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SPRECON[®]-E-T3

COMPACT REMOTE TERMINAL UNITS FOR AUTOMATION AND REMOTE CONTROL





SPRECON[®]-E-T3

SPRECON[®]-E automation and remote control system

Remote control systems have become essential for supervisory control and monitoring of separated or geographically spread processes regarding energy distribution or industrial networks. Depending on the field of application, various requirements have to be met regarding:

- Various inputs and outputs
- Process signals
- Environmental conditions
- Communication protocols
- Communication technology
- As well as essential logical functions

The concept of the SPRECON[®]-E automation and remote control system is based on technical and economical considerations in order to provide optimal solutions by simultaneously sustaining the overall system concept.

The SPRECON[®]-E automation and remote control system consists of the following devices of the SPRECON[®]-E-C product family:

- Multifunctional automation systems
SPRECON-E-Cx2/-Cx4/-Cx6
- Compact RTUs
SPRECON-E-T3

All devices are based on a uniform system architecture in terms of data structures, communication, logical functions as well as engineering and service tools. They are distinguished by their rack sizes as well as their application-based parameters.

SPRECON[®]-E-T3

The SPRECON[®]-E-T3 series was especially developed for low I/O numbers. The systems can be applied both as gateways and local RTUs with or without automation functions.

The applied standard communication protocols are IEC 60870-5-104 (Ethernet) and IEC 60870-5-101. Optionally, all other protocols which are already implemented into the SPRECON[®] system family can be used (i. e. Modbus).

Due to their modular and compact system design, the SPRECON[®]-E-T3 devices allow various combinations which therefore results in high flexibility and scalability.

Areas of application

The SPRECON[®]-E-T3 series can be applied to:

- Electric power supply
 - Switchgears and distribution systems
 - Caloric power plants
 - Hydroelectric power plants
 - Traction power supply
 - Wind power stations
 - Industrial networks
- Municipal utilities
 - Water supply
 - Sewage systems
 - Gas and oil supply
 - District heating
 - Tunnels
 - Traffic control systems

Configuration

Each SPRECON[®]-E-T3 device consists of a CPU module and certain I/O modules, which are connected via an internal bus. A control panel can be optionally connected to the RTUs.

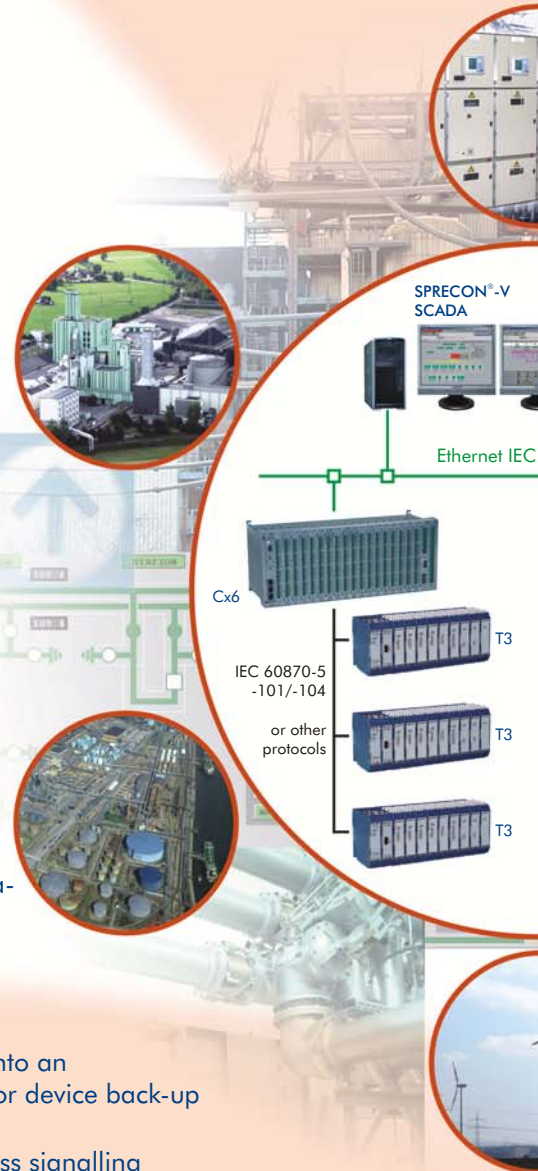
By combination of different I/O modules, the devices can be individually assembled in order to meet particular requirements.

All functions can be individually configured whereby system functions and project settings are kept separate.

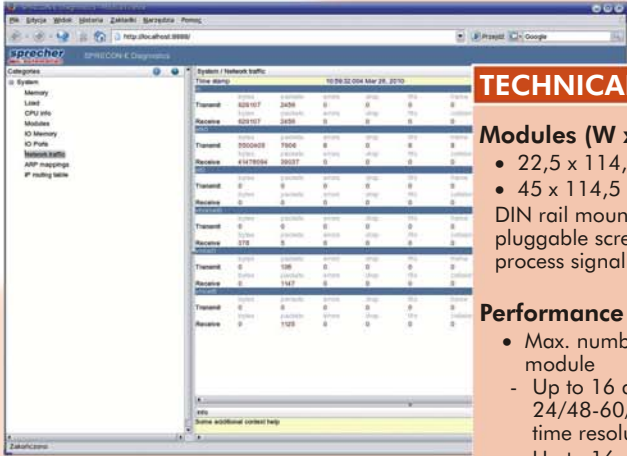
Configuration is accomplished with the SPRECON[®]-E-DESIGNER (configuration tool). Additionally, the systems also feature a web interface.

