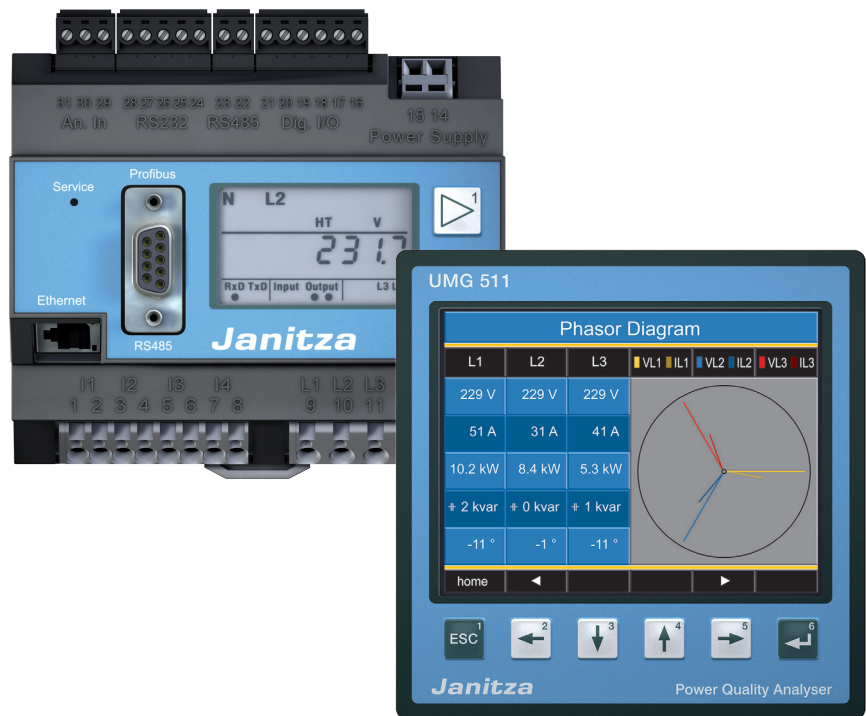


Functional description

Measuring value monitor

UMG 604 / UMG 605 / UMG 508 / UMG 511

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Janitza electronics GmbH
Vor dem Polstück 1
D-35633 Lahnau
Support tel. (0 64 41) 9642-22
Fax (0 64 41) 9642-30
e-mail: info@janitza.com
Internet: http://www.janitza.com

Janitza[®]

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Short description

With the “measuring value monitor” app it is possible to show online and historical measuring values in graphs on the website of a Janitza UMG device. Because of the user-friendly control, anyone can quickly and easily create graphs.

Most important features:

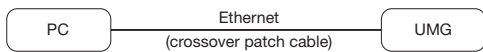
- Completely web based, you only need a web browser
- For usage on PC, Laptop, Tablets PC's etc.
- Access to the most important live and historical measuring values
- Easy export of graphs
- Easy operation trough “drag and drop”
- Up to 6 measuring values in one graph (2 y-axes)
- Up to 60.000 data points in one graph (10.000 per measurement value)

Integrate Power Analyser into the GridVis

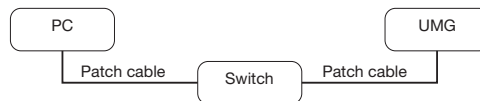
To integrate the Power Analyser into the GridVis evaluation and configuration software an Ethernet connection must be established to the device and the TCP/IP address defined.

Establish a connection between the PC and the device (see connection example) via a direct connection or via a switch/router. It is recommended to use CAT5 cable.

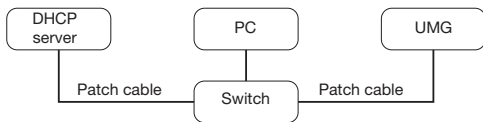
Determine or set the addressing mode ("fixed IP" or "DHCP"). If "fixed IP" mode is selected then set the TCP/IP address of the device.



*Fig. Example connection:
Direct connection between UMG and PC.
Both devices require a fixed IP address.*



*Fig. Example connection:
Configuration using a switch UMG and PC
require a fixed IP address.*



*Fig. Example connection:
Integration into a network with DHCP server.
UMG and PC are assigned their IP addresses
automatically from a DHCP server.*

Fixed IP address

In simple networks without a DHCP server, the network address has to be set directly in the device.

With a direct PC-UMG connection, note:

- Use a crossover patch cable.
- The first three segments of the IP addresses for the device and the computer should be identical. The last segments must be different! The subnet mask must match in all four blocks.

