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Smart Energy Panel

JPC 100-WEB

Installation instructions

Firmware 1.0.54 and higher

Deutsche Version: siehe Vorderseite

- Installation
- Device settings



User manual:

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1 General

Disclaimer
Compliance with the informational products for the device is a prerequisite for safe operation and attaining the stated performance characteristics and product features. Janitza electronics GmbH assumes no liability for bodily injury, material damage or financial losses which result from disregard of the informational products.
Ensure that your informational products are readily accessible in a legible form.

Additional documentation can be found on our website at www.janitza.com under Support > Downloads.

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Subject to technical changes.
- Make sure that your device matches the installation instructions.
- First read and understand the documents associated with the product.
- Keep the documents associated with the product available for the entire service life and pass them on to any possible subsequent users.
- Find out about device revisions and the associated modifications of the documentation associated with your product at www.janitza.com.

Disposal
Please abide by national regulations! Dispose of individual parts, as applicable, depending on their composition and existing country-specific regulations, e.g. as:
- Electronic waste
- Plastics
- Metals

or engage a certified disposal company to handle scrapping.

Relevant laws, standards and directive used
Please see the declaration of conformity on our website (www.janitza.com) for the laws, standards and directives applied for the device by Janitza electronics GmbH.

2 Safety

Safety information
The installation instructions do not represent a compete set of all safety measures required for the operation of the device.
Special operating conditions can require additional measures. The installation instructions contain information which must be observed to ensure your personal safety and avoid material damage.

ATTENTION
Draws attention to an immediately hazardous situation which, when disregarded, can lead to material or environmental damage.

NOTE
Indicates procedures in which there is no hazard of injury or material damage.

Safety information is marked by a warning triangle
and, in dependence on the degree of hazard, is displayed as follows:

⚠DANGER
Indicates the immediate threat of danger that leads to severe or fatal injury.

⚠WARNING
Indicates a possibly hazardous situation that can lead to severe injury or death.

⚠CAUTION
Indicates a possibly hazardous situation that can lead to minor injury or material damage.

Safety measures
When operating electric devices, it is unavoidable that certain parts of these devices will conduct hazardous voltage. Consequently, severe bodily injury or material damage can occur if they are not handled properly:
- Before making connections to the device, ground the device by means of the ground wire connection, if present.
- Hazardous voltages can be present in all circuitry parts that are connected to the power supply.
- There can still be hazardous voltages present in the device even after it has been disconnected from the supply voltage (capacitor storage).
- Do not exceed the limit values specified in the user manual and on the rating plate! This must also be observed during testing and commissioning!
- Take note of the safety and warning notices in the documents that belong to the device!

Qualified personnel
To avoid bodily injury and material damage, only qualified personnel with electrical training are permitted to work on the device who have knowledge of:
- the national accident prevention regulations,
- safety technology standards,
- installation, commissioning and operation of the device.

Intended use
The device is:
- Intended for installation in control cabinets and small installation distributors. See the technical specifications for the mounting orientation.
- Not intended for installation in vehicles! Use of the device in non-stationary equipment constitutes an exceptional environmental condition and is only permissible by special agreement.
- Not intended for installation in environments with harmful oils, acids, gases, vapors, dusts, radiation, etc.

Safe and trouble-free operation of the device presupposes proper transport, proper storage, set-up and assembly as well as operation and maintenance.

⚠DANGER
Electrical voltage!
Severe bodily injury or death can result from:
- Touching bare or stripped leads that are energized.
- Device inputs that pose a hazard when touched.

Switch off your installation before commencing work! Check to be sure it is de-energized!

3 Mounting

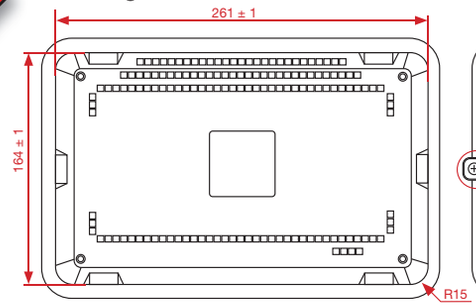

Fig. 1: Cutout dimensions for JPC 100-WEB

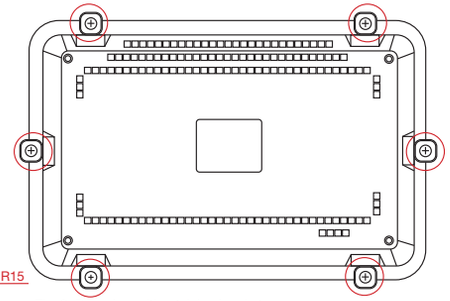

Fig. 2: Rear view with retaining brackets

- Cutout dimensions: 261 ±1 mm x 164 ±1 mm (10.27 ± 0.04 in x 6.46 ± 0.04 in)
- Suitable for installation in walls with a thickness of max. 3 mm (0.12 in)

NOTE

More detailed information on the functions, data and mounting can be found in the user manual.

