POWER QUALITY ANALYZERS



Power Quality acc. to
IEC 61000-4-30 ed.3



- √ Fixed Analyzers
- √ Portable Analyzers
- √ PQA-SCADA Distributed System for Power Quality Analyzers
- √ Flexible and Precise Solutions to Improve Power Quality

Averna
Powered by SPHEREA



→ Power Quality Analyzers

For over 25 years, Averna has developed and manufactured advanced measurement devices and central software to improve power quality worldwide. These products range from single instruments to complex nationwide systems. Services are also available from the initial assessment of the current challenge to the deployment of a complete solution for better power quality, reduced costs and minimal waste.



Global Measuring Systems for Phasor Monitoring (WAMS)



Detailed Energy Monitoring



Comprehensive Power Quality Measurements



Improve the Quality of Electricity

→ Portable Analyzers

PQA-Portable/PQA-PortableUltra - CLASS A PORTABLE QUALITY ANALYZERS

The PQA-Portable and PQA-PortableUltra calculates power quality parameters according to EN50160 and meets the evaluation requirements of IEC 61000-4-30 Class A and other standards.

- Modern controls
- Touch screen display
- Large storage capacity
- Battery, GPS
- Harmonics - U, I, P, Q to the fiftieth harmonic, U and also as 200Hz spectra (0-9 kHz) and 2kHz spectra (PQA-PortableUltra - 0-68 kHz)
- The PQA-PortableUltraH measures 2kHz harmonics up to 500 kHz
- PMU
- Transients
- Symmetrical components
- Power and energy
- Ultra-Precision
- Oscilloscope records (PQA-Portable: 38 kSa/s, PQA-PortableUltra: 120 kSa/s, PQA-PortableUltraH: 800 kSa/s)





PQA-FLEX – THE NEXT GENERATION OF POWER MEASUREMENT

The PQA-FLEX measuring platform is designed with modular architecture to combine a CPU module and up to six input modules into one metering device. Input modules ensure input insulation, filtration and A/D transfer and provide data to the digital bus bar. This flexibility allows the user to design the solution they need using one platform. The CPU module is equipped with an FPGA receiving all digital input data, and the real-time controller running meter firmware and providing all interfaces and data storage. The PQA-FLEX has a high channel count and high-speed sampling to measure supra-harmonics.

- Power quality in class A according to EN 61000-4-30 ed. 3
- Synchrophasor measurement (PMU)
- Multi feeder monitoring (MFM)
- Modular architecture



PQA-MultiSystem

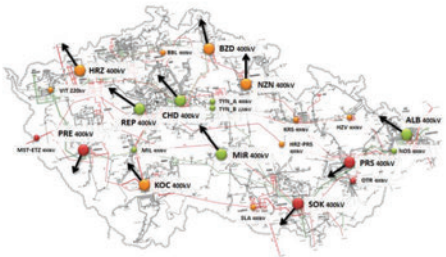
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WAMS - WIDE AREA MONITORING SYSTEM

Phasor angle differences between various parts of the transmission grid is an indicator of grid health and can provide early warning in case of developing power system disturbances that can lead to grid separation known as islanding, or even blackout.

The accurate measurement of phasor angles across the grid is made possible by the use of GPS-synchronized phasor-sampling clocks. Nation-wide networks of time-synchronized phasor measurement units (PMUs) are called Wide Area Monitoring Systems (WAMS).

Main features of WAMS systems are - phasors monitoring and visualization, islanding detection, resynchronization and black start detection, oscillations detection, stability and voltage monitoring. The results can be also passed to SCADA or other systems.



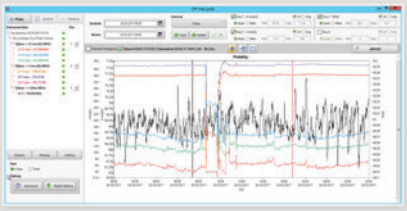
POWER QUALITY ANALYZERS

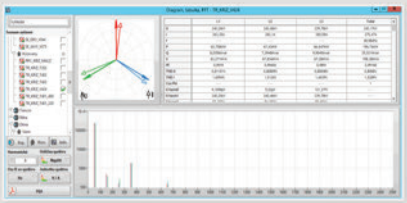


→ Distributed System for Power Quality Monitoring

PQA-SCADA

PQA-SCADA is a distributed system for Power Quality Analyzers (PQA). This central software can communicate with hundreds of meters, and support third-party meters. PQA-SCADA monitors the power quality as well as other parameters from transmissions and distribution grids.







MAIN FEATURES:

- Automatic reading of real-time and historical data from all meters simultaneously
- Displays real-time and historical data in multiple visualization panels including tables, graphs, single line diagrams, voltage/ frequency profiles, vectors, harmonics, digital indicators, maps, historical trends and tables, energy summarization and profiles etc.
- Displays a map of the country/region showing the actual voltage/frequency per substation or area, including graphical warnings for actual voltage levels and GIS data (for example grid map)
- Ability to configure meters for event detection including new events and real-time disturbances
- Store the historical data into the SQL database
- Automatically generate and send exports and/or event PDFs
- Provides automatic supervision system for all system components
- Maintains user levels/rights for access to different data/ configurations

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