

We take care of it.



PQSys

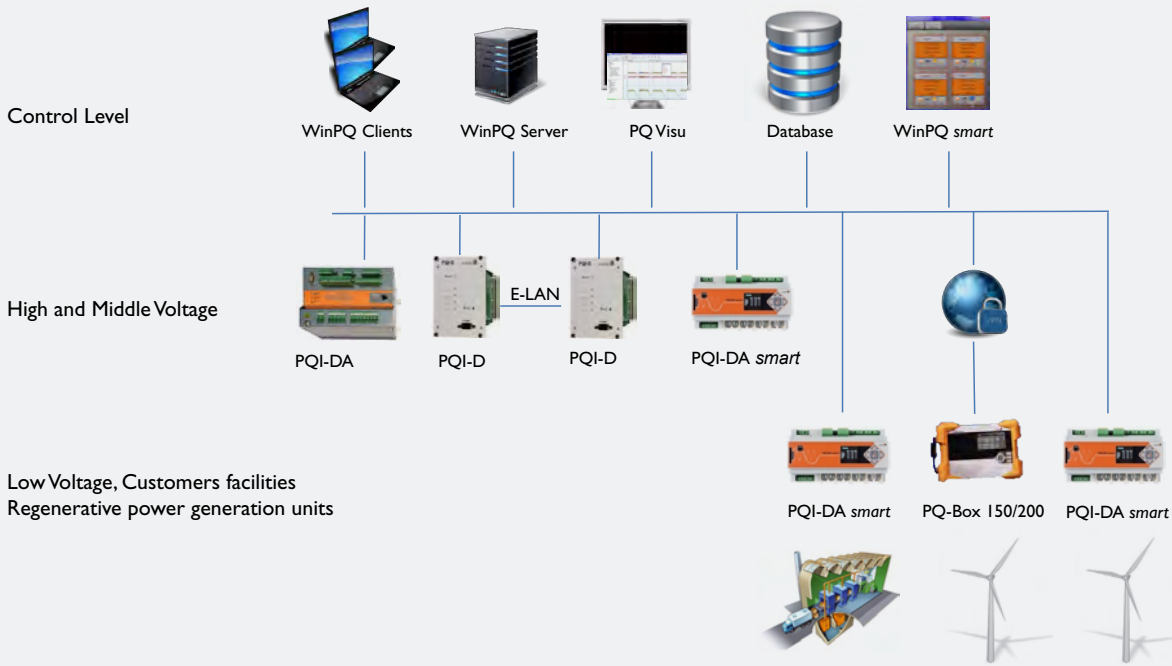
Power Quality.

Voltage quality and grid disturbances safely monitored.
Automatic setup on each voltage level: The Power Quality
analyzers PQI-D, PQI-DA and PQI-DA *smart*.

- Disturbance Recorder
- Power Quality Monitor
- Voltage Quality according to EN 50160
- IEC 61000-4-30 Ed. 3 Class A
- Frequency analysis up to 20 kHz
- Permanent recorder
- Transducer
- SCADA connection according to IEC 61850 / 104 / Modbus



WinPQ and Database – Power Quality System Solution



PQSys

WinPQ

The client-server software backed by an SQL database is an intelligent system solution for a fully automated monitoring of network quality for a large number of measuring instruments. There are different device versions for various requirements available. The high end evaluation software supports all permanent installed as well as the mobile network analyzers and disturbance recorders from A. Eberle.

Disturbance Recorder

The PQSys includes several disturbance recorders with different sampling frequencies. They differ in the level of detailing and length

of recording time. The system offers a huge spectrum of trigger criteria to start recorders. Recording time and pretrigger time are freely selectable. With the "retrigger function" the analyzer can adjust the recording time automatically to each disturbance.

Oscilloscope Traces

The instantaneous values (24 μ s values) are recorded with a frequency of 41 kHz. This enables a fault fingerprint to be registered at all times.