⚠CAUTION

Material damage due to disregard of the mounting instructions.
Disregard of the assembly instructions can damage or destroy your device.
- **Observe the following description for mounting and in particular the maximum tightening torque of the retaining brackets of the device (see Technical data).**
- **Provide adequate air circulation in your installation environment and cooling, as needed, when the ambient temperatures are high. Follow the general ESD protective measures.**

Mount the device on a flat, clean and burr-free surface using the retaining brackets included in the scope of delivery. Uneven surfaces can cause damage to the display and lead to dust and water penetration!
Proceed as follows during mounting:

1. Place the device into the prepared installation cutout from the front.
2. Insert the retaining brackets into the openings on the device provided for this purpose.

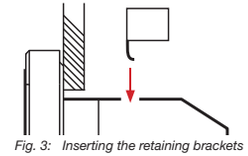

Fig. 3: Inserting the retaining brackets

3. Push the retaining brackets towards the back until they are flush with the back of the opening.

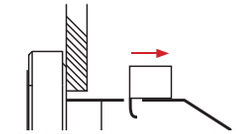

Fig. 4: Pushing the retaining brackets towards the back

4. Insert the fastening screws included in delivery into the retaining brackets.

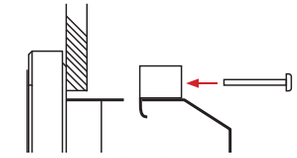

Fig. 5: Inserting the fastening screws

5. Fasten the device by tightening the fastening screws.
Observe the tightening sequence: First the upper, then the middle and then the lower retaining brackets. The maximum tightening torque is 0.25 to 0.3 Nm (2,21 to 2,66 lbf·in)!

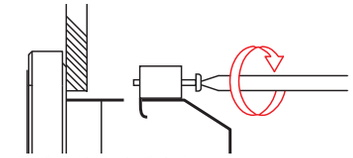

Fig. 6: Tightening the fastening screws

4 Connection

The JPC 100-WEB is connected via Ethernet to the gateway devices / master devices of up to three bus systems each with up to 30 slave devices connected:

JPC 100-WEB

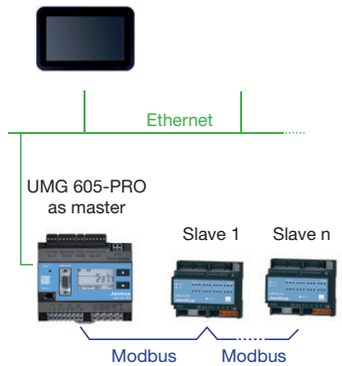

Fig. 7: Bus topology with a UMG 605 as master and JPC 100-WEB connected

In addition, the JPC 100-WEB is itself able to function as a master in a bus system via the RS-485 interface:

JPC 100-WEB as master

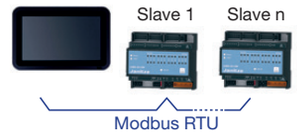

Fig. 8: JPC 100-WEB as the master in the bus system

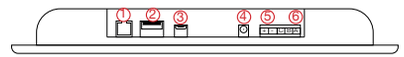

Fig. 9: JPC 100-WEB from below

1 Ethernet
2 USB 2.0 type A
3 Micro USB
4 12 V supply voltage (jack connection)
5 24 V supply voltage (terminal)
6 RS-485 (3-pole)

HINWEIS

The JPC 100-WEB has no gateway function.

