

Smart Energy Panel JPC 100-WEB

User manual and technical specifications



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1. General

1.1 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.

1.2 Copyright notice

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All rights reserved.

Any reproduction, processing, distribution or other use, in whole or in part, is prohibited.

All trademarks and the rights arising from them are the property of the respective owners of these rights.

1.3 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.de.

1.4 Conformity declaration

The laws, standards and directives applied by Janitza electronics GmbH for the device can be found in the declaration of conformity at www.janitza.de.

1.5 Comments on the manual

Your comments are welcome. If anything in this manual seems unclear, please let us know and send us an **email** at:

info@janitza.de

2. Safety

Please read this user manual and all other publications that must be consulted when working with this product. This applies in particular to installation, operation and maintenance.

Please observe all safety regulations and warnings. If notices are disregarded, this can lead to personal injury and/or damage to the product.

Any unauthorized modification or use of this device beyond the specified mechanical, electrical or other operating limits can cause personal injury and/or damage to the product.

Any such unauthorized modification constitutes "misuse" and/or "negligence" under the product's warranty and thus voids the warranty for any possible resulting damage.

Concerning the user manual:

- Read it before using the device.
- Retain it for the entire service life of the product and keep it at hand ready for reference.

When using the device, also observe the legal and safety regulations that are applicable for the respective use case.

2.1 Safety information

NOTE

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

ATTENTION

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

**WARNING****Electrical voltage!**

Severe physical injury or death can result from dangerous voltages.

Therefore please abide by the following:

- **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.**
- **Equip stranded conductors with wire ferrules!**
- **Only connect screw terminals with the same number of poles and the same type.**
- **Switch off the installation before commencing work!**

ATTENTION**Material damage due to security vulnerabilities in programs, IT networks and protocols.**

Security vulnerabilities can lead to data misuse and faults and even the standstill of your IT infrastructure.

To protect your IT system, network, data communications and measurement devices:

- **Inform your network administrator and/or IT representative.**
- **Always keep the meter firmware up to date and protect the communication to the meter with an external firewall. Close unused ports.**
- **Take protective measures against viruses and cyber attacks from the Internet, e.g. through firewall solutions, security updates and virus protection programs.**
- **Close security vulnerabilities and update or renew existing protection for your IT infrastructure.**

2.2 Safety measures

When operating electric devices, it is unavoidable for certain parts of these devices to conduct hazardous voltage. Consequently, severe bodily injury or material damage can occur if they are not handled properly.

2.3 Qualified personnel

This device must be operated and maintained exclusively by qualified personnel.

Skilled personnel are persons who, on the basis of their relevant training and experience, are capable of identifying risks and avoiding possible hazards that the operation or maintenance of the device might cause.

**WARNING****Risk of injury due to improper use**

If the device is not operated in accordance with the documentation, protection is no longer ensured and the device can be dangerous.

3. Product description

3.1 Scope of performance

The device is intended for:

- Visualization of current and voltage measuring devices in bus systems.
- Measured value monitoring of connected Janitza measurement devices.
- Configuration of connected slave devices.

You can connect up to 3 Janitza master devices and up to 30 Janitza slave devices to the JPC 100-WEB and manage them via the touchscreen. You can retrieve measured values from all integrated devices and configure slave devices.

The slave devices are integrated either via the gateway function of the master devices or directly via Modbus RTU with the JPC 100-WEB as the master device.

ATTENTION

To be able to display the RCM values of the UMG509, the measurement device requires at least firmware 5.009.

3.2 Operating concept

You can operate the device in the following ways:

- **Directly on the device** via the display with the touchscreen.
- Via the Ethernet interface with a connected PC.

This operating manual only describes the operation of the device via the touchscreen.

3.3 Incoming goods inspection

The prerequisites for trouble-free and safe operation of this device include proper transport, storage, setup and assembly, as well as proper operation and maintenance.

Exercise due caution when unpacking and packing the device, do not use force and only use suitable tools.

Check the devices for flawless mechanical condition by visual inspection.

Check the scope of delivery for completeness before you start installing the device.

If it can be assumed that safe operation is no longer possible, the device must be taken out of operation immediately and secured against unintentional start-up. It can be assumed that safe operation is no longer possible if the device, for example:

- has visible damages,
- no longer functions despite an intact power supply,
- was subjected to extended periods of unfavorable conditions (e.g. storage outside of the permissible climate thresholds without adjustment to the room climate, condensation, etc.) or transport stress (e.g. falling from an elevated position, even without visible external damage, etc.).

3.4 Scope of delivery

Quantity	Part. no.	Designation
1	15.06.358	JPC 100-WEB
1	33.03.381	Installation instructions
1		Mounting kit

3.5 Intend use

The device is:

- Intended for installation in control cabinets.
- 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.

3.6 Supported measuring devices

The **JPC 100-WEB** supports the configuration of the following measuring devices:

Measuring device	Master device	Slave device
UMG 96 RM-E	✓	✓
UMG 96-PA	✓	✓
UMG 604-PRO	✓	✓
UMG 605-PRO	✓	✓
UMG 509-PRO	✓	✓
UMG 512-PRO	✓	✓
UMG 20 CM		✓
UMG 96 RM		✓
UMG 96 RM-EL		✓
UMG 96 RM-P		✓
UMG 96 RM-PN		✓
UMG 96 RM-CBM		✓
UMG 103-CBM		✓
Zähler MID B2x		✓

Table of measuring devices supported by the JPC 100-WEB

4. Mounting

WARNING

Risk of injury due to 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.

Therefore please abide by the following:

- **Disconnect your system from the power supply before starting work!**

CAUTION

Material damage due to disregard of the installation instructions!

Disregard of the installation instructions can damage or destroy your device.

Observe the information on the mounting orientation in the sections "Mounting" and "Technical Data".

4.1 Installation location

The device is suitable for installation in stationary and weatherproof switchboards indoors.

4.2 Mounting orientation

The break-out dimension in the switchboard is 261 ± 1 mm x 164 ± 1 mm (10.27 ± 0.04 in x 6.46 ± 0.04 in) with a wall thickness of max. 3 mm (0.12 in).

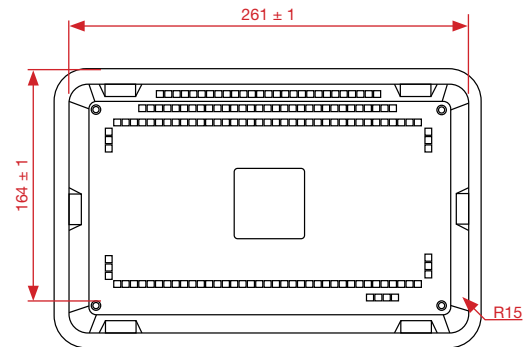


Fig.1: Mounting orientation of the JPC 100-WEB

4.3 Securing

The device must be mounted on a flat, clean and burr-free surface by means of the retaining brackets (Fig.2) included in delivery. Unevenness can lead to damage of the display and to the entry of dust and water.