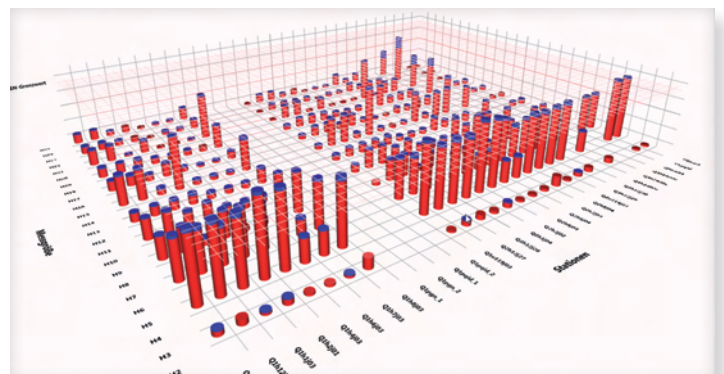
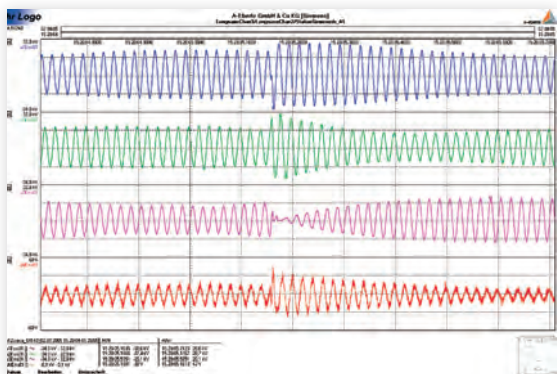
RMS Recorder

The RMS-recorder records with 10 ms interval time all TRMS values of voltages (line to

line and line to earth), currents, real, apparent, reactive power and the frequency.

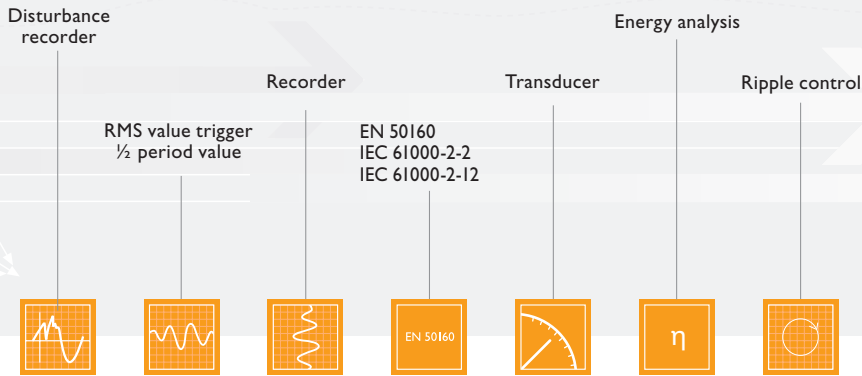
Auto Reporting

The system automatically signals fault records and sends these on to e-mail addresses and printer. Power Quality reports and long-term statistics will be automatically archived from the system software. The 3D graphics helps tracing many devices in a network area or at one voltage level.



Voltage quality safely in view.

PQSys family: Grid Analyzer, Disturbance Recorder and Transducer all in one



Digital Channels

All binary inputs can be recorded with up to 10,24 kHz. These channels can be used for recording external events (switch positions, protection relays) or to start and stop disturbance records.

PQ Event Recorder

All EN 50160 limit value violations, together with identification and timestamp, are recorded in the event recorder.

Permanent Recorder

With the continuous recorder function it is possible to record up to 3,000 different measurement values with different recording

times parallel. The following different recorders are possible: 200 ms; 1 sec; n x sec; 3 sec; 1 min; n x min; 10 min; 2 h. In addition the 1/2 period extreme values within the measurement interval are also available.

Transducer

The PQSys can also be used as a multiple measurement transducer, that can supply up to eight mA outputs with over 3,000 measurement values.