Features

- Integrated Web server
- Configuration data can be stored onto an USB-stick, which can be also used for device back-up and therefore for device recovery
- Pluggable screw-terminals for process signalling
- Function diagram acc. to IEC 61131-3 (option)
- Control panel (option)



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Access via Web browser on a PC or a PDA

TECHNICAL DATA (excerpt)

Modules (W x H x D)

- 22,5 x 114,5 x 99 mm
 - 45 x 114,5 x 99 mm
- DIN rail mounting, pluggable screw-terminals for process signalling (RM 5,08 Combicon)

Performance characteristics

- Max. number of inputs/outputs per module
 - Up to 16 digital inputs 24/48-60/110/220 V DC time resolution: 1ms
 - Up to 16 digital outputs 250 V AC/DC
 - Up to 8 digital control outputs 250 V AC/DC
 - Up to 8 analog inputs 0 to ± 20 mA / 0 to ± 10 V
- Up to 8 I/O modules per CPU
- Power supply
 - 24 V DC to 48 V DC, 60 V DC or 110 to 250 V DC and 110 to 230 V AC / 50/60 Hz

Communication protocols

- IEC60870-5-101/-103/-104
- IEC61850 (in preparation)
- Modbus

Communication interfaces

- LAN
 - 1 x Ethernet 10/100 Mbit/s (RJ45)
- RS232
- RS422/485

Tests

Acc. to IEC60068-2, IEC60255-5, IEC60870-2-1, IEC61000-4, EN55022, CE designation

Environmental conditions

- Recommended temp. -5 to +55°C
- Limits: -25 to +70°C (on request)

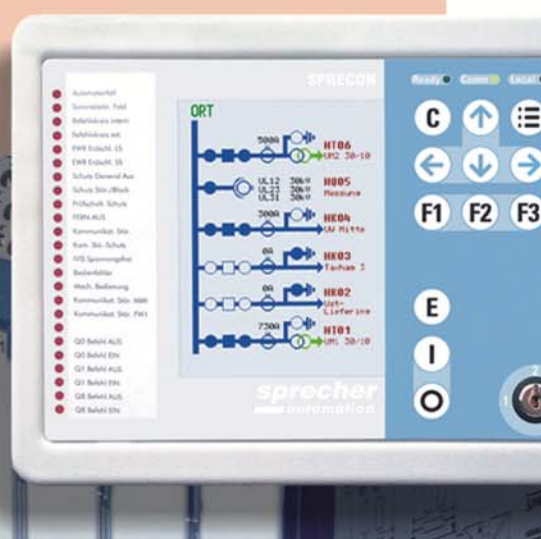
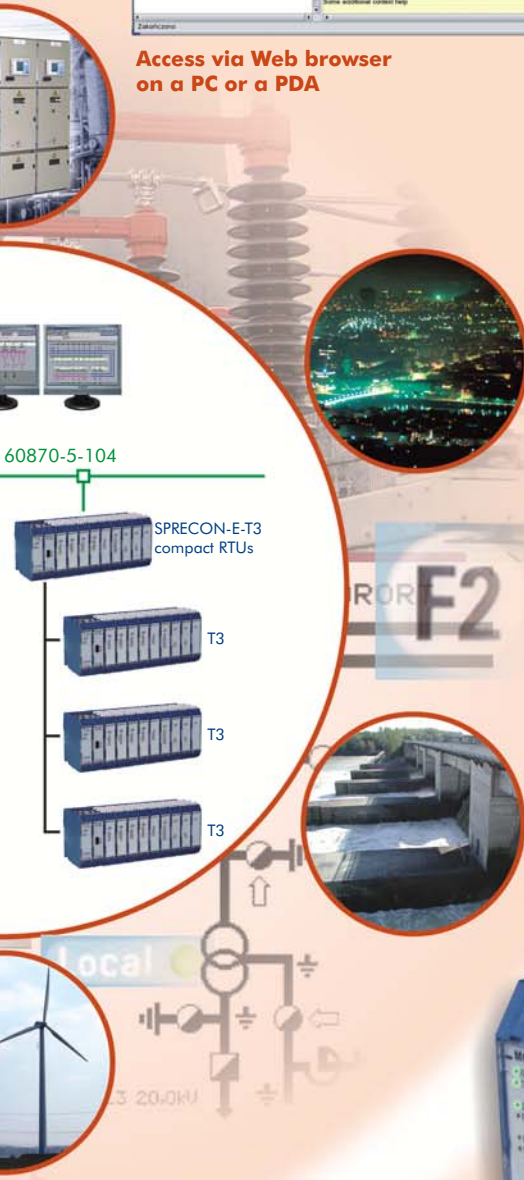
Functions

- Control and monitoring of electric devices and process elements
- LED signalling at the I/O modules
- Single and double commands with 1-, 1½-, 2-pole control
- Automatic functions for switching sequences
- Programmable logic (IEC 61131), AWL, FUP, boolean
- Switching authority and command levels
- Switching device interlocking
- Switching device blocking
- Substitution of switching device status
- Event recording
- Group-assigned indication and measured-value blocking
- Limit value monitoring
- Maximum demand value calculation
- Maximum value calculation
- Configurable transmission mode for measured-values
- Metered-value capturing
- Elapsed-hour meter, operations counter
- Archiving and configuration on USB

- Remote maintenance and configuration
- Time synchronisation with DCF77, GPS, IRIG-B, NTP, control / remote control
- Continuous self-monitoring
- Open interfaces for connection to intelligent electronic devices (IEC)
- Support of common standards and, optionally, proprietary protocols

HMI control panel

- Detached mountable
- Full-graphical display (high resolution)
- 25 individually configurable LEDs
- Alarm panel with 100 alarm LEDs (optional)
- Colour display (optional)



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