5 Start screen/user interface

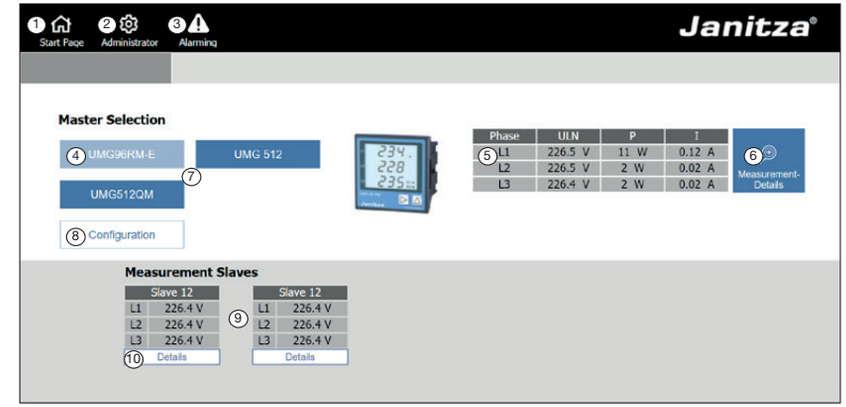

Fig. 10: Start screen

1 The Start Page menu item
2 The System menu item
3 The Alarming menu item
4 Selected master device
5 Measured values of the selected master device
6 Accessing further measured values (master)
7 Overview of all master devices
8 Opening the configuration menu
9 Measured value overview of the slave devices
10 Accessing further measured values (slave)

6 Log in

Log into the user interface in order to be able to make changes to the system settings and the connected measurement devices.

The actions available depend on the user role of the logged in user. Available user roles:

- Read access
- Operator
- Administrator

The role of *Administrator* is assigned to the user of the same name and is intended exclusively for administrative tasks.

User: admin
Password: 1234

The password of the Admin user can be changed via: **System > User Settings > User Management > Admin Password**

1. Open the system settings.



2. Open the user settings.
3. Enter your login data.

Once correct login data have been entered, the information under *Current User* is updated in accordance with the logged in user role.

7 System settings

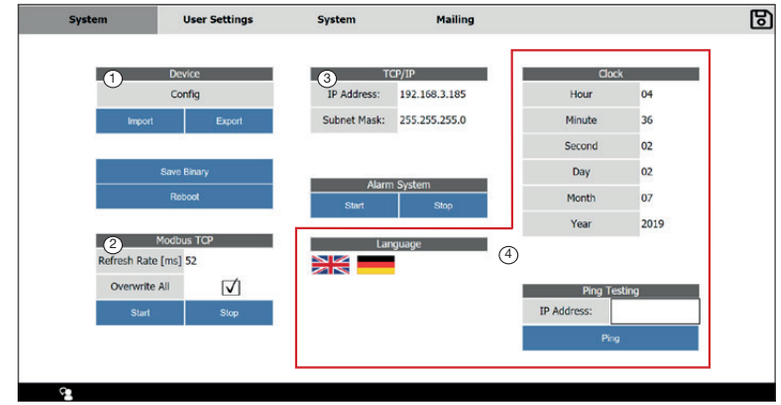

Fig. 11: System settings

1 System settings and device configurations can be exported and imported here (for more information, see the user manual).
2 Overwriting of the device configuration can be enabled here and the communication via Modbus/TCP can be enabled/disabled as well.
3 The device offers the TCP/IP modes *DHCP* and *static* (fixed IP address).
4 Select the menu language and configure the time settings in this area.

8 Modbus/TCP and TCP/IP

Modbus/TCP
The Modbus TCP area displays the sampling rate (refresh rate) at which the JPC 100-WEB queries the measured values of the connected bus systems.

The number of measurement devices connected influences the refresh rate.

Use the *Overwrite All* checkbox to enable the overwriting of the device configurations of all connected slave devices.

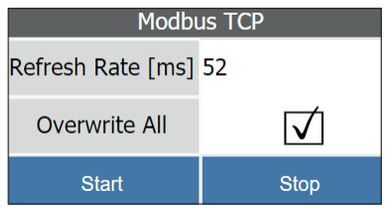

Fig. 12: Modbus/TCP settings

TCP/IP
The device offers the communication modes *dhcp* and *static* (fixed IP address). The factory setting is DHCP.

Changing TCP/IP settings:

1. Open the hardware settings by pressing the *Change* button.
2. Open the Ethernet settings in the *Wireless & Networks* area.

Enable or disable the interface using the *Ethernet* switch.
Touching the Ethernet IP Mode entry switches the setting between *DHCP* and *static*.