Example:

Computer's IP address: 192.168.000.020 with the subnet mask: 255.255.255.0

UMG's IP address: 192.168.000.021 with the subnet mask: 255.255.255.0

DHCP mode

DHCP allows for the fully automatic integration of a UMG into an existing network without additional configuration. When started, the UMG automatically obtains the IP address, the network mask and the gateway from the DHCP server.



Attention

The connection of the UMG to an existing Ethernet network may only be carried out after discussion with the network administrator!

Integrating the UMG 604 / 605

- Change the device to programming mode. To do so press buttons 1 and 2 simultaneously for approx. 1 second. With the password query deactivated the programming mode is then started and identified with the text "PRG". The first digit of the address flashes.
- Set the address 205 for the selection "DHCP-Modus" (=2) or "Fixed IP address" (=0).
 - To do so, use button 2 to set the first digit to the value 2. Then switch to the second digit with button 1 and set it to a value of 0 with button 2. Set the third digit to a value of 5 in the same way.
 - Once the address is set, switch to the setting with button 1. Use button 2 to set the parameter to the corresponding value (cf. "Addressing mode" table).
 - For further settings use button 1 to go back and enter the next address.
 - If no button is actuated for ca. 60 seconds, or if buttons 1 and 2 are pressed simultaneously for ca. 1 seconds, then the device exits programming mode and changes back to display mode.

Address	Description
205	DHCP mode 0 = Fixed IP 1 = BootP 2 = DHCP client 3 = Zeroconf

Table: Addressing mode

- With the selection of "Fixed IP address", other additional network parameters must be set:
 - Setting the device IP address
 - Change to programming mode. Set the address 300 as described and set the first three digit block of the device IP address (cf. IP addresses table).
 - Then set the address 301 and allocate the second block of the device IP address.
 - Complete the entries with the addresses 302 and 303.
 - Setting the subnet mask
 - Set the subnet mask, using the same method as for configuring the device IP address, with addresses 304 to 307 (cf. IP addresses table).
 - Setting the standard gateway
 - Set the standard gateway (if present), in the same way as the IP address, with addresses 310 to 313 (cf. IP addresses table).
 - Note: Gateway adjustment is normally not required for the configuration.
- Read out the device address with "DHCP mode" selection:
 - Change to the programming mode as described. Set the address to 300, using buttons 1 and 2 and note down the three digit block in the Contents area. Carry out the same step for addresses 301 to 303 (cf. table under step 10).

Address	Description	Address	Description	Address	Description
300	IP address, xxx --- --- ---	304	IP mask, xxx --- --- ---	310	IP gateway, xxx --- --- ---
301	IP address, --- xxx --- ---	305	IP mask, --- xxx --- ---	311	IP gateway, --- xxx --- ---
302	IP address, --- --- xxx ---	306	IP mask, --- --- xxx ---	312	IP gateway, --- --- xxx ---
303	IP address, --- --- --- xxx	307	IP mask, --- --- --- xxx	313	IP gateway, --- --- --- xxx

Table: ID addresses

Integrating the UMG 508 / 511

- Start the configuration menu from the home display with button 1 ("ESC"). Change to the "Communication" entry with button 3 and open this with button 6.
- Similarly to above, set the selection to "DHCP". To do so mark the "DHCP" entry and open this via button 6. Select the corresponding entry "DHCP" or "Off" with button 3 or 4 and confirm this with button 6. Deactivate the entry in the case of networks without DHCP servers ("Off").
- With the DHCP mode deactivated ("Off") further network parameters must be set:
 - Setting the device IP address
 - Select the entry "Address" with button 3 or 4 and open this with button 6. Change the first digit of the address via button 3 or 4. Then switch to the second digit with button 5 and set this in a similar manner to above. Complete the IP address and confirm the entries with button 6.
 - Setting the subnet mask
 - Select the entry "Netmask" with button 3 or 4 and open this with button 6. Set the subnet mask in a similar manner to the setting of the IP address for the device.
 - Setting the standard gateway
 - Select the entry "Address" with button 3 or 4 and open this with button 6. Set the IP address for the Standard Gateway (if present) in a similar manner.
 - Note: Gateway adjustment is normally not required for the configuration.
- Reading out the device address:
 - Start the configuration menu from the home display with button 1 ("ESC"). Change to the "Communication" entry with button 3 and open this with button 6.
 - Note the addresses under "Address" and "Netmask".

Setting the IP address of the computer for a direct connection

PCs on company networks normally use DHCP. If you would like to assign a fixed IP address for the PC (e.g. for a direct PC to UMG connection), proceed as follows:



Attention

Settings in a company network can vary.



Attention

The connection of the UMG to an existing Ethernet network may only be carried out after discussion with the network administrator!

