors, turbines, mills, etc.) as well as production processes (e.g. producing electrical energy in hydropower plants or wind farms) with metering and reporting functions. It can be used to control rectifiers and inverters, UPS devices, generators and skids, operate power-system protection devices, PLCs, network analysers, recorders, metering transducers, utility meters (energy, water, gas, heat) and other devices allowing for remote data retrieval.

ADAPTABILITY

The e²YANKEE system is designed with future upgrades in mind, allowing Customers to increase its functionality as needed. Examples of such additional functionality include: a grounding log module, station operation command management module (issue, approve, accept), a feeder passport module to save any text information related to a specific feeder (e.g. equipment parameters, maintenance schedules), and a power guard module to set the ordered capacity for incoming and outgoing feeders along with balancing.

BENEFITS

can be integrated with multi-display stations



access control and multiple languages

controlled access to operating functions, ability to switch languages "on the fly"

constant data readout and archiving

archiving measured values, events from bay controllers and fault recorders, clearing events, archiving and creating reports

alarm statuses

interactive visualisation

switchgear status updates with option to operate switches

access to application in a web browser

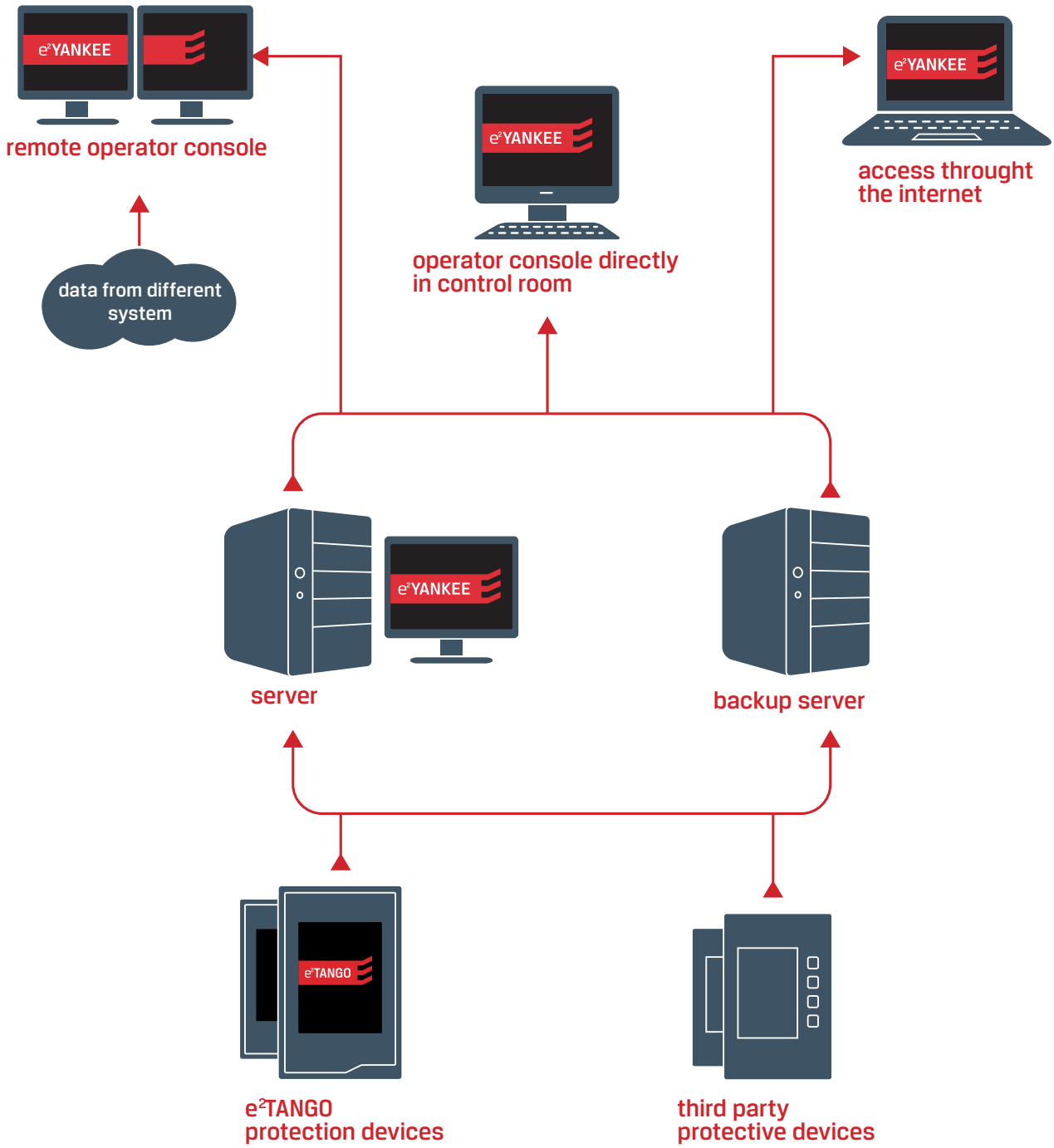
using the most common browsers

remote notifications

notifications through text and e-mail messages

SYSTEM STRUCTURE

With e²YANKEE's modular design, the Customer can achieve any configuration based on their needs and expected reliability. Smaller systems based on a single operator station collect data from and control devices. Medium systems are equipped with a data collecting hub and a local or remote operator console accessed through the internet. Large systems can include multiple hubs with full redundancy as well as numerous operator consoles and remote stations accessed through the internet for the purposes of system operation.



ACCESS TO DEVICE DATA

e²YANKEE allows for real-time readout and archiving of recorder data. With data collection functionality, the user can perform analysis at a later date. Data collected from the event recorder is displayed in an intuitive table layout. Events can be displayed all at once or individually for each feeder and can be filtered by category. Fault recorder data is archived in COMTRADE format and can be accessed through a browser supplied with the e²YANKEE system or through any software that supports the format.

COMMUNICATION

e²YANKEE supports numerous types of communication protocols. Internal communication is based on typical network devices that can operate in ring or radial type layout. Communication with devices (controllers) is based on protocols and communication interfaces shared by the devices.
To increase reliability, e²YANKEE can connect to devices by means of numerous independent communication channels, e.g.: Ethernet as the main channel and RS485 as the backup channel.

Supported communication standards:
- ethernet
- RS485 serial interface
- optical fibre connection (single-mode, multi-mode, plastic)
- GPRS
- GSM/LTE
- radio connection
- current loop

Examples of supported data exchange protocols:
- modbus RTU
- modbus TCP
- modbus ASCII
- DNP3
- IEC 61850
- OPC/OLE/DDE
- other protocols according to customer requirements

ACCESS CONTROL

Our solution offers a multi-layer authorization and access control system for the application. An unlimited number of system operators can access the application. At the same time, the system offers multi-layer authorization restrictions which allow only select operators to access and operate connectors, view statuses and manage events. Depending on credentials, any user or user group can have their access to parts or the entirety of the application restricted.

MODERNIZATION

The flexible design of e²YANKEE allows for multi-stage upgrades. Depending on the Customer's needs, e²YANKEE can be upgraded with additional operator stations as well as remote consoles accessed through the internet. The interface can be enhanced with new functionalities and support for further controllers (protective devices). Full scalability allows for effortless modernization of the communication and server portions of the system. At any time, the system can be equipped with redundant devices and additional communication channels.

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