

# Interaction of Network and Customer Power Quality Analyser or Power Meter?

## Here is both!



The objectives of a power quality analyser are manifold. Even manifold as the choice of measuring equipment. The right choice of the equipment is the premise for a successful analysis.

Often it's not enough to measure the voltage at the point of common coupling only but also to evaluate the interaction between the grid and the connected loads. The required parameters are not only voltage and short circuit level. It is also important to analyse the load currents, power components and power factor.

It is well known, that the performance of a modern electrical appliance should be described with a high precise current measurement in a wide frequency range. This means, that the use of a high precision power meter is essential.

The measurement and analysis system **ZES ZIMMER Power Quality Analyser PQA450** combines the wide features of a power quality analyser, for example long time recording, with the considerable advantages of a modern power meter:

- Measurement of high voltages and current in a frequency range of DC-20kHz with an accuracy of 0.1%
- Exactness evaluation of power parameters and power factors also by small cos phi
- Tabulate and graphical display of the measured data in real time
- Adoption of additional analog and digital channels to acquire the control signals and non electrical parameters.

# ZES ZIMMER Power Quality Analyser PQA450

- High precision measuring DC-20kHz, 0.1%
- High dynamic ranges: 600mA-18A, 6V-720V directly

- Color display
- Display of the most significant values in real time
- Graphical display of measured values

- Additional measuring inputs for clamps and sensors
- Precision power analysis even at small cos phi
- Flexible setting of the resolution in time domain
- Formula-, respectively script editor
- Analog and digital in-/outputs

- Separate use of the power meter
- To use with a commercial notebook or PC as storage medium
- Transient analysis with a sampling rate up to 50kHz
- Harmonic analysis up to 100 harmonics

4 Channel Precision Power Meter LMG450



Network Data Logger NDL5

- Display of the current status of the data recording
- IP-address of the connection

- Long term recording of all relevant measured data with a variable resolution of 200ms-15min
- Permanent recording of the half-wave r.m.s. values of the voltages
- Operational control via Ethernet, also during the measurement

- Comfortable evaluation of the measured data
- Statistical evaluation according to EN50160
- Evaluation voltage dips
- Export of measured data
- Tools to create an analysis report

## Function

- Disturbance analysis
- Examination of operational conditions of electrical appliances
- Verifying the public main supply
- Analysing according to the power quality standards

## Customer

- Designers of electrical appliances
- Departments of industrial power supplies
- Supply utilities
- Consulting engineers
- Operators of wind power plants

- Recording of the waveforms from voltages and currents
- Measurement without interruption
- Adjustable trigger conditions for recording
- Continuous display of the measured values
- Additional measurement of control signals and non electrical values
- Comfortable handling of the measuring via Ethernet
- Considerable tools to analyse the measured data.

## Applications

- Planning and optimization of power supply systems for industrial plants
- Disturbance analysis at industrial plants, offices and households
- Optimization of electrical devices and appliances during the development
- Measuring of the operating conditions from wind power plants

## Features

- Statistical analysis according to EN50160
- Evaluation of voltage dips
- Recording of
  - voltages, currents and powers
  - harmonics and flicker
  - unbalances
  - half-wave r.m.s. values
  - main signalings

Subject to technical changes, especially to improve the product, at any time without prior notification.