- Open the Network and Sharing Center in the Windows Control Panel.
- Open the status window via the LAN connection (fig. Network and Sharing Center).
- By selecting "Properties", it is possible to assign a fixed IP address to the PC (see fig. Process for defining a fixed IP address under Windows 7).

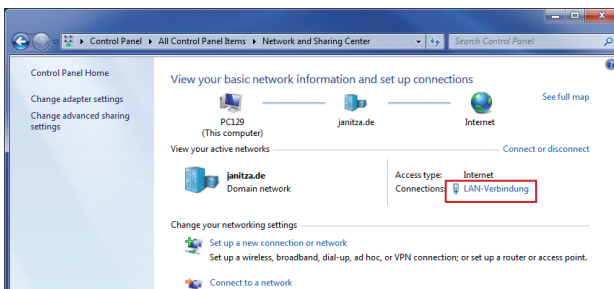


Fig.: Network and Sharing Center

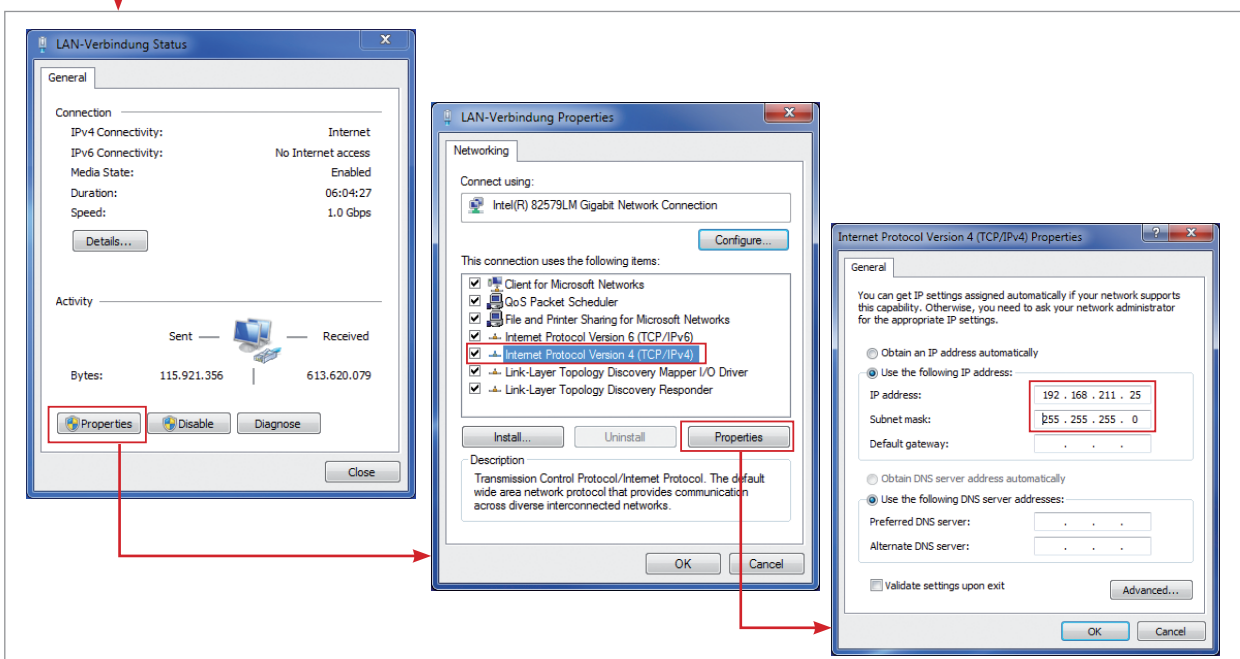


Fig.: Process for defining a fixed IP address under Windows 7.

Insert the device in the GridVis software

- Open the GridVis software and load or create a project.
- Open the "Device" node in the project window and activate the context menu for the "Device" node with a right click of the mouse.
- Select the "Add new device" context menu item (cf. fig. Add new device).

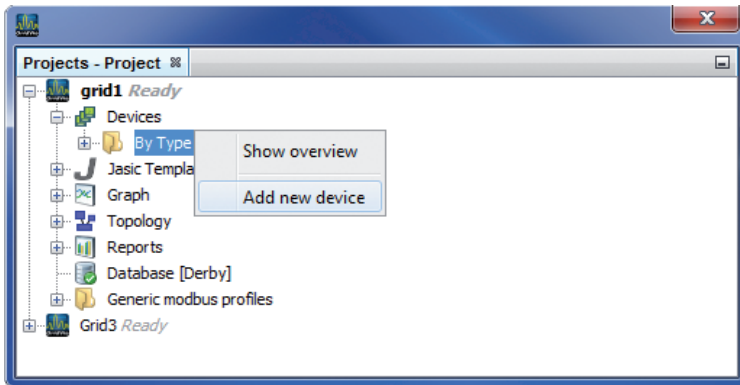


Fig.: "Add new device"

- Select the type of device, listed under the device category, and confirm the selection with "Next".

