

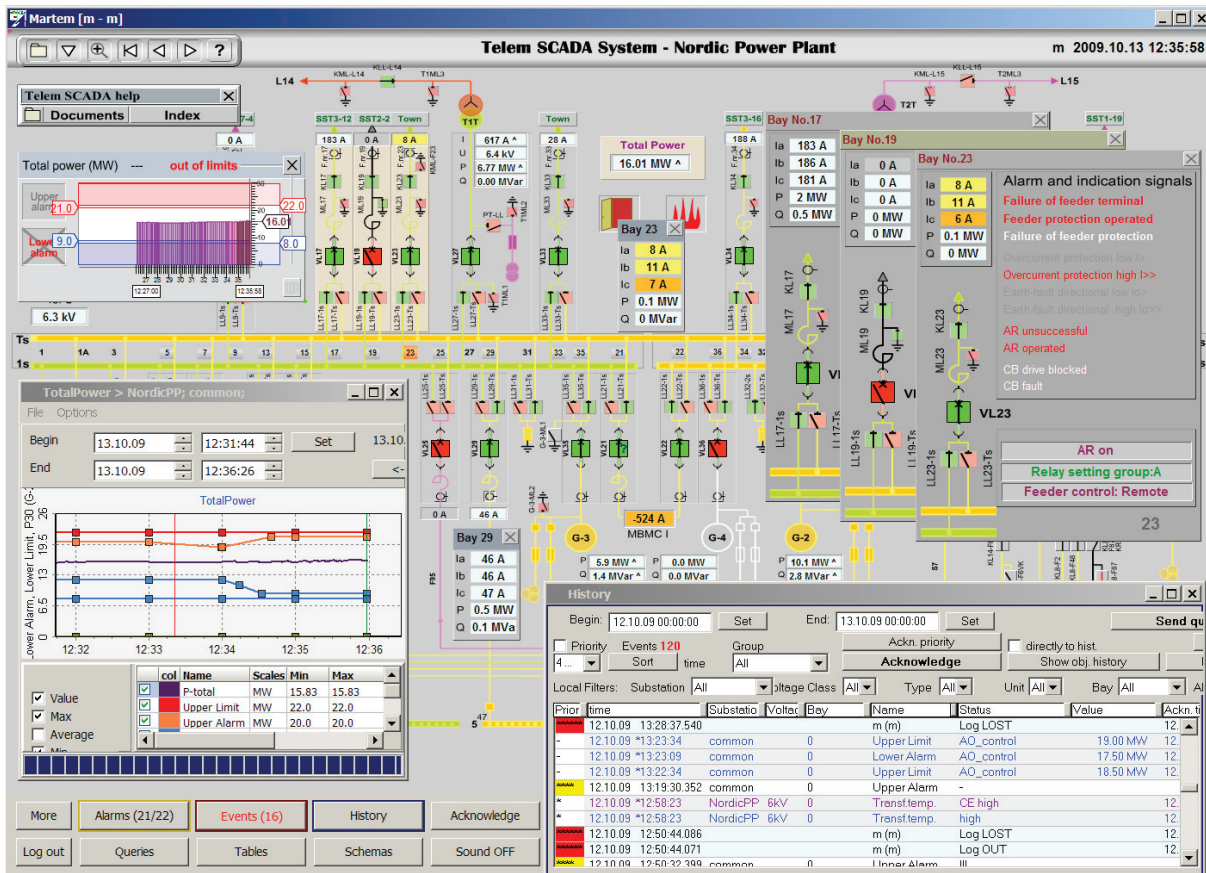
TELEM SCADA SYSTEM

TELEM – SCADA is a solution designed for use in high-, medium- and low-voltage electric power distribution networks. Martem's hardware and software solution is built on modern industry standards and standard interfaces, which is a key to guarantee the long-term life cycle of the system.

Scalable software and hardware enables to build systems with various sizes:

- **SCADA Centers - dispersed multilevel systems with several servers, separate communication processors and separate workstations**
- **Substation Control System - minimal configuration where base server, communication processor and workstation are located in the same computer**
- **System can be built as a redundant hot stand-by system**

Telem SCADA system offers interactive monitoring, rapid control, user-friendly real-time and historical information analysis.



Functions and features:

- Communication with substations' equipment and other SCADA systems of various producers
- Operative control and blocking operations
- Registration of events, operator actions and measurements values
- Flexible to customer-specific requirements: number of displays, use of mimic board if needed
- Remote workstations over the Internet
- System supervision: Status of servers and communication links, connected workstations
- Multi-user support: Different user rights, events can be divided between users
- Flexible filtering of events, alarms and historical data
- User-composed measurement groups for displaying real-time and historical trends
- Formula descriptions for analog and digital calculations
- Custom designed graphical schemas using existing libraries or user designed graphical symbols
- Custom configured Line Coloring system for graphical schemas enables to color the schemas according to presence of voltages
- Animated and interactive graphics with scripts - all possibilities of Adobe Flash
- Design and testing of graphical schemas can be performed separately from the system
- Rapid system development using user-friendly configuration tools, import/export from/to CSV (Comma Separated Values) for use of MS Excel
- Open configuration tools enable to configure the expansions by client personnel

Communication Protocols:

- IEC60870-5-101, IEC 60870-5-104, IEC60870-5-103, Modbus RTU
- Built-in OPC interface enables to use a lot of other protocols