

We take care of it.



They never stop –
even when the going gets tough

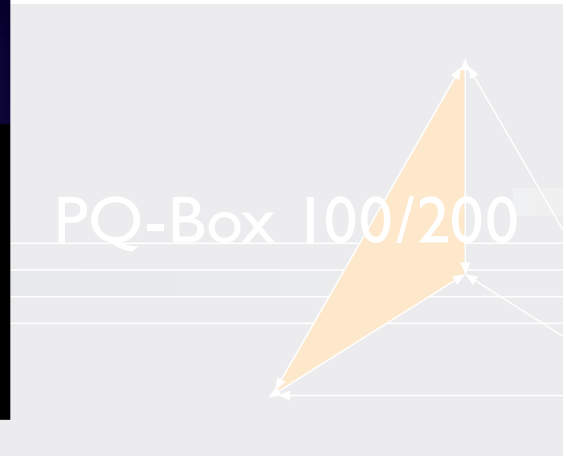


PQ-Box 100/200

Extremely robust power grid analyzers: PQ-Box 100 and PQ-Box 200

- Powerful tools to resolve network faults
- Evaluation of voltage quality in accordance with EN50160 and IEC61000-2-2/-2-4
- Frequency analysis up to 20 kHz
- Load analysis and energy measurements
- Transient analysis 2 MHz, 5 kV (optional)
- Ripple control signal analysis
- Comprehensive analysis software
- CAT IV rated
- IEC61000-4-30 Class A device





A. Eberle's PQ device family; Portable PQ-Box 100, PQ-Box 200 and permanently installed fault recorders/PQ Analyzers PQI-D and PQI-DA: portable network analysers, power meters and transient recorders - all in one.

The PQ-Box 100 and PQ-Box 200 power grid analyzers are powerful, mobile network analyzers, output meters and transient recorders in one. The user-friendliness of the measuring instrument and the intuitiveness of the software were two of the main development goals.

The devices were specially developed for mobile operation (protection class IP 65) and designed for measurements in public power grids (installation category CAT IV). The device meets all of the requirements of the strict Measurement Instrument Standard IEC 61000-4-30 for Class A devices.

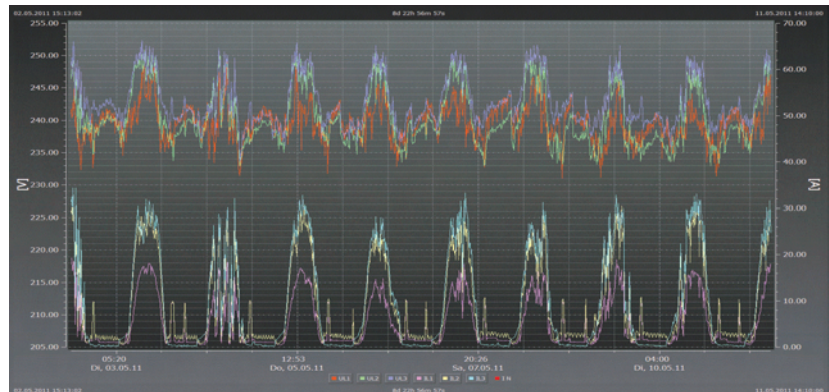
The devices are equipped with a wide range of trigger options that enable them to quickly identify the cause of a failure in the power grid. In the event of a power failure an onboard UPS ensures the PQ-Box continues monitoring.

IEC61000-4-30-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

The robust mechanical design and the lack of rotating parts such as fans and hard drives, enable the devices to be used in the toughest conditions.