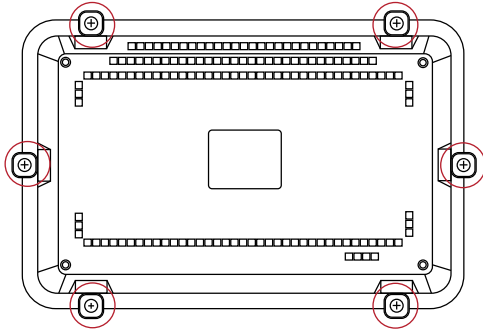


Fig.2: Rear view with retaining brackets

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.

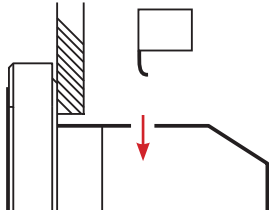


Fig.3: Inserting the retaining brackets

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

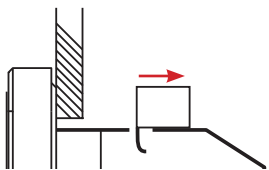


Fig.4: Pushing the retaining brackets towards the back

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

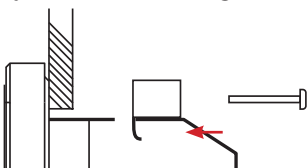


Fig.5: Inserting the fastening screws

5. Secure the retaining brackets by tightening the fastening screws.

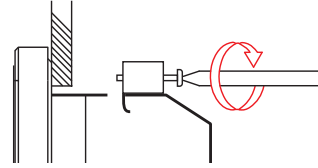


Fig.6: Securing the retaining brackets

ATTENTION

Material damage due to disregard of the installation instructions.

Excessive tightening of the retaining brackets can damage the device.

- **Tighten the retaining brackets evenly.**
- **Follow this sequence when tightening: first the top, then the middle, then the bottom brackets.**
- **Max. torque: 0.25 - 0.3 Nm.**

5. Installation

WARNING

Risk of injury due to 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.

Therefore please abide by the following:

- **Disconnect your system from the power supply before starting work!**

5.1 Circuit breaker

When installing the device in a building, provide a suitable circuit breaker for the supply voltage in order to disconnect the device from the power supply.

- Install the circuit breaker near the device and within easy reach of the user.
- Mark the circuit breaker as the disconnecting device for this measuring device.

5.2 Supply voltage

A supply voltage is required to operate the device. Please refer to the technical data for the type and level of supply voltage for your device.

The following power supply options are available:

- 12 V via jack connection
- 24 V via plug-in terminals

Before applying the supply voltage, make sure that the supply voltage corresponds to the specification in the technical data. (see section 11. on page 30)

If no indication appears on the display after connecting the supply voltage, check whether the supply voltage is within the nominal voltage range.

5.3 Connection to a master device

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

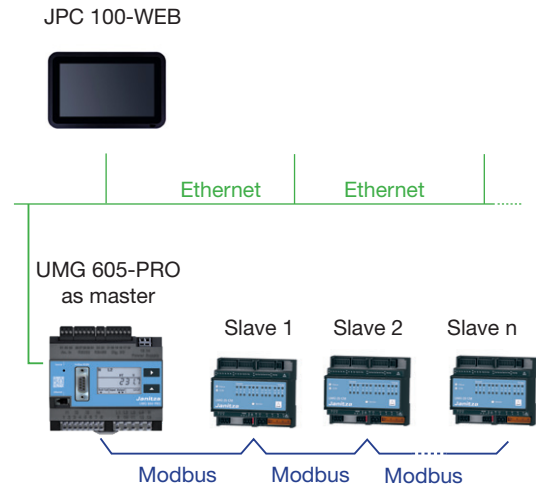


Fig.7: Bus topology with a UMG 605 as master and JPC 100-WEB connected

5.4 Connection as a master device

In addition, the JPC 100-WEB is itself able to function as a master in a bus system via the RS485 interface.

JPC 100-WEB as master

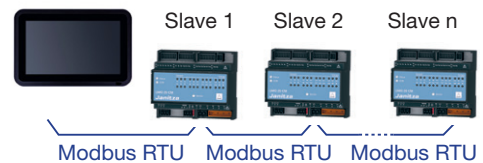


Fig.8: Bus topology with the JPC 100-WEB as the master

6. Introduction to operation

To access the measurement devices via the user interface, they must be connected (described in 5. on page 12) and integrated (described in 9. 1. on page 24 and 9. 2. on page 26).

The JPC 100-WEB user interface is divided into three menus: *Start Page*, *Settings* and *Alarming*. These can be called up via the corresponding button in the menu bar (②).

The screenshot shows the Janitza JPC 100-WEB user interface. At the top, there is a menu bar with icons for 'Start Page', 'Administration' (1), and 'Alarming' (2). The main content area is divided into two sections: 'Master Selection' and 'Measurement Slaves' (5).

In the 'Master Selection' section, 'Master RTU' (3) is selected, showing a 'UMG 96 RM-E' device. A 'Measurement-Details' table (4) displays the following data:

Phase	ULN	P	I
L1	1.15 MV	57.0 kW	109 mA
L2	231 V	2.29 W	21.8 mA
L3	231 V	2.36 W	21.9 mA

In the 'Measurement Slaves' section, three tables show data for 'UMG 96 RM-PN', 'UMG 96 RM-P', and 'Slave 3':

UMG 96 RM-PN		UMG 96 RM-P		Slave 3	
L1	231 V	L1	231 V	L1	231 V
L2	231 V	L2	231 V	L2	231 V
L3	231 V	L3	231 V	L3	231 V

Fig. 09: Start page

- 1 Settings menu (depending on the user role, this menu is labeled *Administrator*, *Read only* or *Operator*)
- 2 Menu bar
- 3 Selected master device
- 4 Measured value overview of the selected master device
- 5 Overview of slave devices

6.1 Start page

The start page (Fig. 09) shows an overview of all integrated devices that is structured as follows:

- Overview of the master devices in the upper area. Optionally, a measured value overview of the selected master device is displayed at this location.
- Tabular measured value overview of the slave devices assigned to the selected master device in the lower area.

6.3 Log in

Log in to the interface to make changes to the system settings and the configuration of the devices and alarms.

Open the log-in window via the *Settings* (Fig. 09 ①) and then the *User settings* tab.

Once you have entered valid login data in the login window, you are automatically logged in to the interface.

For more information, see 7.2 Users (login to the system) on page 19.