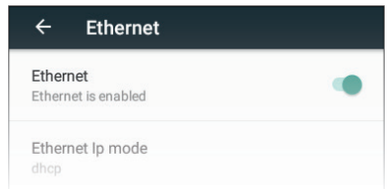

Fig. 13: Ethernet settings

9 Device configuration (example of a UMG 20 CM)

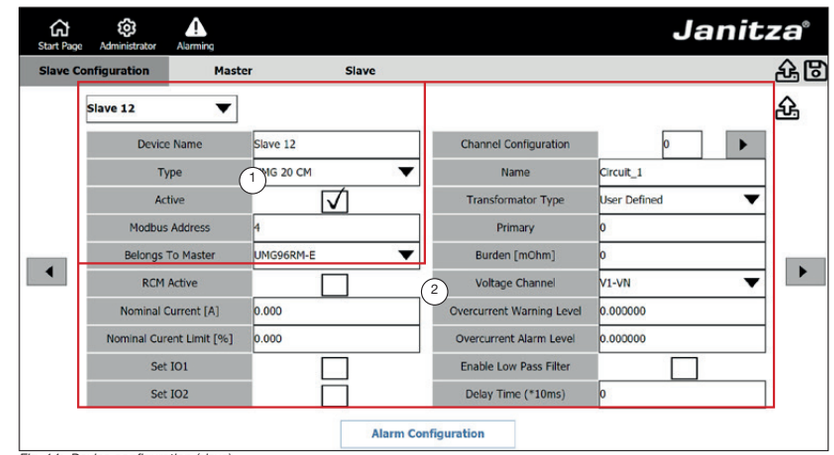

Fig. 14: Device configuration (slave)

Log into the user interface in order to be able to configure the measurement devices connected to the JPC 100-WEB.

Use **Start Page > Configuration** to open the configuration of the devices.

The following slave devices can be configured via the JPC 100-WEB:

- UMG 20 CM
- 20CM-CT6
- UMG 96 RM
- UMG 96 RM-E
- UMG 96 RM-EL
- UMG 96 RM-P
- UMG 96 RM-PN
- UMG 96 RM-CBM
- UMG 96 PA
- UMG 103 CBM
- UMG 604-PRO
- UMG 605-PRO
- UMG 509-PRO
- UMG 512-PRO
- UMG 806
- RCM 202-AB
- RCM 201-ROGO
- MID B2x

To access a measurement device, configure the connection settings (Fig. 14 ①)

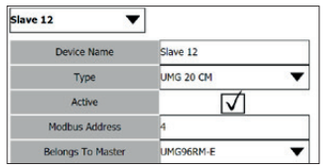

Fig. 15: Connection settings

UMG 20 CM configuration (example)
The configuration options (Fig. 14 ②) depend on the respective slave device.

1. Open the configuration.
2. Use the tabs to go to the configuration menu for slave devices.
3. Select the slave device you wish to edit via the drop-down menu.
4. Select the measurement channel to be configured.
5. Make the desired configurations on the device (for more information on configuration of the UMG 20 CM, please see the usage information).
6. **Optional:** Transfer the configurations to all channels of this slave device using the *Actions for this UMG* button.
7. Save the configurations with the *Save* button.
8. Use the menu bar to go to the settings.
9. Enable the function *Overwrite All* in the *Modbus/TCP* area.
10. Start the Modbus communication.

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10 Technical data

General	
Net weight	approx. 900 g (1.984 lb)
Dimensions	**w = 282 mm (11.10 in),** **h = 184 mm (7.24 in),** **d = 35 mm (1.38 in)**
Backlight (LED)	Brightness: 450 cd/m² (41.8 cd/ft²)
Chip	Rockchip RK3288 Quad-Core CPU 1.6 GHz
Main memory	2 GB DDR3 SDRAM
Memory capacity	8 GB eMMC
Cutout dimensions	w = 261 mm (10.28 in) ±1 mm (0,04 in) h = 164 mm (6.46 in) ±1 mm (0,04 in)
Tightening torque for the retaining brackets	0,25 to 0,3 Nm (2,21 to 2,66 lbf·in)
Installation in wall thickness	max.3 mm (0.12 in)

Interfaces	
USB	• USB 2.0 type A • Micro USB
Ethernet	• 1x RJ45 • Transmission rate 10/100 Mbit/s
RS-485	• Protocol: Modbus RTU/master • 3-lead connection with C (GND), B, A • Transmission rate[1]: 9.6 kbps, 19.2 kbps, 38.4 kbps, 57.6 kbps, 115.2 kbps, 230.4 kbps

Display	
Type	TFT color
Diagonal	10”
Resolution	1024 x 600 pixels
Touchscreen	Capacitive multi-touch

Electrical properties	
Supply voltage	• 24 VDC (via terminal connection) • 12 VDC (via jack connection)
Power consumption	max. 13 W

Environmental conditions	
Protection level to EN 60529	IP53 on the front, IP20 on the back
Operating temperature	0 (32 °F) to 35 °C (195 °F)
Storage and transport temperature	0 (32 °F) to 70 °C (158 °F)
Air humidity	10 to 90%, non condensing

1) Ensure a uniform baud rate in the bus system.

ATTENTION

To be able to display the RCM values of the UMG 509, the measurement device requires at least firmware 5.009.