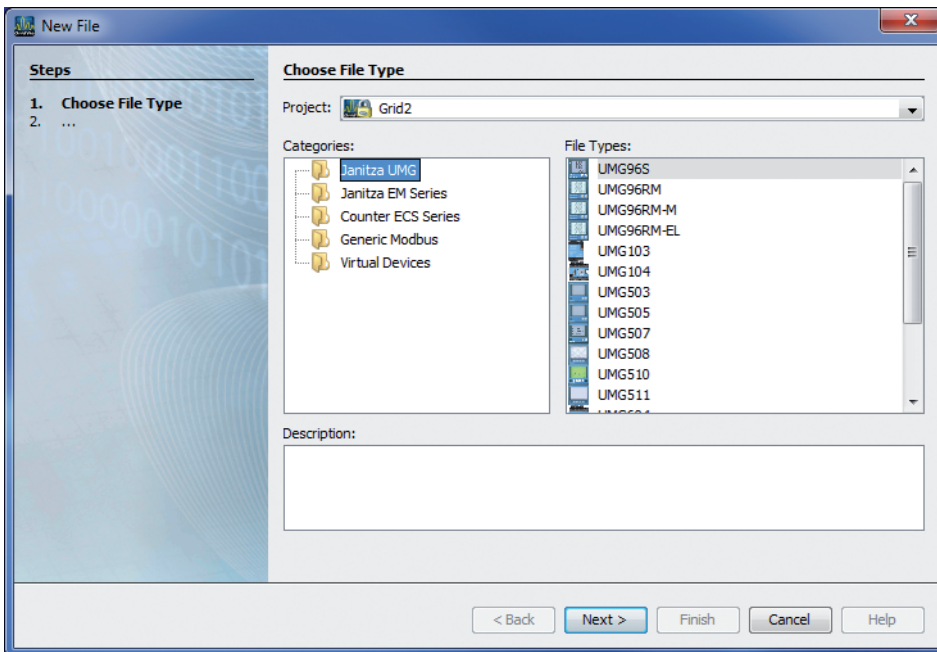


Fig.: "Add new device" - Device selection

- Set the connection type to "TCP/IP" and enter the corresponding device IP address (cf. chapter "Integrate UMG 604 / 605" or "Integrate UMG 508 / 511")

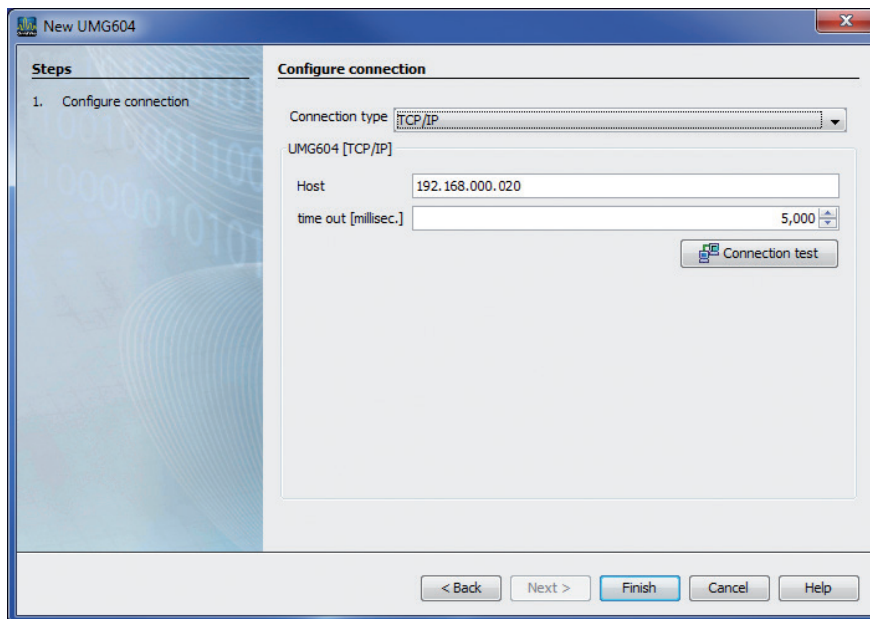


Fig.: Configure device integration

- Carry out a connection test after entering the device IP address. If the connection with the UMG has been established then device information - such as the serial number for example - will be displayed. The device can now be used and configured within the software.