<p>Master Selection</p> <p>Master RTU</p> <p>Master TCP/IP 2</p>	<p>Select the respective master device using the names of the master devices.</p>
<p>Measurement-Details</p> <p>Details</p>	<p>Use the Measurement -Details/Details buttons to retrieve further measured values of the respective device (the measured values displayed depend on the device type). For master devices you can hide the measured value overview on the start page using the configuration options.</p>
<p>Configuration</p>	<p>Open the configuration menu of the selected master device with the Configuration button.</p>

6.2 Remote access

To access JPC 100-WEB from a PC via the Ethernet connection, proceed as follows:

1. Open a browser on the PC.
2. Enter the following in the address line: `http://[IP address of the JPC 100-WEB]:8080/jpc.html`

For an explanation of how to determine the IP address of your JPC 100-WEB, see section 7.1.3.

7. Settings

7.1 System

Use the *System* tab to configure the basic settings of the JPC 100-WEB such as interfaces, time setting or language. The menu is divided into the areas *Device*, *Modbus*, *TCP/IP*, *Alarm System*, *Language*, *Clock* and *Ping testing*.

You can access the system settings via the *Settings* menu and then the *System* tab.

Fig. 10: System settings

- 1 Currently selected tab
- 2 Tab overview for settings menus
- 3 System settings with areas

7.1.1 Device

The *Device* area provides you with the option of importing/exporting the settings and of restarting the device.



Fig. 11: File system

Exporting configuration

You can export the settings of the JPC including all device configurations. This can be useful to create a backup of the settings or to transfer the configurations to other JPC 100-WEB devices.

Use the *Export* button to save the configuration file of the JPC 100-WEB in the file system. The storage location is displayed in the subsequent pop-up window.

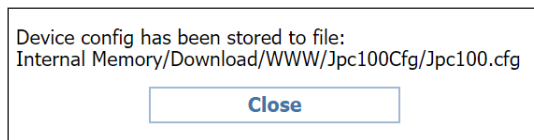


Fig. 12: The "Export device configuration" pop-up window

Proceed as follows to transfer the configuration file to an external storage medium:

1. Connect a suitable, external storage medium to the USB 2.0 interface of the JPC 100-WEB.
2. Use the *Open File Explorer* (Fig. 10) button to open the file system.

3. Navigate to the storage location of the configuration file.
4. Touch the configuration file until the context menu opens.
5. Select the option *Copy*.
6. Navigate to the desired storage location on the external storage medium.
7. Paste the file here using the *Editor* (②).

Importing configuration

To import a configuration file, it must be available on a USB flash drive.

1. Connect the USB flash drive to the USB 2.0 interface of the JPC 100-WEB.
2. Use the System Settings to open the file explorer.
3. Navigate to the storage location of the configuration file on the storage medium.
4. Copy the configuration file (described in section „Exporting configuration“.)
5. Navigate to the folder *Internal Memory/Download/WWW/Jpc100Cfg*.
6. Paste the file here using the *Editor*.
7. Return to the system settings using the *Back* (③) button.

7.1.2 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 meters connected influences the *Refresh Rate*.

Use the *Overwrite All* checkbox to enable the overwriting of the device configurations of all connected slave devices. The configuration is only transferred if this function and the Modbus communication are activated.

Modbus TCP	
Refresh Rate [ms]	3
Overwrite All	<input type="checkbox"/>
Status	✓
Start	Stop

Fig. 13: Modbus TCP settings

7.1.3 TCP/IP

The TCP/IP area shows the current IP address and subnet mask of the JPC 100-WEB.

TCP/IP	
IP Address:	192.168.3.225
Subnet Mask:	255.255.255.0
Change	

Fig. 15: TCP/IP settings

DHCP is active ex works, which means the device is assigned an IP address dynamically when it is connected to a network.

Changing IP-settings

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

You can activate/deactivate the interface using the *Ethernet* toggle button.

Pressing the *Ethernet Ip mode* entry switches the setting between DHCP and static (fixed IP address).

Use the *Back* button (Fig. 11 ③) to return to the system settings.

Ethernet	
Ethernet	<input checked="" type="checkbox"/>
Ethernet is enabled	
Ethernet Ip mode	dhcp
IP address	192.168.3.193

Fig. 14: Ethernet settings

ATTENTION

Material damage due to incorrect network settings.

Incorrect network settings can cause faults in the IT network.

Consult your network administrator for the correct network settings for your device.

7.1.4 NTP / Clock

The time for the JPC 100-WEB is either set manually or obtained from an NTP server.

NTP stands for *Network Time Protocol* which is a protocol for time synchronization of devices in a network.



Fig. 16: Change the NTP settings

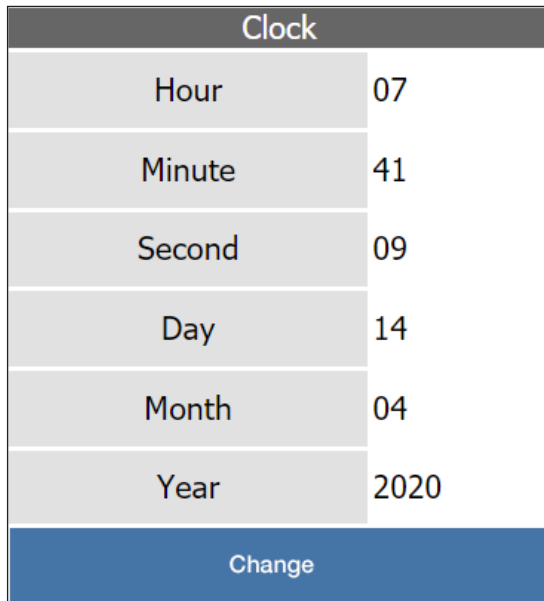


Fig. 17: Time and date settings

Changing settings

Press the *Change* button in the *NTP* or *Clock* area to open the time settings (Fig. 19).

Here you can perform the following actions by touching the corresponding entry:

- Select between automatic and manual time and date setting.
- Select between automatic and manual time zone.
- Change the NTP server.
- Change the time format (12h/24h)

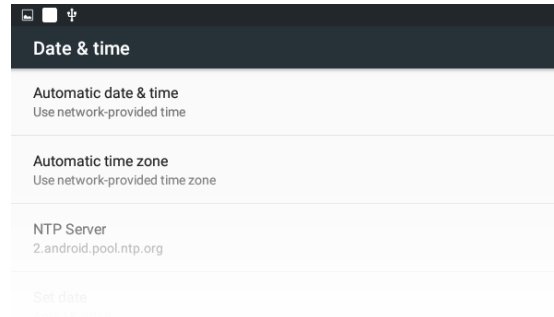


Fig. 19: Change the time and date settings

7.1.5 Ping testing

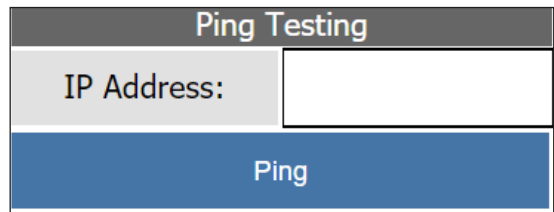


Fig. 18: Ping testing

In the *Ping testing* area, you can ping an IP address to test if the JPC 100-WEB has access to it.