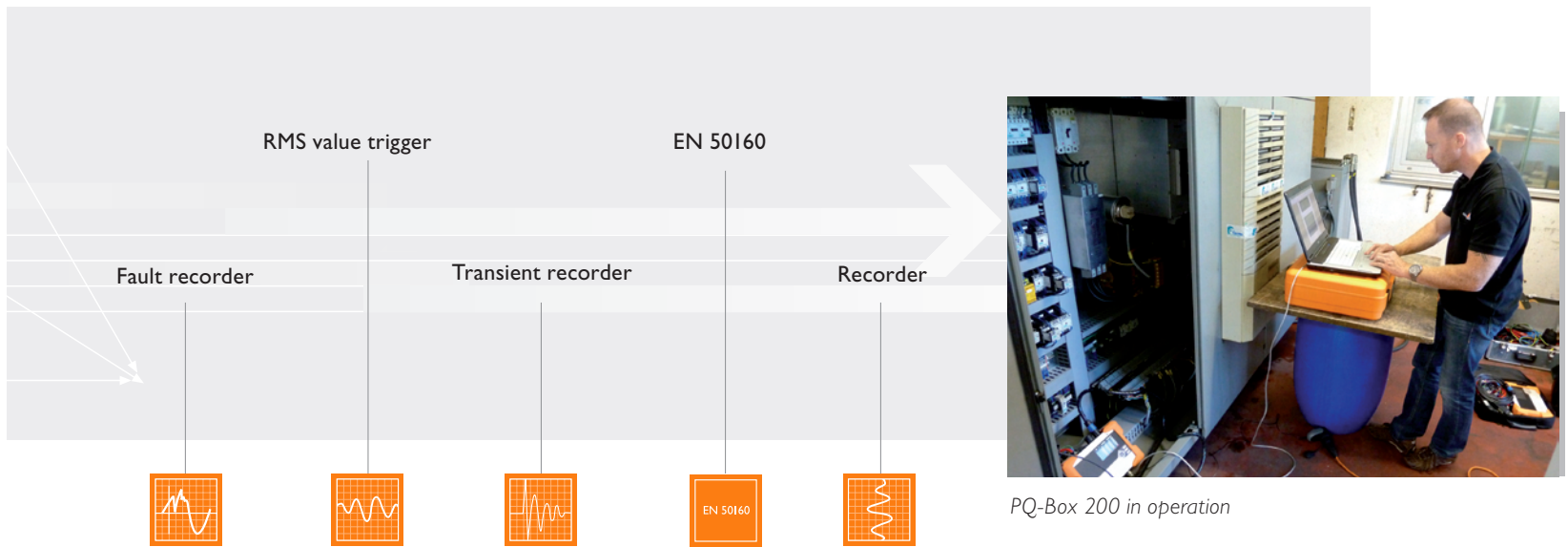
PQ-Box 100 and PQ-Box 200 are equipped with large memory ranging from 1 GB up to 32 GB (optional), which enables measurement data to be stored for up to a year.



Level-Time diagram: Voltage, Current

The all-rounder for tough field jobs

PQ-Box 100 and PQ-Box 200 –
logical, portable additions to the permanently installed PQI-D(A) analysers



PQ-Box 200 in operation

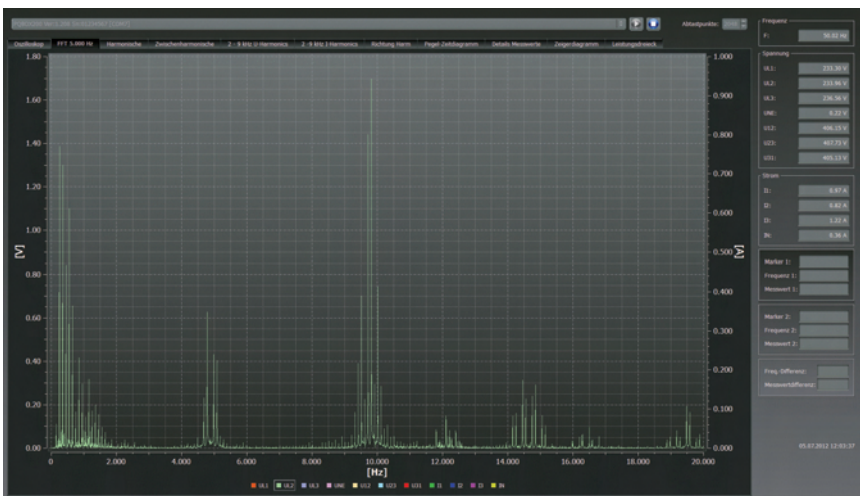
The accessories are sophisticated and yet simple. A code in the connector enables the PQ-Box 100 and PQ-Box 200 to recognize the connected current clamps and adjust the measurement ranges automatically.

Evaluation software

WinPQmobil, the comprehensive and practice-oriented evaluation software for the PQ-Box 100 and PQ-Box 200, is supplied free and can be installed on any number of PCs.