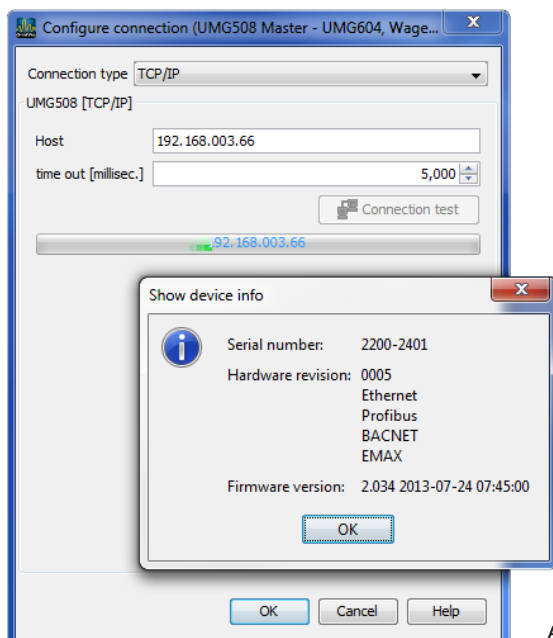


Fig: Successful connection test for device



Further information on using the GridVis software can be found in the internet.

Installing the app

- To install the app, start the GridVis software. Click "Extras / Install app" and select the app via the button "...". Then select the device for installation and choose a program location.