To do so, enter the IP address in the text field and then click the *Ping* button.

The test may take a few seconds.

7.2 Users (login to the system)

Use the *User Settings* tab to log in/out on the system or to change the user.

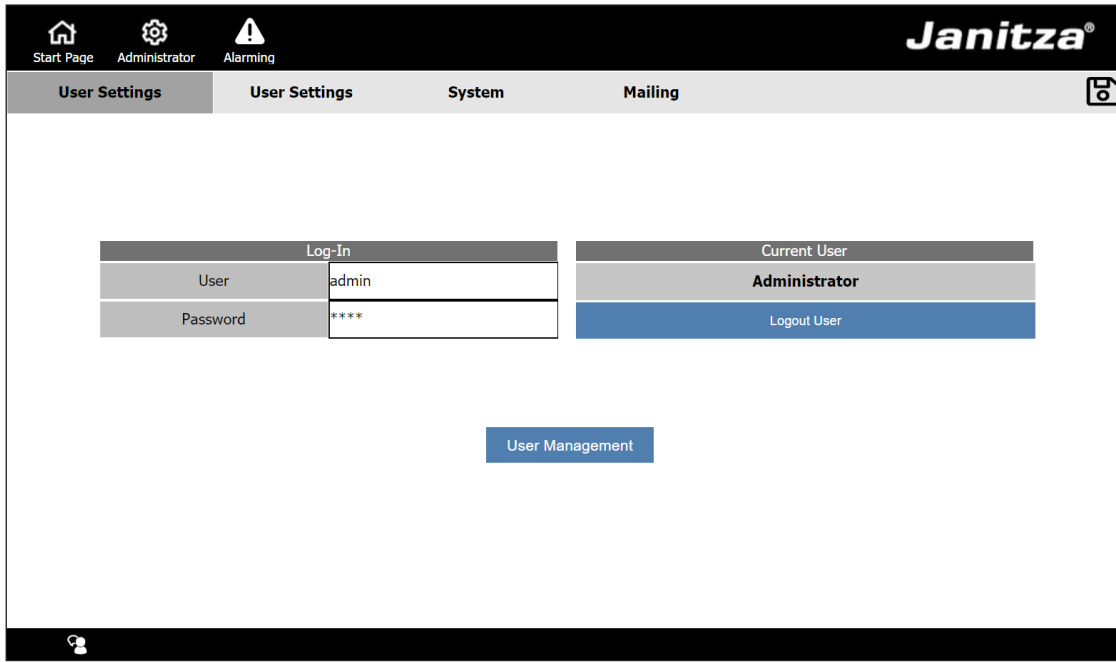


Fig. 20: User Settings

When operating the JPC 100-WEB, the actions which are possible differ according to the active user role.

The JPC 100-WEB includes the following user roles:

- **Read only:** Is active as long as the user is not logged in. This role allows viewing of measured values, system settings and alarms.
- **Operator:** Standard role for logged in users. They can also acknowledge and configure alarms and warnings as well as configure devices.
- **Administrator:** Can additionally manage other users, change the administration password and change system settings.

An administrator user is available to you with following login data:

- Username: admin
- Password: 1234

NOTE

Change the password as soon as you start working with JPC 100-WEB. Remember the new password.

7.2.1 User management

The following actions are available in the user management:

- Add, delete or edit users.
- Change the administrator password.

To access the user management, you need administrator rights.

You can open the user management via the *User Management* button on the *User settings* tab. In this case a new login with administrator access data is necessary.

To change the username or password, touch the appropriate field of the table.

All users that have been created are displayed in a table. Five lines of the table are displayed per page. Use the arrow buttons on the right side of the table to scroll through the table pages.

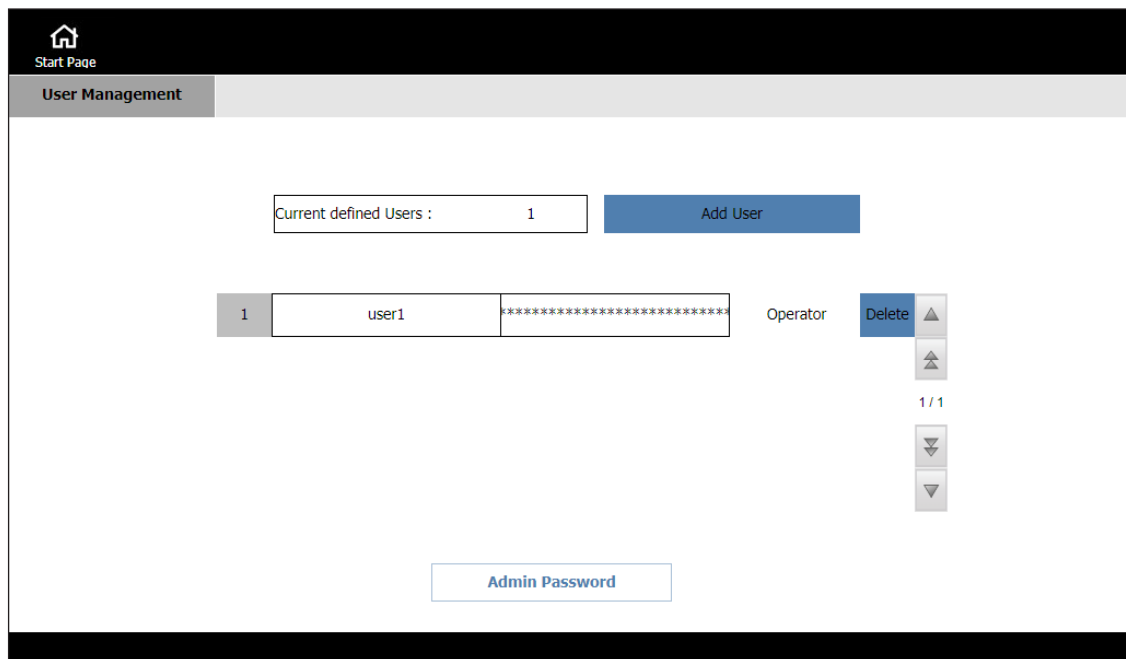


Fig. 21: User Management

7.3 Emailing

In addition to the alarms and warnings (section 8. on page 22) on the user interface, the JPC 100-WEB can also send notifications by email.

The screenshot shows the Janitza web interface with the 'Mailing' tab selected. The interface includes a navigation bar with 'Start Page', 'Administrator', and 'Alarming' options. Below the navigation bar, there are tabs for 'Mailing', 'User Settings', 'System', and 'Mailing'. A message box states: 'The Mail system of this device allows you to send E-Mail notifications. To do so, configure the SMTP server by which the E-Mail shall be sent as well as the mail's content'. The configuration is divided into two sections: 'E-Mail Server Configuration' and 'E-Mail Notification'.