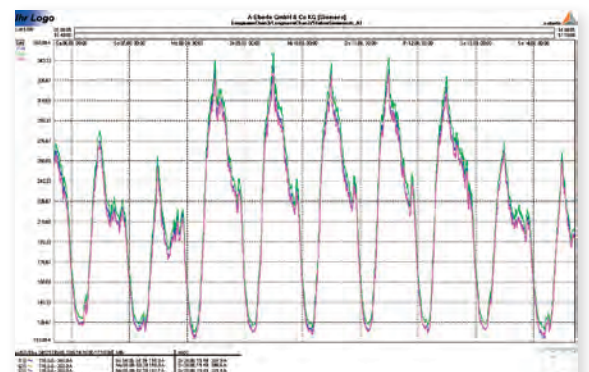
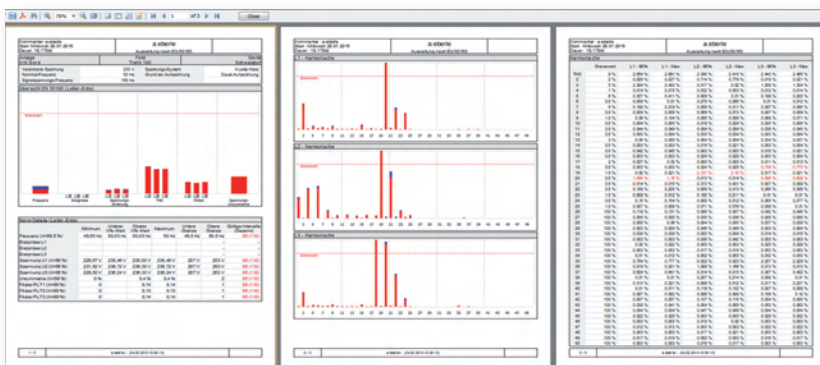
Analog Input

Additional user-programmable analog inputs offer the possibility of measuring inputs for

temperature measurement, wind speed or any low-level signals in parallel to the traditional current and voltage inputs.

IEC 61000-4-30 Ed. 3 Parameters

Parameter	Class
Accuracy of voltage measurement	A
Determination of time intervals	A
Flagging of event measurements	A
Harmonics, interharmonics	A
Flicker	A
Frequency	A
Voltage asymmetry	A
Event logging	A
Time synchronization	A





PQI-D



PQI-DA



PQI-DA smart

PQI-D – the flexible

Supply voltage AC/DC 88 V ... 264 V or DC 18 V ... 72 V
 Inputs U and I 24 bit resolution
 Time synchronization DCF77, GPS, IRIG-A, IRIG-B, NTP
 Voltage inputs Selectable for 100 V or 400 V input
 Current inputs Selectable for protection circuit 1A / 5A or metering circuit 1A / 5A
 Options The PQSys devices can be connected with the interface REG-PE or REG-PED to SCADA systems via IEC 61850 or IEC 60870-5-103 protocol.

Design 19" rack, wall mounting case, panel mounting housing
 Inputs 4 x U, 4 x I or 8 x U for each plug in module
 116 x U, 16 x I or 32 x U maximum channels per 19" rack

Options Binary inputs, Relay outputs
 Analog outputs (measurement transducer (-20 mA ... 0 ... +20 mA)
 Analog inputs for temperature and additional signals
 Current inputs for current clamps or Rogowski coils
 Memory 64 MByte for each plug in module
 Interface 2 x RS232 / 1 x RS485
 2 x E-LAN (RS485) bus system for max. 255 devices
 2 x time and trigger bus

Industry PC optional Fix installed, robust Industry PC
 Memory optional 16 GB CF card
 Optional interfaces Ethernet TCP/IP; analog modem, GPRS, UMTS,
 two-wire or four-wire connection, optical fibre

PQI-DA – the compact

Design Wall mounting case, DIN-rail housing
 Inputs 4 x U, 4 x I or 8 x U, 4 binary inputs, 5 relay outputs
 Memory 64 MB
 Interface 2 x RS232 / 1 x RS485
 2 x E-LAN (RS485) 2 x E-LAN (RS485) bus system for max. 255 devices
 2 x time and trigger bus / Ethernet TCP/IP
 Optional interfaces Analog modem, GPRS, UMTS, two-wire or four-wire connection, optical fibre

PQI-DA smart

Design Wall mounting case, panel mounting housing, DIN-rail housing
 Inputs 4 x U, 4 x I, 2 x binary inputs, 2 x relay outputs
 Memory 1 GB fix installed; CF card 4/8 up to 32 GB additionally available
 Sampling frequency optional 40,96 kHz / 10,96 kHz
 Color Display 1,7 inch
 Bandwidth input channel DC to 20 kHz

General Data

Standard IEC 61000-4-30 Ed. 3 class A
 Accuracy < 0,1%

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