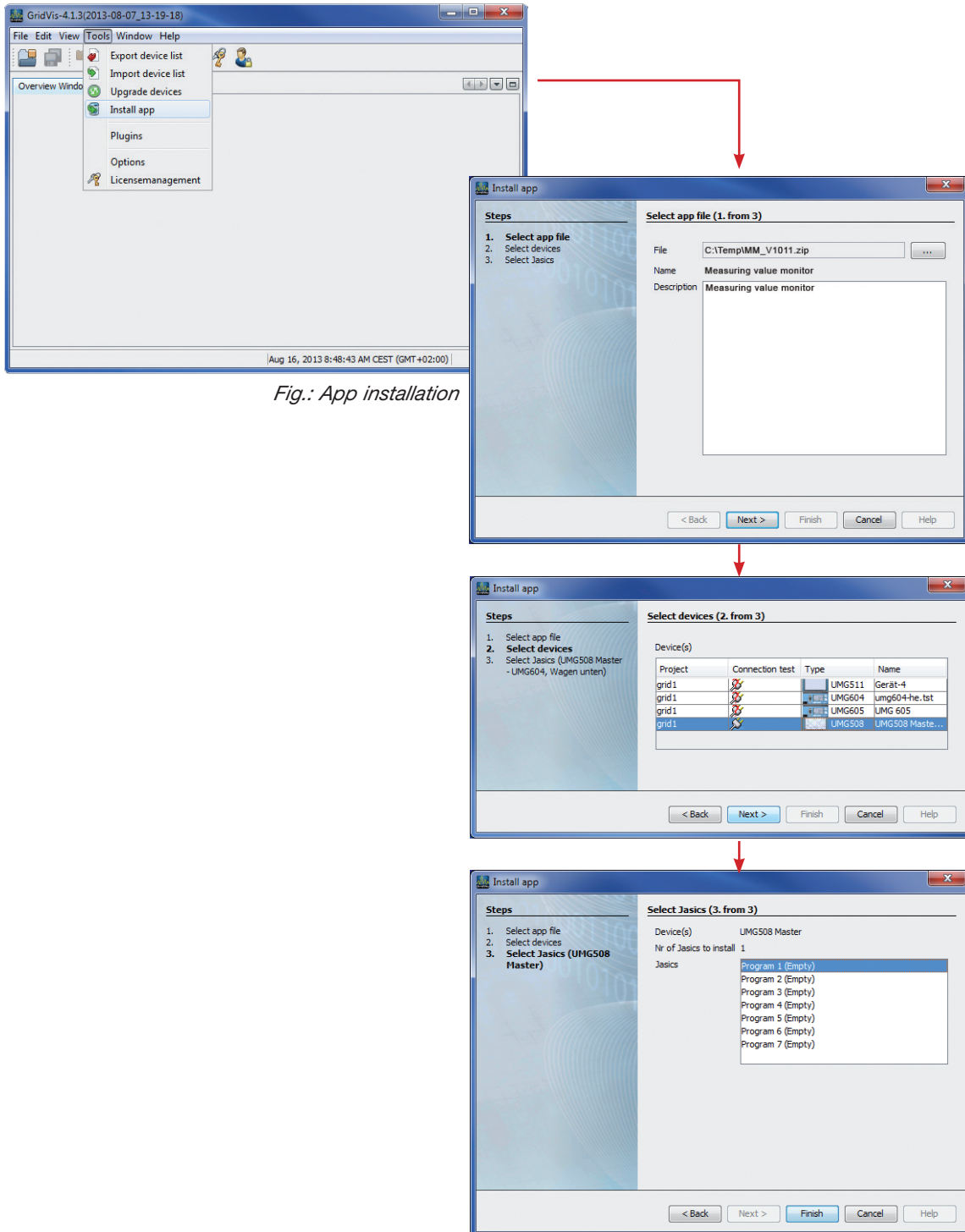


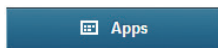
Fig.: App installation

Access the app

- The app can be accessed via the website of the power analyser. The user can access this website by entering the IP-address of the power analyser in a webbrowser.
- For example: the IP-address of the power analyser is 192.168.0.021. If you enter this IP address in your browser and press enter you will access the internal website.



- There you can find the button app, and when you click on it a drop down menu appears with the installed apps.

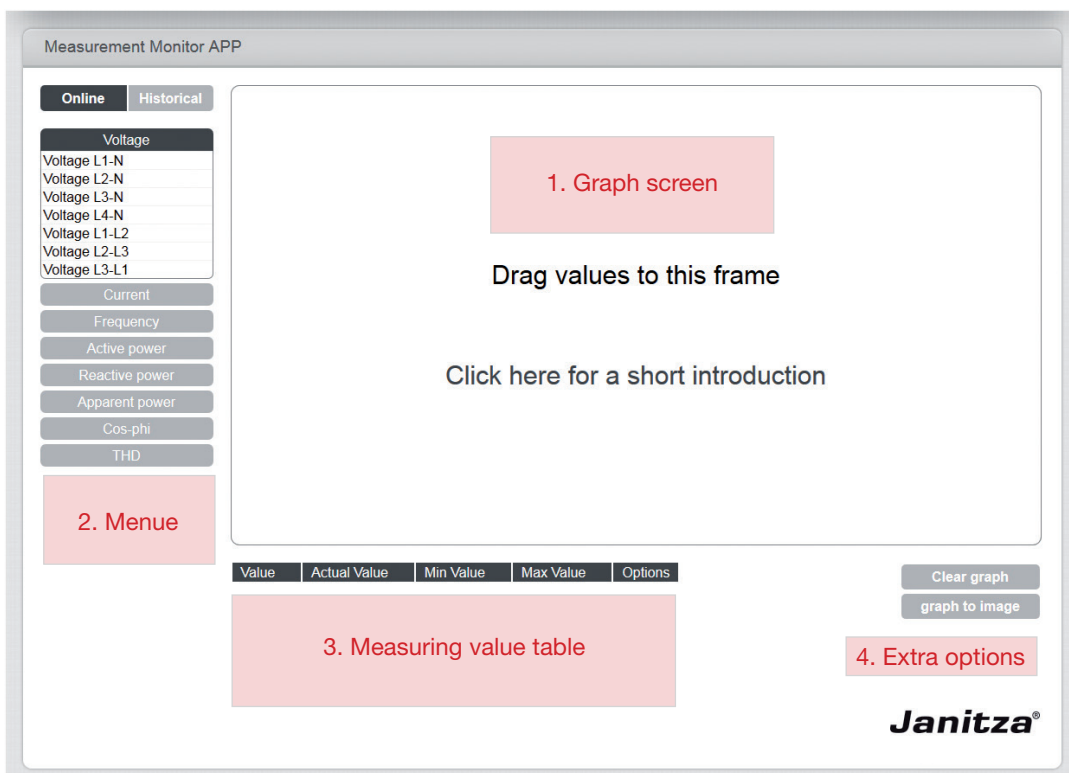


- When you click on measuring value monitor, the app will load.

Basic control app

In this chapter we will explain the basic control of the app.

- Layout app screen
When you open the app, the following screen will appear:



The app is divided in 4 parts:

1. **Graph screen:** You can drag measuring values to this screen. These values will be shown in this graph.
2. **Menu:** In the menu you can either select online or historical. You can also select the measuring value which you want to show in the graph.
3. **Measuring value table:** In this table you can find a quick overview of the measuring values you have added to the graph
4. **Extra options:** Here you can either clear the graph, or save the graph in an image file.

- **Selecting modus**

By selecting a modus you can switch between realtime and historical measurement values. When you switch you will delete the current selection.



Online: Real-time measuring values of the power analyser.

Historical: Historical measuring values which are saved in the internal memory.

- **Showing measuring value in graph (online)**

To show a measuring value in a graph you need to select it from the menu.

