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GridVis® software quick guide UMG 605-PRO

Supplement to the user manual and installation manual



User manual:

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1 General

This quick guide to our GridVis® software is a supplement to the user manual and installation manual of the UMG 605-PRO.
The following steps outline the most common connections for communication between PC and device.

First, please read and ensure that you understand the information products that accompanies the product and in particular the safety related information contained therein.

Disclaimer
The observance of the information products for the devices is a prerequisite for safe operation and to achieve the stipulated performance characteristics and product characteristics. Janitza electronics GmbH accepts no liability for injuries to personnel, property damage or financial losses arising due to a failure to comply with the information products. Ensure that your information products are accessible and legible.

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Subject to technical amendments
Information and specifications subject to change. Please inform yourself under www.janitza.com on the latest version of our software.

SAFETY
Please note safety instructions in this document, which are shown as follows and include the following level of danger for our software:

VORSICHT! Refers to dangerous situations which, for example, can lead to property damage from data loss or failures in IT network.

This symbol with the word **NOTE!** describes important information, procedures or handling steps.

2 Establish an Ethernet connection

Connections for communication between PC and device:

1. PC — Ethernet (cross patch cable) — UMG

The device and PC require a static IP address.

2. PC — Patch cable — Switch/ router — Patch cable — UMG

The device and PC require a static IP address.

3. DHCP server — Patch cable — Switch/ router — Patch cable — PC, UMG

The DHCP server automatically assigns IP addresses to the device and PC.

NOTE!
The description of additional communication interfaces can be found in the user manual for your device.



Ethernet connection
Recommendation:
Use at least CAT5 cables!

CAUTION! **Property damage due to incorrect network settings**
Incorrect network settings can cause faults in the IT network!
Find out the correct Ethernet network settings for your device from your network administrator.

3 UMG 605-PRO - PC connection via Ethernet

For the UMG 605-PRO the Ethernet connection is the most common connection for communication between PC and device.

The device has 4 settings for addressing to the Ethernet interface (TCP / IP) in **DHCP** mode:

1. **Static IP address (Addr. 205, content = 0)**
   In networks without a DHCP server, select the network address on the device.
2. **BootP (Addr. 205, content = 1)**
   BootP enables a device to be integrated into an existing network fully automatically. However, BootP is an older protocol and does not provide the scope of functions provided by DHCP.
3. **DHCP client (Addr. 205, content = 2)**
   DHCP makes it possible integrate a device into an existing network automatically without the need for any additional configuration.
4. **Zeroconf (Addr. 205, content = 3)**
   Setting to configure the UMG 605-PRO with the software GridVis®.

The device's default setting is "DHCP client".
On startup, the device automatically obtains the IP address, netmask, and gateway from the DHCP server.

NOTE!
For a detailed description of the device configuration with „Fixed IP address", „BootP", „DHCP Client" or „Zeroconf", please refer to the installation manual or the user manual of your device.

4 Check the IP address of your computer

For further settings and the next steps it is important to check the IP address of your PC and to note this down if necessary.

There are 2 ways to check the IP address of your PC:
1. Via the *"Windows input prompt" (CMD window)*.
2. Via the *"Control panel"*.

Checking the IP address via the *"Windows input prompt"*:
1. Press the Windows key.
2. The *"Start menu"* appears with the search window.
3. Enter the command *"cmd"* in the search window and confirm with the *"Return key"*.
4. The *"Windows input prompt"* appears.
5. Enter the command *"Ipconfig"* and confirm with the *"Return key"*.
6. The IP address, the subnet mask and the standard gateway for your PC appear in the *"Windows input prompt"*.

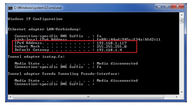


Fig. MS-Windows 7 - Windows input prompt (CMD window)

Checking the IP address via the "Control Panel":
1. Press the Windows button.
2. The *"Start menu"* is displayed.
3. Click *"Control Panel"* in the right menu area.
4. The *"Adjust Computer Settings"* window is displayed.
5. Click *"Network and Sharing Center"*.
6. The *"Network and Sharing Center"* window is displayed.



