

# Quick reference Power Quality Analyser PQA450

ZES ZIMMER Electronic Systems GmbH

Tabaksmuehlenweg 30

D-61440 Oberursel

pho ++49 (0)6171 628750

fax ++49 (0)6171 52086

email: [sales@zes.com](mailto:sales@zes.com)

internet: <http://www.zes.com>

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Regard DIN 34!

We reserve the right to implement technical changes at any time, particularly where these changes will improve the performance of the instrument

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# 1 System requirements

## Minimum requirements

- Pentium 133MHz processor
- 32MB of RAM
- Win9x, WinNT, Win2000
- USB-interface by using the analyser without the net data logger
- Ethernet interface by using the analyser with the netdata logger
- display resolution of 1024 x 768
- 10 MB spare space on harddisk for configuration and analysing software
- Harddisk space containing your analysing data

## Recommended requirements

- Pentium II 300MHz processor
- 64MB of RAM
- Win9x, WinNT, Win2000
- USB-interface by using the analyser without the net data logger
- Ethernet interface by using the analyser with the netdata logger
- display resolution of 1024 x 768
- 10 MB spare space on harddisk for configuration and analysing software
- 5GB of harddisk space, for analysing the data

# 2 Power quality analyser PQA450

This quick reference is given to you, to easily start with the power quality analyser PQA450 from ZES ZIMMER Electronic Systems GmbH. You'll find further details in the particular manuals.

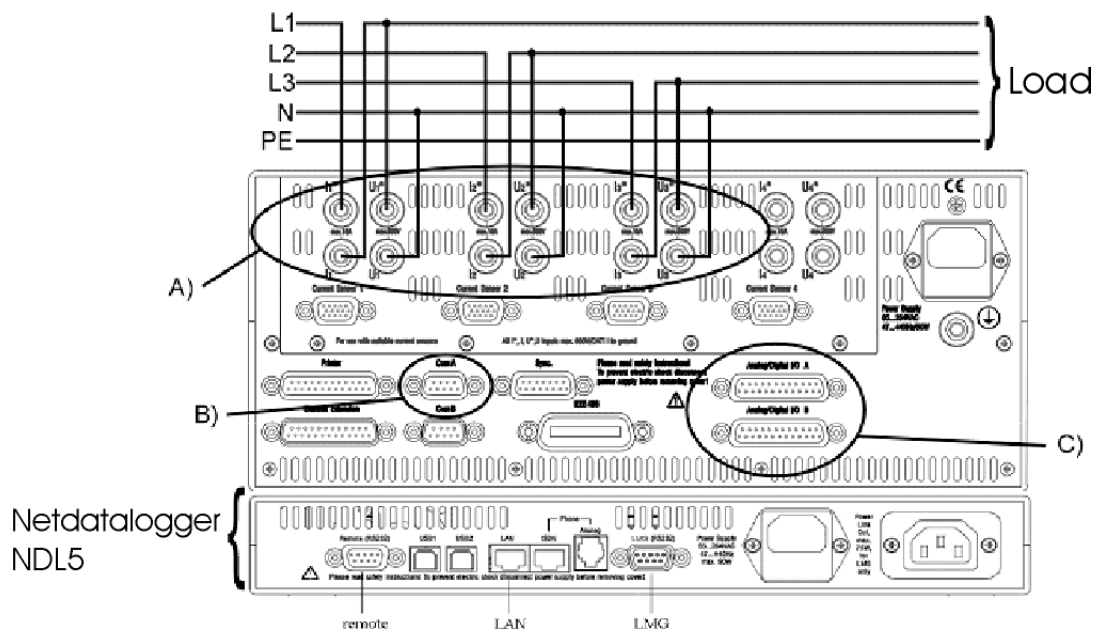
## 2.1 Usual connection of the power quality analyser

On the rear of the power quality analyser, you'll find all needed connectors to operate. Connect the 3-phases, which you want to be measured, as shown with point A) of the analyser.

**IMPORTANT:** It's only possible to measure a 4 wire system with a neutral conductor. In case you want to measure a 3 wire System (without neutral conductor), you need an artificial startpoint simulation (accessory LMG-AMP).

If you use the power quality analyser without the net data logger, you have to connect the provided USB/RS232 converter cable to your computer and the ComA interface of the analyser, as shown with point B). If you measure with the net data logger, please read the quick reference of NDL5, which is in the following of this document and read further at chapter 2.4.