The software offers a wide range of evaluation options, such as load analysis and the ability to diagnose faults on the power grid. Standard reports in accordance with EN50160, IEC61000-2-2/-2-12 (public power grids) or IEC61000-2-4 (industrial power grids) are automatically generated. Measurement data can be exported as COMTRADE, XML or CSV files.

A comprehensive online function provides valuable information while PQ-Box is logging measurements. Software updates can be downloaded free of charge. A.Eberle's power quality team are continuously developing the software and adding extra functionality often based on customer's ideas.



Frequency range DC to 20 kHz

Product characteristics

Type of power grid analyzer	PQ Box 100	PQ Box 100	PQ Box 100	PQ Box 200	PQ Box 200
	Basic	Light	Expert		incl. Option T1
Option					
Memory	1 GB	1 GB	1 GB	1 to 32 GB	1 to 32 GB
Inputs	4xU / 4 x I	4xU / 4 x I	4xU / 4 x I	4xU / 5 x I	4xU / 5 x I
Binary input				x	x
Evaluation of voltage quality according to					
EN50160 (2011) / IEC61000-2-2 / IEC61000-2-12 / IEC61000-2-4 (Class 1; 2; 3) / NRS048 / IEEES19 / VDE N-4105		x	x	x	x
Logging of free interval from 1 sec to 30 min (> 2,600 measurement parameter permanent parallel)					
Voltage: Average, minimum, maximum value	x	x	x	x	x
Current: Average, maximum value	x	x	x	x	x
Power: P, Q, S, PF, cos phi, sin phi	x	x	x	x	x
Distortion power D; Power at the fundamental frequency	x	x	x	x	x
Energy: P, Q, P+, P-, Q+, Q-	x	x	x	x	x
Flicker (Pst, Plt, Ps5)	x	x	x	x	x
Asymmetric current and voltage; negative, positive and zero sequence component	x	x	x	x	x
Voltage harmonics in accordance with IEC61000-4-30 Class A		up to 50.	up to 50.	up to 50.	up to 50.
Voltage harmonics 200Hz frequency bands				2kHz to 9kHz	2kHz to 9kHz
Current harmonics		up to 50.	up to 50.	up to 50.	up to 50.
Current harmonics 200Hz frequency bands				2kHz to 9kHz	2kHz to 9kHz
Phase angle of current harmonics		up to 50.	up to 50.	bis 50.	up to 50.
THD U and I; PWHD U and I; PHC	x	x	x	x	x
FFT calculation for voltages and currents		DC to 5kHz	DC to 5kHz	DC to 20kHz	DC to 20kHz
Ripple control signal 100 Hz to 5 kHz		x	x	x	x
Frequency, 10 sec, average, minimum, maximum value	x	x	x	x	x
15/30 min interval power values P, Q, S, D, cos phi, sin phi	x	x	x	x	x
Online mode					
Oscilloscope image - Sampling frequency	10,24kHz	10,24kHz	10,24kHz	40,96kHz	40,96kHz
3D power triangle for apparent, active, and reactive current and distortion power	x	x	x	x	x
Voltage and current harmonics	DC to 5kHz	DC to 5kHz	DC to 5kHz	DC to 20kHz	DC to 20kHz
Interharmonic groups (U, I)	DC to 5kHz	DC to 5kHz	DC to 5kHz	DC to 20kHz	DC to 20kHz
Direction of harmonics and phase angle current harmonics	x	x	x	x	x
Trigger functions (Rec A / Rec B)					
Manual trigger via trigger button		x	x	x	x
RMS level trigger (U, I)			x	x	x
RMS jump trigger (U, I)			x	x	x
Phase shift trigger			x	x	x
Envelope trigger			x	x	x
Automatic trigger			x	x	x
Trigger on binary input (0 – 250V AC/DC; 10V threshold)				x	x
Ripple control analysis recorder for voltage and current – Option R1	100Hz to 3kHz	100Hz to 3kHz	100Hz to 3kHz	100Hz to 3kHz	100Hz to 3kHz
Transient recorder programmable 200 kHz; 500 kHz; 1 MHz; 2 MHz – Option T1	not possible	not possible	not possible	retrofitable	2MHz

Your Sales Partner



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