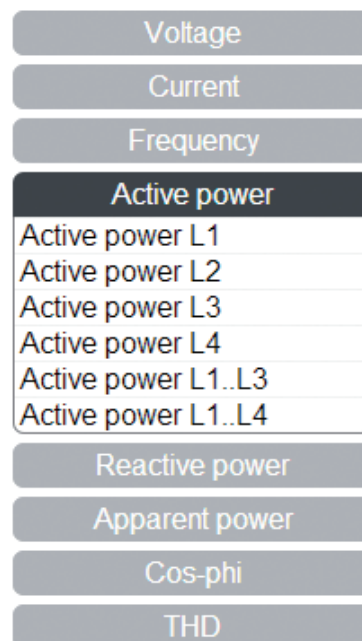
Select measuring value

You can select a measuring value from the menu by opening or closing the tabs. For example, when you need a value from the voltage category you will select "Voltage". After this the menu will open showing all the available values to this category.

Showing the value in the graph

To show a value in the graph, you click on the value and drag it to the graph. The measuring value will be shown in the graph.

It is possible to show up to 6 measuring values or up to 2 measuring units.



- Showing measuring value in graph (historical)

To show a historical measuring value, you first need to select a time range for the measuring value.

To select a begin and end date

You can select a begin and an end date by clicking on one of the buttons. A calendar will appear where you can select the specific beginning and end date.

To close the calendar, simply click next to the calendar and the dates will appear in the button of the start and end date.

When the selected time frame is so big (f.e. more than 2 months) so number of data points which have to be shown will exceed the maximum of 10.000, you have to reduce the time frame.

Selecting measuring values

You can select different measuring values by opening and closing different tabs. The APP recognizes automatically the recorded values in the Janitza Analyser. Every recording group has its own tab.

A recording time of 10 minutes means that every 10 minutes this measuring value is stored in the internal memory of the power analyser.

You can select a measuring value by opening and closing the tabs of the recordings. When you opened a tab, you can see which measuring values are recorded with that specific recording.

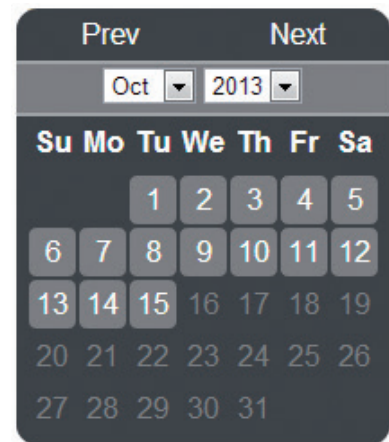
Showing measuring value in the graph

To show a value in the graph, you click on the value and drag it to the graph. The measuring value will be shown in the graph.

It is possible to show up to 6 measuring values or up to 2 measuring units.

- Erase graph

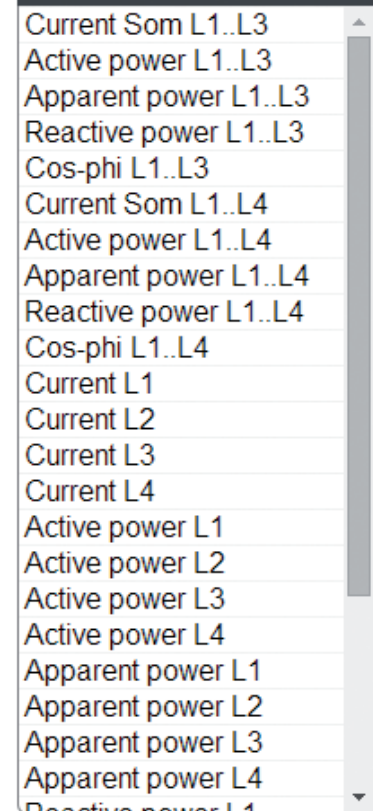
To erase the graph, click on the button "erase graph". You will have a clean graph-screen.



Record: 0 / 10 min

Record: 2 / 60 min

Record: 3 / 10 min



Extended manual

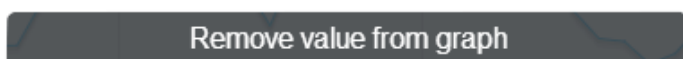
In the next chapter we will take a closer look at the controls of the app

- Delete measuring value from the graph

To delete a measuring value from the graph, select the value from the measuring value table and press the options button next to it.

Value	Actual Value	Min Value	Max Value	Options
Voltage L1-N	231.29 V	228.795 V	233.126 V	▶
Voltage L2-N	231.96 V	229.476 V	233.629 V	▶
Voltage L3-N	233.00 V	229.675 V	233.826 V	▶

Then you click on



The measuring value will be deleted from the graph

- Change colour of the graph

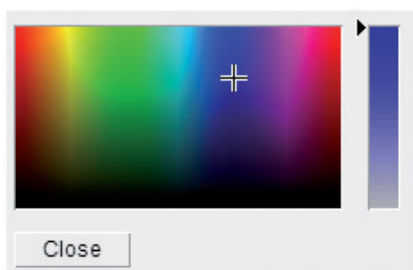
It is possible to change the colour of a specific measuring value in the graph. To do this, select a value from the measuring value table and press the options button next to it.