The analog and digital inputs, which are shown with point C), are for optional use, please take a look therefor into the PQagent and PQviewer manuals.

**Usual connection of PQA450**

## 2.2 Connect the power analyser to the Computer/Laptop

First of all, you have to install the driver of the USB/RS232 converter cable on your Computer/Laptop. Then connect the cable with a spare USB slot of your Computer.

## 2.3 Configuration of the communication interface of the power quality analyser

Turn on the power quality analyser and start the interface menu by pushing the key „IF/IO“ followed by the softkey „IF“. Please choose as device „ComA: OEM Appl“ by using the softkey „Dev“ (Device). You can scroll to the intended device with the rotary knob and confirm by pushing the rotary knob or pushing the „Enter“ Key. With the softkey „Set“, you can set up baud rate, change baud rate to 115200 baud. To finish this procedure, push the softkey „Back“, to leave the interface menu.

## 2.4 Installation and handling of the Software

The provided software consists of three parts:

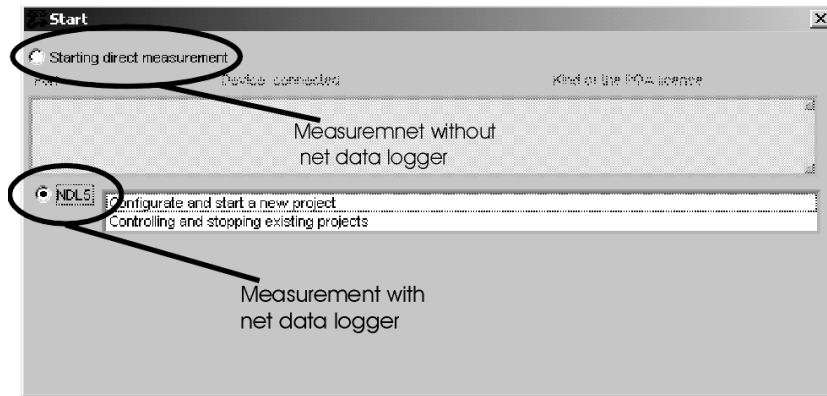
- National Instruments Visa 2.6 driver (or a later version)
- PQagent (configuration software)
- PQviewer (evaluation software)

**IMPORTANT:** First of all, you have to install the Visa 2.6 driver of national instruments, this driver is handling the communication between the power quality analyser and your Computer.

Afterwards you have to install the PQagent and PQviewer software, by using the particular setup functions and follow the on screen instructions.

### 2.4.1 Function and using of PQagent

The PQagent is used to configure the power quality analyser and start to the measurement. Please start Pqagent, which you has already installed. Following starting screen appears.



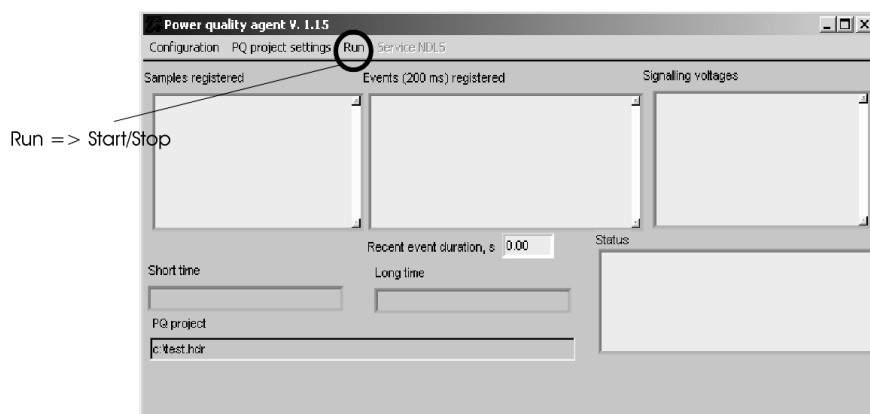
start screen

If you are using the net data logger for your measurements, you have to choose the second option (default) „NDL5“. While selecting this, you have two further options. First, starting a new project and second, to stop an already started project.

If you want to measure without net data logger, you have to choose the first option on the start screen („start direct measurement“). The PQagent seeks automatically for the power quality analyser. After found, it will be available and you can select it by double clicking.