E-Mail Server Configuration		E-Mail Notification	
Host IP	smtp://smtp.gmail.com:465	Sender	max.mustermann@gmail.com
Encryption	TLS/SSL ▼	Receiver	Boris.Beispiel@web.de
Port	465	Subject	Testsubject
User Name	max.mustermann@gmail.com	Text	This is a test mail.
Password	*****	Send Test	
Interval [ms]	5000		

Fig.22: Email settings

The JPC 100-WEB requires access to a SMTP server to be able to send e-mails.

You must define an interval at which JPC 100-WEB checks whether new warnings or alarms are present. All new, unacknowledged warnings and alarms are collected in an email and sent to the specified recipient.

Ask your system administrator for information about the *Host IP*, *Encryption*, *Port* and mail server access data.

8. Alarming

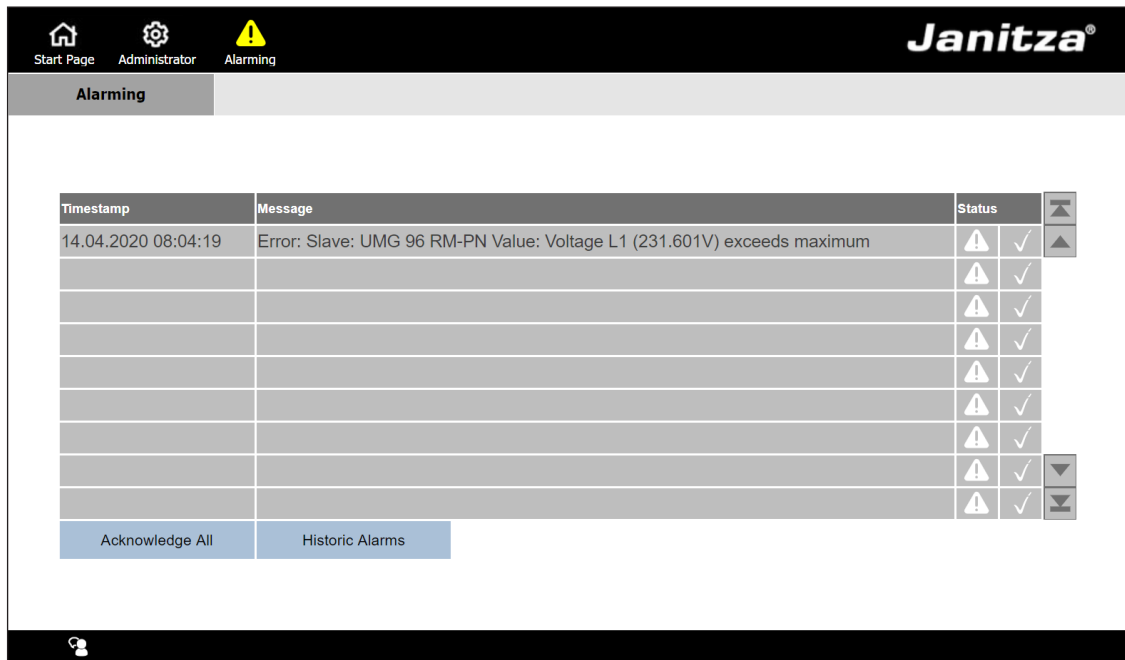


Fig. 23: List of the current alarms

You can use the JPC 100-WEB to configure warnings and alarms for the measured values of the connected master and slave devices (section 9. 3. on page 28).

All warnings and alarms are displayed in the alarm list found in the *Alarming* menu.

Current alarms must be acknowledged. You can either acknowledge all alarms at once by pressing the *Acknowledge All* button or acknowledge individual alarms by pressing the check mark after the corresponding alarm.

Use the *Historic Alarms* button to open a list of all alarms that are no longer current and have been acknowledged.

The *Status* column shows you the status of the corresponding alarm at a glance.

	Alarm/warning threshold is currently over/undershot
	Alarm/warning threshold is currently no longer over/undershot
	Alarm has been acknowledged
	Alarm has not yet been acknowledged

Fig. 24: Alarm status symbol explanation

9. Configuration

The screenshot displays the Janitza web interface for configuring a device. The top navigation bar includes 'Start Page', 'Administrator', and 'Alarming' icons, along with the 'Janitza' logo. The main content area is titled 'Master Configuration' and has tabs for 'Master' and 'Slave'. A dropdown menu at the top left shows 'UMG 96 RM-E'. Below this, the configuration is organized into two columns. The left column, under the 'Master' tab, contains the following fields:

Device Name	UMG 96 RM-E
Type	UMG 96 RM-E
Active	<input checked="" type="checkbox"/>
Bus Type	Modbus TCP
Modbus Unit ID	1
TCP/IP Address	192.168.3.183

The right column, under the 'Slave' tab, contains the following options:

Show L4	<input checked="" type="checkbox"/>
Show L5	<input checked="" type="checkbox"/>
Show L6	<input checked="" type="checkbox"/>
Show Values On Start Page	<input checked="" type="checkbox"/>
Show Home Page	Off

At the bottom center of the configuration area, there is a blue button labeled 'Alarm Configuration'.

Fig. 25: Configuration

Use the configuration to integrate new measurement devices in the JPC 100-WEB and to configure integrated devices.

Call: Start page > Configuration.

You must be logged in to the device as an administrator to configure measurement devices.



Use the tabs *Master* and *Slave* to switch between the configuration of master and slave devices.

9.1 Master devices

The JPC 100-WEB allows you to manage up to four master devices. The first position is reserved for the JPC 100-WEB (for more information, see „9. 1. 1 Integrating a new master device“).

To configure a device that is already integrated, select it on the start page before opening the configuration.

Different configuration options are available here depending on the type of the selected device.

