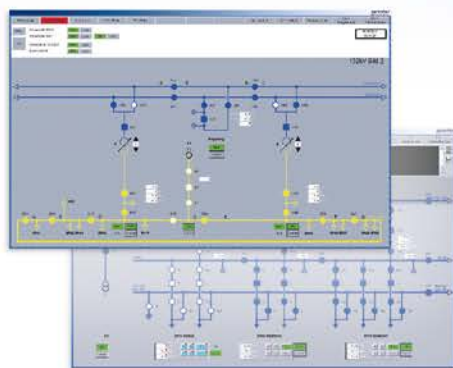




SPRECON[®]-V460

Scalable Control Center
& Grid Control System

INTRODUCTION

SPRECON-V460 meets all demands of modern control center systems concerning monitoring and evaluation of processes in the area of power generation and distribution.

A multitude of functions and application possibilities are available due to consistent integration of international standards and technologies, the synergetic effects between energy economies and industrial applications as well as continuous development of the process visualisation system. By the full continuity of SPRECON-V460 at all process levels, Sprecher Automation introduces a new standard to the SCADA world. The SPRECON-V460 Editor allows comfortable creation and maintenance of all visualisation projects regardless of different process levels.

SPRECON-V460 facilitates process visualisations of all possible ranges:

- Local HMI panels
(preferred: Windows® 10 IoT LTSC)
- HMI workstations at station control level, machine control level or local power plant control systems (Windows® 10 server or desktop OS)
- Hot-standby, multi-hierarchical SCADA systems for various grids and network structures

SPRECON-V460 provides basic HMI functions such as process pictures, control, trend diagrams of measured values, acknowledgeable state list (ASL), operating logs and many more. For SCADA applications, the system offers superior functions such as supply optimisation and forecasting, topo-logical colouring and interlocking, earth fault and short circuit detection, process simulation and reporting for consumption. Beside the standard protocols IEC 60870-5-104 and IEC 61850, SPRECON-V460 also allows communication via

various proprietary protocols. All process data can be retrieved via the SPRECON-V460 Webserver via Internet/Intranet.

AREAS OF APPLICATION

Electric power supply, NCC

- High and medium voltage switchgears
- Distribution systems
- Caloric power plants, hydroelectric power plants, wind power plants
- Traction power supply
- Industrial networks

Municipal utilities

- Water supply and sewage systems
- Gas and oil supply
- District heating
- Tunnels and traffic control systems

PROCESS VISUALISATION

In the areas of HMI and process visualisation, Sprecher Automation has put the main emphasis on the design of the graphical user interface – especially on user guidance, general usability as well as on the design of the various functions. SPRECON-V460 provides a wide range of graphical design elements for sophisticated process pictures, which accurately display the current conditions at any time. The system guarantees just-in-time alarming of critical process conditions. A multitude of functions are available for displaying process information:

- Change in colour, element movements, display of text and numbers
- Text and bitmap buttons, switches or combo/list boxes
- Bar graphs, multifunction controls, numerical values, dynamic text display and pointer instrument for best possible display of values

- Programmable ActiveX® controls for individual solutions
- Freely adjustable vector elements such as circles, rectangles, lines etc. and freely definable fonts, colours and various 3D display settings
- Libraries with predefined switch symbols as well as completely preconfigured bays of energy stations

FLEXIBLE OPERATING CONCEPT

The following operating concepts are available for the SPRECON-V460 runtime system:

- Operating windows
- Context menus
- Main menus
- Smart icons
- Drag & drop
- Zooming, panning and decluttering
- Multi-window and multi-monitor concept
- Full touchscreen operation

EFFICIENT ENGINEERING

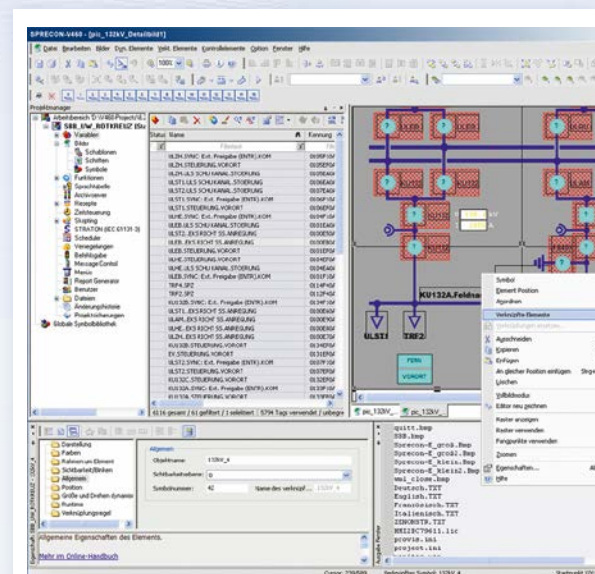
The SPRECON-V460 EDITOR guarantees comfortable and clear operation. The various functions and tools are defining standards for modern project engineering. The system also provides Microsoft add-ins for automated engineering.

All project data of the SPRECON-V460 control center system is stored in a central SQL database. It can be transferred directly into the runtime system with the editor's integrated remote transport.

PROJECT ENGINEERING INSTEAD OF PROGRAMMING

Project engineering with SPRECON-V460 does not require programming skills. All projects can be created with mouse clicks. Graphics, navigation and logics are configured via "properties" and predefined functions. The visualisation system allows easy and efficient centralised project engineering in an object-oriented way. Additionally, SPRECON-V460 can be extended functionwise by Microsoft add-ins and integrated automatic functions according to IEC 61131-3.

SPRECON-V460 also provides the necessary features for follow-up projects. Without additional efforts, all SPRECON-V460 functions can be designed by means of circular redundancy® for the complete application and can be applied to various grids and network structures.



*Comfortable and clear engineering
with SPRECON-V460 EDITOR*

SPRECON-V460 – TECHNICAL DATA (EXCERPT)

BASIC FUNCTIONS

- Process visualisation and process monitoring
- Multi-window and multi-monitor technology
- Flexible operating concept
- Secure command initiation with time-out
- Command interlocking
- User administration and access protection
- Hierarchical picture alarming
- Status processing of process conditions such as “revision”, “blocked”, “substitute value” etc.
- Topological colouring
- Chronological Event List (CEL)
- Acknowledgeable State List (ASL)
- Spontaneous/cyclic archiving of process data
- Integrated reporting
- Trend display
- Process communication via IEC 60870-5-101/-104, IEC 61850
- Network compatibility, multi-hierarchical and distributed control system concept
- Redundancy
- Unicode-based online language switching with language table
- Data linkage with Microsoft® Office applications (via CSV, SQL, HTML, XML, COM etc.)
- Online help

SPECIAL FEATURES

Special features provided for applications in the areas of power system management or control systems in utilities as well as local utilities:

- Multi-hierarchical and distributed control center concept
- “World picture” display with zooming, panning and decluttering
- Topological colouring with command interlocking
- Process simulation
- Fault detection (earth fault and short circuit)
- Short term load forecast for electricity and gas
- SNMP-based network manager
- Automatic alarming of standby service (message control)
- Integrated IEC 61131-3-compliant control
- Production and process scheduler
- Web server (monitoring and control)
- Process gateways (OPC UA, SNMP, SQL, IEC 60870)

COMMUNICATION

- IEC 60870-5-101
- IEC 60870-5-104
- IEC 61850

Communication drivers for other systems: DNP3, MODBUS, OPC Client/Server, Profibus DP, Bacnet, CAN Bus, M-BUS, MODBUS Plus, EIB, SNMP



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