After an effective configuration, a request appears, to name your new project. This will be also the name for the journal, after finishing the measurement.

After choosing a name, the PQagent main menu appears. Where you can specify your measurement.



PQagent main menu

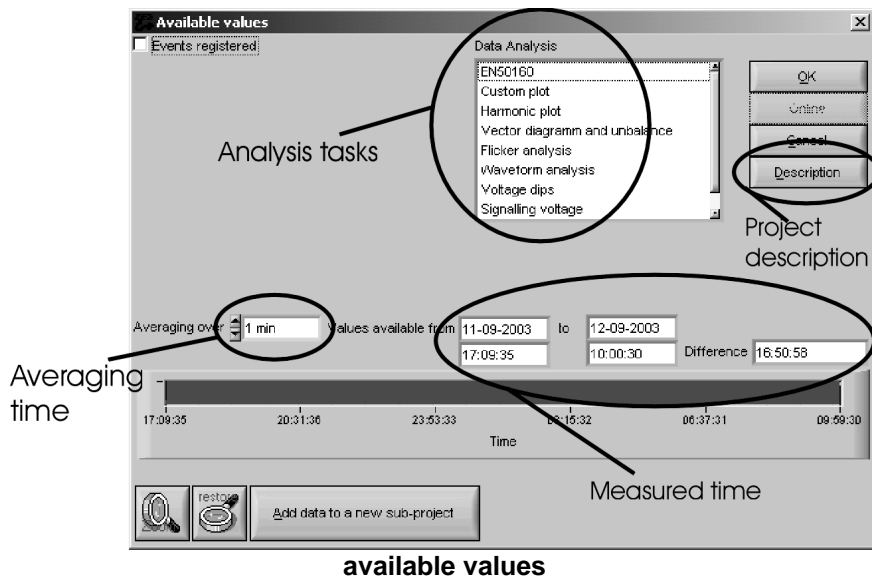
For a quick start respectively a standard analysis, the measuring parameters are already set (default). In case you want to change them, please take a look into particular manual of the PQagent. To start the measuring, press „start“, which you'll find in the function „run“. All parameters, which will be fundamental, will now be saved the harddisk of your Computer or on the net data logger, in case it's in use. You can stop the measuring by pressing „stop“ in the function „Run“.

**IMPORTANT:** During the measurement without the net data logger, the PQagent must stay active, don't close it, otherwise it will stop the measurement immediately.

## 2.4.2 Function and using of PQviewer

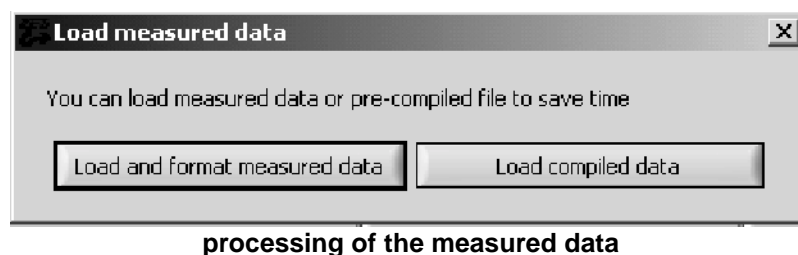
The PQviewer is used to evaluate the measured data, which were specified and recorded from PQagent.

After starting PQviewer you are called up to open your measured project, by selecting header file with the intended project name. After selecting the file, the following menu appears:



In the above overview (pic. Available values) you see which averaging time were used (it's variable, please take a look into PQagent manual), how long the measurement took, the different analysis tasks and a description about the measurement.