Fig. MS Windows 7 - "Network and Sharing Center" window

7. Click *"Local area connection"* in the Internet area.
8. The *"LAN-Connection status"* window is displayed.
9. Click *"Details"*.

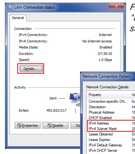


Fig. MS Windows 7 - "LAN-Connection status" window

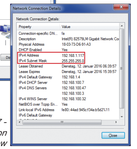


Fig. MS Windows 7 - "Network Connection Details" window

10. The *"Network Connection Details"* window is displayed and shows your PC's IP address and subnet mask.

5 Connection test - computer settings (Ethernet/TCP/IP connection)

A **connection test between your device and the PC is required** to
- integrate your device into the software.
- access the device homepage via a web browser.

Proceed as follows for the connection test:
1. **Ensure** that the
   - first three blocks of the **PC's IP address** (see "Check the IP address of your computer", step 4) match those of the **device IP address.**
   - the last three digits (xxx) of the PC's IP address must be different from the last three digits of the device IP address.
   - subnet mask of your PC corresponds with that of your device.

Example: IP address: 192.168.1.xxx
Subnet mask: 255.255.255.0

2. **Read out the IP address of the device (see Installation manual)**
   1. Switch the device to programming mode
   2. Use buttons 1 and 2 to set address 300 and note the first three characters in the content area.
   3. Proceed in the same way for addresses 301 to 303.
3. **Send the "ping command"**
   1. Press the *Windows key* on your PC.
   2. The Start menu appears with the search window.
   3. Enter the command *"cmd"* in the search window and confirm with the *"Return key"*.
   4. The *"Windows input prompt"* appears.
   5. Enter the command *"ping"* (then a ***space***) with your previously noted device IP address (e.g. *"ping 192.168.1.116"*).
      Note: Leave zeros at the beginning of a block of 3!
   6. Confirm with the *"Return key"*.
   7. If the "ping command" reaches the device, a positive response will be implemented.

NOTE!
Entering the IP address of your device in a web browser (e.g. *"http://192.168.1.116"*) leads to the device homepage and so this checks the connection.

6 Set the static IP address for the PC

In networks without DHCP servers it is necessary to set the IP address and the subnet mask yourself. The gateway address is not required for the configuration.
You require administrator rights for your PC and must set the DHCP communication protocol (DHCP mode) of the device to ***"Static IP adress"*** beforehand (step 3, further information in the installation manual).

Example:
Device IP address: 192.168.1.116
Subnet mask: 255.255.255.0

In this case, set the computer as follows:
IP address: 192.168.1.117
Subnet mask: 255.255.255.0

In order to **allocate an IP address for the PC** e.g. for a direct connection between the PC and your device, please proceed as described up to and including point 8, as described in step 4 **"Checking the IP address via the Control panel"**.

Then proceed as follows:
1. Click the *"Properties"* button in the *"Local area connection status"* window.

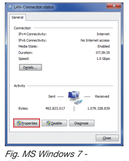


Fig. MS Windows 7 - "Local area connection status" window

2. The *"Local area connection properties"* window appears.

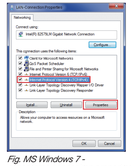


Fig. MS Windows 7 - "Local area connection properties" window

3. Select the *"Internet protocol version 4 (TCP/IPv4)"* option in the *"Local area connection properties"* window and then click the *"Properties"* button.
4. The *"Internet Protocol Version 4 (TCP/IPv4) Properties"* window is displayed.

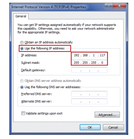


Fig. MS Windows 7 - "Properties of internet protocol version 4 (TCP/IPv4)" window

5. Select the *"Use the following IP address"* option and enter your PC's *"Static IP address"* (and *"Subnet mask"* if necessary).
6. Click "OK".