<div style="border: 1px solid black; padding: 2px;"> Slave 10 ▼ </div>	<p>Use this drop-down menu to select which device you are configuring in the JPC 100-WEB. The first list entry of the master devices is reserved for the JPC 100-WEB as the master.</p>								
<div style="border: 1px solid black; padding: 2px;"> Device Name Slave 10 </div>	<p>The device name determines the name under which the device is listed in the JPC 100-WEB user interface. The configuration on the device itself is not affected by this.</p>								
<div style="border: 1px solid black; padding: 2px;"> Active <input checked="" type="checkbox"/> </div>	<p>This checkbox controls the visibility of the device on the start page.</p>								
<div style="border: 1px solid black; padding: 2px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 2px;">Bus Type</td> <td style="border: 1px solid black; padding: 2px;">Modbus RTU</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">Baud Rate</td> <td style="border: 1px solid black; padding: 2px;">9600 ▼</td> </tr> </table> </div>	Bus Type	Modbus RTU	Baud Rate	9600 ▼	<p>When you integrate measurement devices using Modbus RTU, the master device (JPC 100-WEB) and slave devices must have the same baud rate. (The respective user information describes how to determine the baud rate of the respective slave devices.)</p>				
Bus Type	Modbus RTU								
Baud Rate	9600 ▼								
<div style="border: 1px solid black; padding: 2px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 2px;">Bus Type</td> <td style="border: 1px solid black; padding: 2px;">Modbus TCP</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">Modbus Unit ID</td> <td style="border: 1px solid black; padding: 2px;">1</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">TCP/IP Address</td> <td style="border: 1px solid black; padding: 2px;">192.168.3.183</td> </tr> </table> </div>	Bus Type	Modbus TCP	Modbus Unit ID	1	TCP/IP Address	192.168.3.183	<p>If you integrate master devices using Modbus TCP, you must know the Modbus ID and the TCP/IP address of the device. (Information on how to determine this data can be found in the corresponding usage information.)</p>		
Bus Type	Modbus TCP								
Modbus Unit ID	1								
TCP/IP Address	192.168.3.183								
<div style="border: 1px solid black; padding: 2px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 2px;">Show L4</td> <td style="border: 1px solid black; padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">Show L5</td> <td style="border: 1px solid black; padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">Show L6</td> <td style="border: 1px solid black; padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">Show Values On Start Page</td> <td style="border: 1px solid black; padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table> </div>	Show L4	<input checked="" type="checkbox"/>	Show L5	<input checked="" type="checkbox"/>	Show L6	<input checked="" type="checkbox"/>	Show Values On Start Page	<input checked="" type="checkbox"/>	<p>Use these checkboxes to specify whether and which values of the master device are displayed on the start page. The values available here depend on which measured values are supplied by the device.</p>
Show L4	<input checked="" type="checkbox"/>								
Show L5	<input checked="" type="checkbox"/>								
Show L6	<input checked="" type="checkbox"/>								
Show Values On Start Page	<input checked="" type="checkbox"/>								
<div style="border: 1px solid black; padding: 2px;"> Show Home Page Off ▼ </div>	<p>For devices with a device homepage (e.g. UMG 509/512/604/605), you can optionally display a button in the measured value details which leads to the device homepage.</p>								
<div style="border: 1px solid black; padding: 10px; width: 50px; margin: 0 auto;">  </div>	<p>Use the Actions for all UMGs button to reset energy meters and minimum/maximum current measurement values for all UMGs and to transfer the current configuration to all UMGs</p>								
<div style="border: 1px solid black; padding: 10px; width: 50px; margin: 0 auto;">  </div>	<p>Save your changes using the Save button.</p>								
<div style="border: 1px solid black; padding: 10px; width: 150px; margin: 0 auto;"> Alarm Configuration </div>	<p>Use this button to open the alarm configuration for this device.</p>								

9. 1. 1 Integrating a new master device

To integrate a new master device into the JPC 100-WEB interface, proceed as follows:

1. Make sure that the JPC 100-WEB is connected to the master device via Ethernet.
2. Open the device configuration using the button on the start page.
3. In the drop-down menu, select under which of the four available master devices the new device should be stored. (The first position is reserved for the JPC 100-WEB as the master.)
4. Configure the name and communication settings (TCP/IP and Modbus).
5. **Optional:** Use the checkboxes (see page 24) to configure which measured values are displayed on the start page.
6. **Optional:** Activate/deactivate the link to the device homepage in the measured value details. (Only for measurement devices with a device homepage.)
7. Save the configuration.

The master device is now displayed on the start page. To learn how to integrate slave devices connected to the JPC 100-WEB, see 9. 2. 1. on page 27

9. 1. 2 Using the JPC 100-WEB as a master device

You can use the JPC 100-WEB itself as a master device by means of the built-in RS-485 interface.

1. Open the master device configuration.
2. Select the first option from the drop-down menu.
3. Activate the master device via the checkbox.
4. Select the baud rate used in the bus from the drop-down list.
5. Save the configuration.

The master device is now displayed on the start page. To learn how to integrate slave devices connected to the JPC 100-WEB, see 9. 2. 1 Integrating a new slave device on page 27

9.2 Slave devices

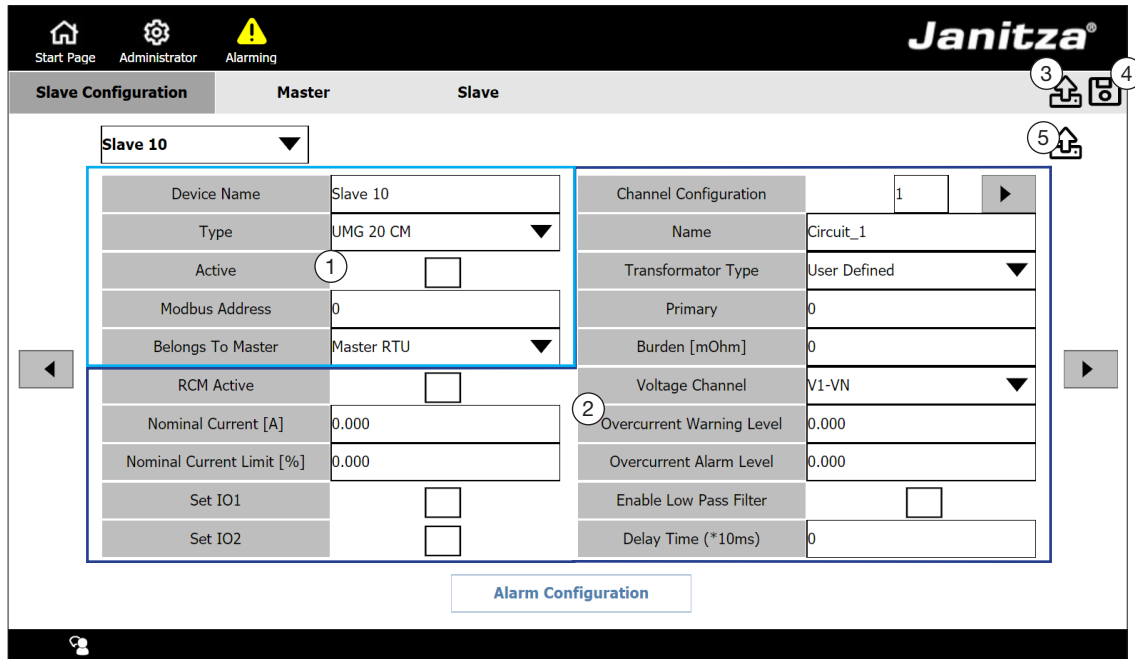


Fig. 26: Slave configuration using the example of the UMG 20 CM

- 1 Configuration on the JPC 100-WEB
- 2 Configuration on the measurement device
- 3 Actions for all UMGs
- 4 Save configuration
- 5 Actions for this UMG

In addition to the display settings (1), there are also configuration options available for slave devices on the slave device itself (2). These depend on the respective slave device.