Value	Actual Value	Min Value	Max Value	Options
Voltage L1-N	231.29 V	228.795 V	233.126 V	▶
Voltage L2-N	231.96 V	229.476 V	233.629 V	▶
Voltage L3-N	233.00 V	229.675 V	233.826 V	▶

Then you click on



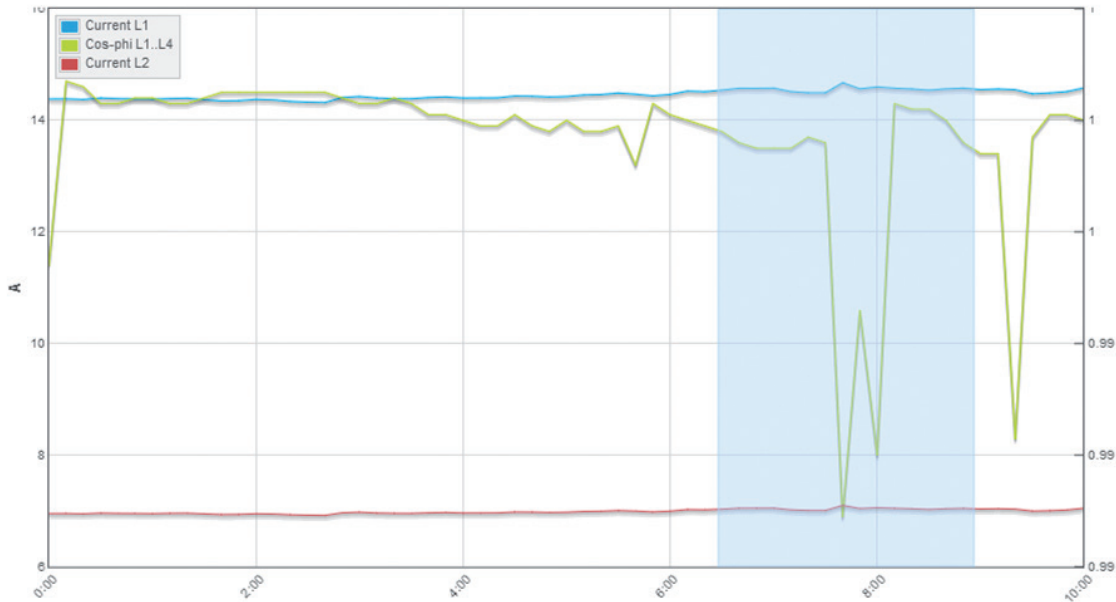
Now you can select the colour you want and press close.



- **Zooming in the graph**
With historical graphs, it is possible to zoom in with the mouse.

Zoom in:

You can zoom in at a specific area in the graph by clicking and dragging an area to the specific part of the graph:



You can repeat this method to zoom in further.

Zoom out:

By clicking once, you can zoom out to the original size of the graph.

- **Export graph**
Via the app it is possible to export the graph to an image. This way you can either print or save the image.

When you press on the button “graph to image” a new frame will open inside your browser.

graph to image

Save image: To save the image on your pc, right click on the image, and select “save image as...”. You can now select a location to where you want to save the graph.

Help

Here you can find the problems which may occur when using the app.

There are no values available in the historical modus

The app can only show measuring values which are stored in the memory of the power analyser. These values can be programmed using the software Gridvis.

Not all the recorded values are shown

The app only shows recording values which have a minimum recording time of 1 minute.

I get the following message: “There is a recording detected with more than 230 variables. The app only will show the first 230 variables.”

The app can only show up to 230 variables in 1 historical recording. To make sure you don't get this message in the future you can change the configuration in the Gridvis software.

I get the message: “U have selected more the 10000 data points. Please change the time period to lower the amount of data points”

The app is limited to 10000 data points per graph line. You have selected a period which exceeds this amount. Please shrink the selected time frame with the calendar function.

Maximal time period which you can display in the graph per recording time:

Recording time of 1 hour:	416 days
Recording time of 15 minutes:	104 days
Recording time of 1 minute:	6 days

It seems that app doesn't work

For an optimal operation please use on of the following browsers:

- Google Chrome, version 30 or higher
- Mozilla Firefox, version 24 or higher
- Microsoft Internet Explorer, version 10 or higher