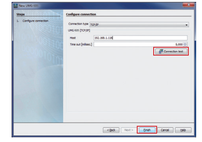
7 GridVis® software settings

Install the GridVis® software on your computer and proceed as follows:

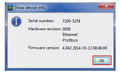
Create new project:
1. In the menu bar, select *"File" > "New project"*.
   If the project already exists, open it by selecting *"File" > "Open project"*.
2. The *"New project"* window is displayed.
3. In step 1, *"Select project"*, click *"Continue"*.
4. In step 2, *"Project path", select the:*
   - *"Project name"*,
   - *"Project path"*,
5. Click *"Finish"*.
6. Your project is displayed on the left in the *"Projects"* window in the work area.

Insert a new device into the project:
1. In the menu bar, select *"File" > "New file"*.
2. The *"New file"* window is displayed.
3. In step 1, *"Select file type"*, select the *"File type"* for your device in the *"Measurement devices"* category.
4. Click *"Next"*.
5. The *"Configure connection"* step is displayed in the window.





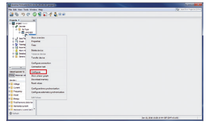
6. In the *"Connection type"* selection list, select *"TCP/IP"* and enter the IP address for your device in the *"Host"* field (see installation manual).
7. Click *"Connection test"*.
8. If the connection test is positive, the *"Display device information"* window with the serial number, hardware revision and firmware version is displayed.
9. Click *"OK"*.

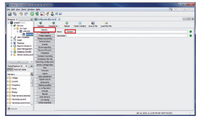


10. Complete the *"Insert new device into the project"* step by clicking *"Finish"*
11. Configure your device (see the following steps).

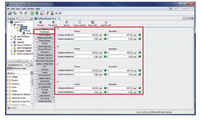
8 GridVis® software - device configuration

Basic settings
1. Right-click to open the context menu for your device:
   - In the *"Projects"* > *"Your project"* > *"Devices"* > *"By device type"* > *"UMG 605"* > *"Device x"* window.

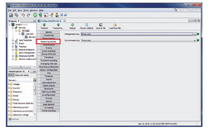


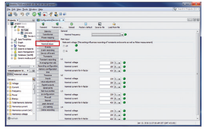


2. Click the *"Configuration"* menu item in the context menu.
3. The *"Configuration [Device x]"* window is displayed in the right half of the work area.
4. Enter your individual device name in the *„Name"* input field in the *"Identity"* menu in the *"Configuration"* window.
5. Enter the voltage and current ratios in the input fields in the *"Transformer"* menu in the *"Configuration"* window.



6. In the selection lists in the *"Connection variants"* menu in the *"Configuration"* window, select the connection variants for voltage and current measurement on your device (see the user manual).



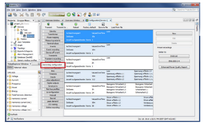


NOTE!
In order to avoid data loss, save your device configuration changes with the *"Transfer"* or *"Transfer to"* buttons!

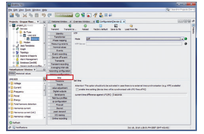
7. In the *"Nominal values"* menu in the *"Configuration"* window, select the nominal frequency in accordance with the network ratios that are present.
   Enter the nominal values for the phases as a reference, in order to detect events (overvoltage/undervoltage and over-current).

9 GridVis® software - recording settings

Under *"Recording configuration"* you can check and configure which recordings the measurement device should save if required. A record holds a measured value or the mean value of the measured value.



In order to be able to compare recordings of transients and events with those from other measurement points, activate the NTP mode under the *"Time"* menu and enter an NTP time server.



NOTE!
The GridVis® device configurations and recording settings represents the basic settings.
The program window shown may, depending on the device, different from the actual display.
Other functions, information and device settings, especially for your device, see the online help of the GridVis® software.

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