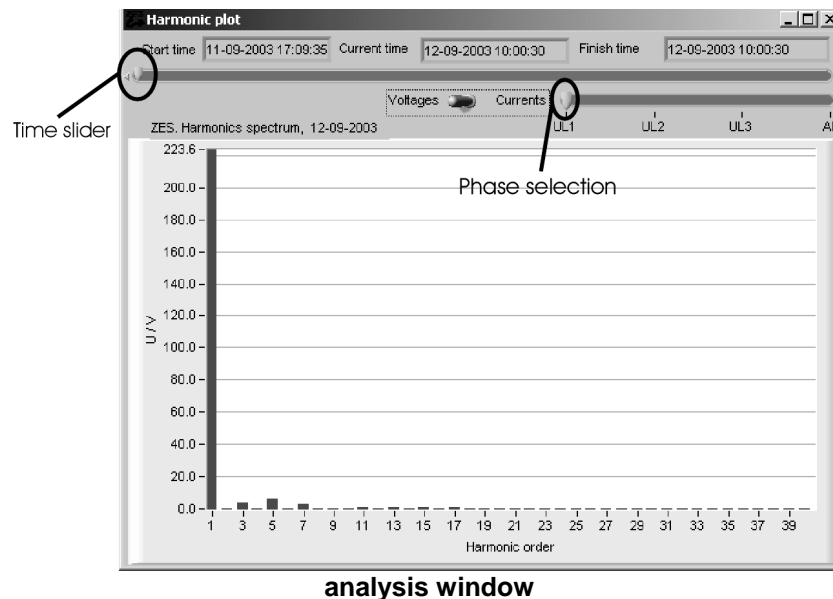
Make your choice required analysis task and confirm by pressing „OK“. It appears the following window:



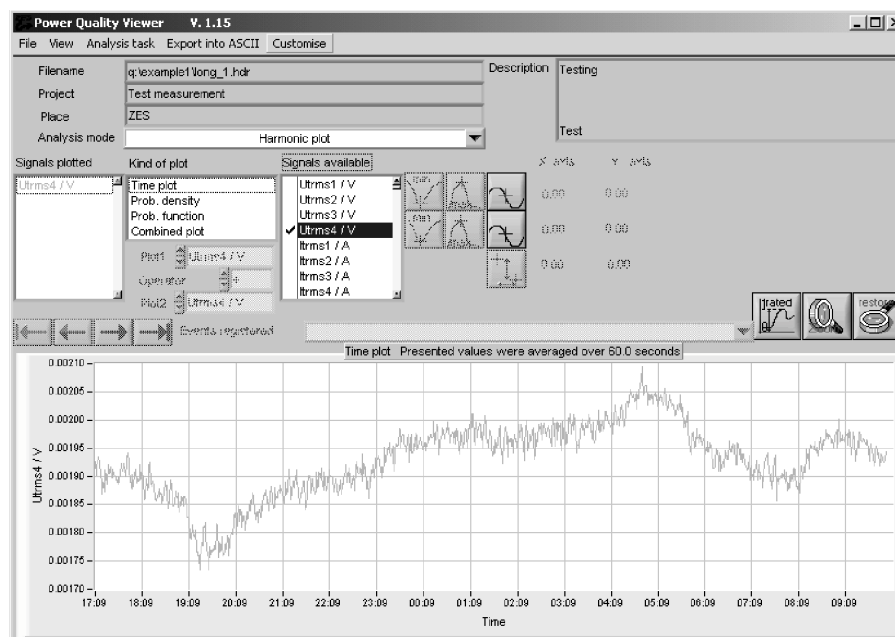
Select „Load and format measured data“, if you analyse your measured data the first time with the chosen task (not, it could take several minutes load all data). Or select „Load compiled data“, if you already analysed your measured data with the chosen task.

After evaluation of the data, the appendant analysis windows appears (here for example „Harmonics“), which shows required analysis.



**analysis window**

With the upper time slider, you can move through the whole measurement period. With the slider below, you can select the phases. With this functions, you will get graphical view of your analysis for every time period you want. After closing the window, you are stepping to the main menu of the PQviewer.

**main menu PQviewer**

In the main menu, you have the opportunity, to get a graphical over view of all relevant measuring data. They are displayed single or combined, means that you can see for example the voltages as single or in relation to each other. More details, you will find manual of PQviewer. You can change the analysis tasks, at the pull down menu „analysis task“.

### 3 FAQ

*User: I don't get my PC connected to the power quality analyser ?*

**Support:** Please check the cable joint and the interface settings.

*User: When starting PQagent, I get the error message : „Open Visa ..“!*

**Support:** Please check, that you have installed the Visa driver from National Instruments, or maybe you need an update of that driver.

*User: PQagent crashes, without any apparant cause!*

**Support:** Turn off every running program. Many programs, which are working as background tasks of Microsoft Windows, like virus scanners, email programmes, a.s.o., interfere the correct work of PQagent.