As an example the configuration options for the UMG 20 CM slave device are explained below.

UMG 20 CM ▼	Use this drop-down menu to select which slave device you want to configure in the JPC 100-WEB.
Channel Configuration 1 ▶	You can switch between the different measurement channels of the UMG 20 CM quickly using the arrow buttons.
Belongs To Master Master RTU ▼	Use this drop-down menu to assign the slave device to the master device via which it is connected.
RCM Active <input type="checkbox"/>	Use this checkbox to define whether the device measures operating current or residual current (RCM).
Enable Low Pass Filter <input type="checkbox"/>	Use this checkbox to activate the low-pass filter for the residual current measurement
Set IO1 <input type="checkbox"/> Set IO2 <input type="checkbox"/>	The digital outputs of the measurement device can be set if the warning (output 1) or alarm (output 2) threshold is exceeded.
Overcurrent Warning Level 0.000 Overcurrent Alarm Level 0.000	You can define an overcurrent warning and alarm threshold for each channel.





<input type="text" value="0"/>	Use the response delay to define how long the overcurrent warning or alarm threshold must be exceeded for a warning or alarm to be triggered.
	Use the <i>Actions for all UMGs</i> button to reset energy meters and minimum/maximum current measurement values for all UMGs and to transfer the current configuration to all UMGs.
	Use the <i>Actions for this UMG</i> button to reset energy meters and minimum/maximum current measurement values for this UMG or this channel and to transfer the current configuration to all channels of the device.
<input type="button" value="Alarm Configuration"/>	You can configure alarms and warnings for both slave and master devices („8. Alarming“)
 	Use the arrow buttons to switch between the individual slave devices.

Fig. 27: Configuration options for the UMG 20 CM

9.2.1 Integrating a new slave device

To retrieve measured values from a connected slave device and to configure the device requires that it be integrated.

1. Make sure that the corresponding slave device is connected either via a master device or directly with the JPC 100-WEB.
2. Select the slave device you want to edit using the drop-down menu.
3. Select the type of the device to be integrated.
4. Enter the Modbus address of the slave device. (Refer to the user manual of the device to find out how to determine this.)
5. Use the *Belongs to master* drop-down menu to select to which master device the slave device is assigned.
6. Save the settings with the Save button.

The device has now been integrated and can be seen on the start page under the corresponding master device.

9.2.2 Configuring the UMG 20 CM

The available configuration options depend on the respective slave device type.

1. Open the configuration as described in „Configuration“ on page 23.
2. Use the tabs to go to the configuration menu for slave devices.
3. Select the slave device you want 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. If desired, transfer the configurations to all channels of this slave device using the *Actions for this UMG* button.
7. Save the configurations using the Save button.
8. Use the menu bar to go to the settings (Fig. 09 ①).
9. Activate the function Overwrite all.
10. Start the Modbus communication.

9.3 Alarms and warnings

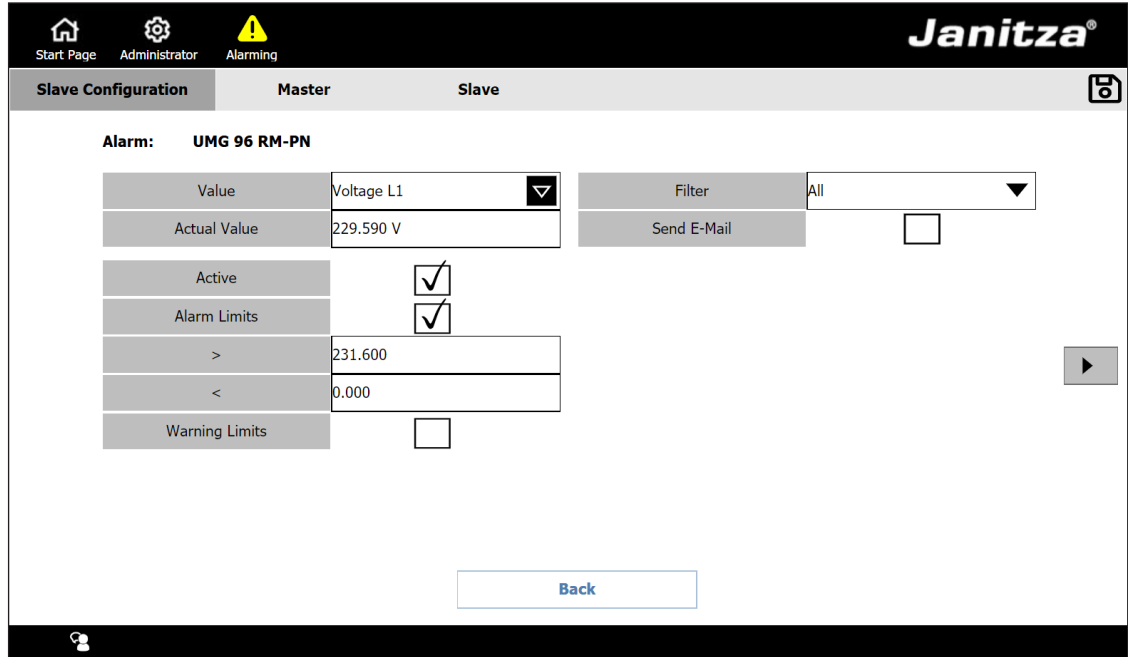


Fig. 28: Alarm configuration of a master device

The alarm configuration of an integrated device can be opened via the Configuration.

<table border="1"> <tr> <td>Value</td> <td>Voltage L1</td> <td>▼</td> </tr> </table>	Value	Voltage L1	▼	<p>Use the drop-down menu to select which measured value is to be monitored.</p>					
Value	Voltage L1	▼							
<table border="1"> <tr> <td>Alarm Limits</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>></td> <td>231.600</td> </tr> <tr> <td><</td> <td>0.000</td> </tr> <tr> <td>Warning Limits</td> <td><input type="checkbox"/></td> </tr> </table>	Alarm Limits	<input checked="" type="checkbox"/>	>	231.600	<	0.000	Warning Limits	<input type="checkbox"/>	<p>Here you can configure the upper (>) and lower (<) limits for alarms and warnings for each measured value.</p>
Alarm Limits	<input checked="" type="checkbox"/>								
>	231.600								
<	0.000								
Warning Limits	<input type="checkbox"/>								
<table border="1"> <tr> <td>Filter</td> <td>All</td> <td>▼</td> </tr> </table>	Filter	All	▼	<p>To facilitate selection, the list of measured values (supply) can be filtered by generic terms.</p>					
Filter	All	▼							
<table border="1"> <tr> <td>◀</td> <td>▶</td> </tr> </table>	◀	▶	<p>You can conveniently switch between the different measured values using the arrow buttons. Warning and alarm thresholds can be defined for each measured value.</p>						
◀	▶								

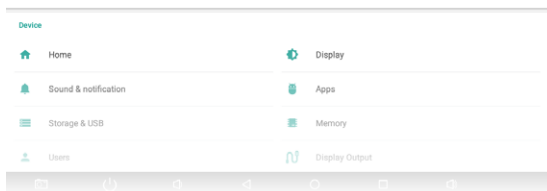
10. Service and maintenance

The device is subjected to various safety tests prior to outbound delivery. If a device is opened, the safety tests must be repeated. A warranty is only assumed for unopened devices.

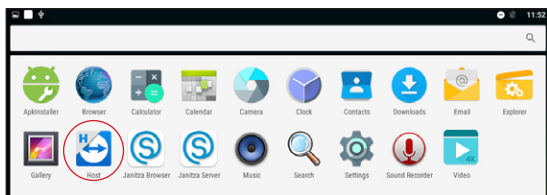
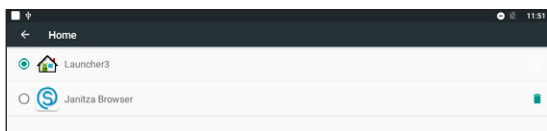
10.1 Remote access via TeamViewer

To access the device via TeamViewer, start the TeamViewer Host application included in delivery:

1. Open the system settings.
2. Open the hardware settings with the Change button in the TCP/IP area.
3. In the Device area, open the Home menu
4. Select the Launcher 3 option.
5. Press the Home button.
6. Open the menu (⊞).



7. Open the TeamViewer Host application.



10.2 Repairs and calibration

Repairs and calibration can only be carried out by the manufacturer.

10.3 Front panel foil

The front panel foil can be cleaned with a soft cloth and standard household cleaning agents. Acids and acidic agents must not be used for cleaning.

10.4 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.

10.5 Service

If questions arise that are not described in this manual, please contact the manufacturer directly.

The following information is essential for us to be able to answer any questions you may have:

- Device designation (see rating plate)
- Software release (see system display)
- Supply voltage
- An exact error description.

11. Technical data

General	
Net weight	approx. 900 g (2 lb)
Dimensions	282 mm x 185 mm x 35 mm (11.10 in x 7.28 in x 1.38 in)
Backlight (LED)	Brightness: typ. 450 cd/m ² (41.8 cd/ft ²)
Chip	Rockchip RK3288 Quad-Core CPU 1.6 GHz
Main memory	2 GB DDR3 SDRAM
Memory capacity	8 GB eMMC
Cutout dimensions	261 ± 1 mm x 164 ± 1 mm (10.27 ± 0.04 in x 6.46 ± 0.04 in)
Tightening torque for the retaining clip	0.25 to 0.3 Nm
Installation in wall thickness	max. 3 mm

Interfaces	
USB	<ul style="list-style-type: none"> • USB 2.0 type A • Micro USB
Ethernet	<ul style="list-style-type: none"> • 1x RJ45 • Transmission rate 10/100 Mbit/s
RS-485	<ul style="list-style-type: none"> • Protocol: Modbus RTU/master • 3-lead connection with GND, B, A • Transmission rate¹⁾: 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	<ul style="list-style-type: none"> • 24 V DC (via terminal connection) • 12 V DC (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 to 35 °C (32 °F to 95 °F)
Storage and transport temperature	0 to 70 °C (32 °F to 158 °F)
Air humidity	10 to 90%, non condensing

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

11. 1 Dimensional drawings



Fig. 29: Front view

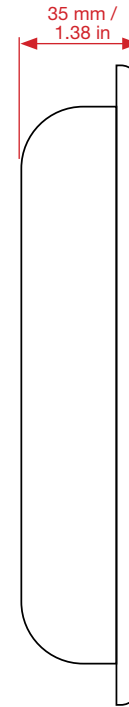


Fig. 31: Side view

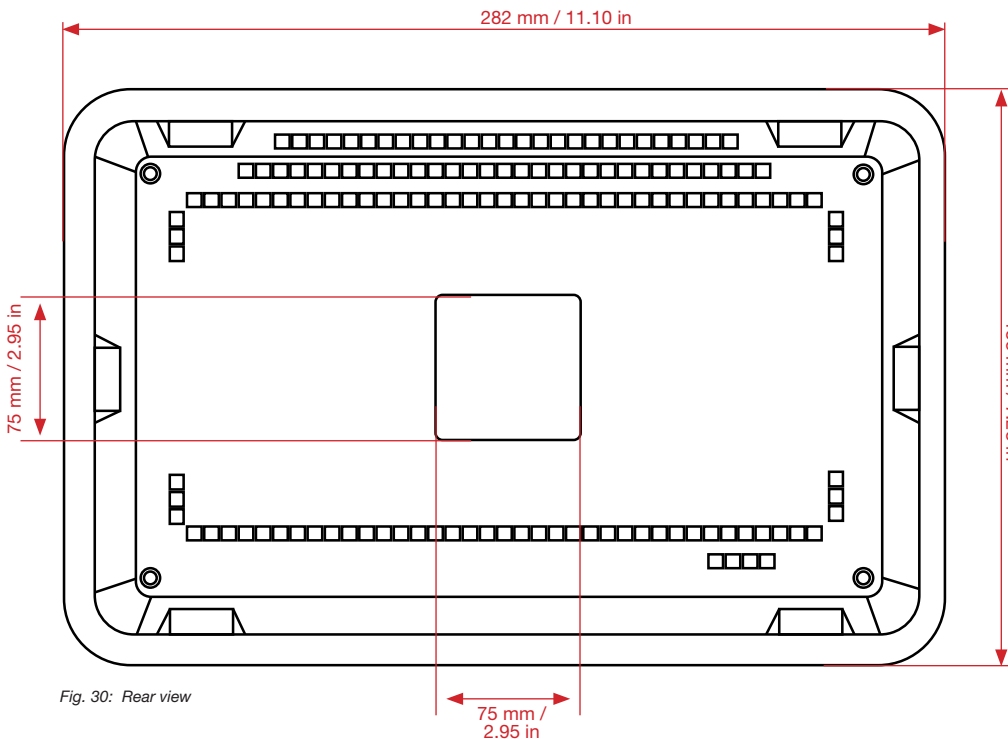


Fig. 30: Rear view

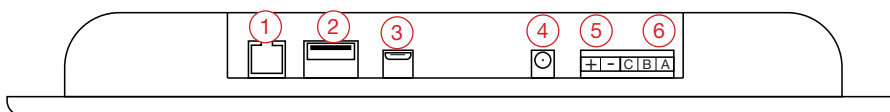


Fig. 32: Bottom view

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

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