

## Smart Energy Panel

# JPC70

User Manual and Technical Data



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## Content

<b>1.</b>	<b>General information</b>	<b>4</b>
1.1	Disclaimer	4
1.2	Copyright notice	4
1.3	Technical changes	4
1.4	Declaration of Conformity	4
1.5	Comments on the manual	4
<b>2.</b>	<b>Safety</b>	<b>5</b>
2.1	Safety instructions	5
2.2	Safety measures	6
2.3	Qualified personnel	6
<b>3.</b>	<b>Intended use</b>	<b>7</b>
3.1	Incoming goods inspection	7
3.2	Intended use	7
2.4	Scope of delivery	7
<b>4.</b>	<b>Product description</b>	<b>8</b>
4.1	Operating concept	8
4.2	Performance features	9
4.3	Product overview	10
<b>5.</b>	<b>Assembly</b>	<b>12</b>
5.1	Installation location	12
5.2	Installation position	12
5.3	Fastening	12
5.4	Ground	13
<b>6.</b>	<b>Installation</b>	<b>14</b>
6.1	Connection to a master device	14
6.2	Disconnectors	14
6.3	Supply voltage	14
6.4	Bus structure	15
<b>7.</b>	<b>Configuration</b>	<b>16</b>
7.1	Start screen	16
7.2	Show bus system	17
	7.2.1 Integrating the master device:	17
	7.2.2 Integrating slave devices	18
	7.2.3 Starting communication	18
7.3	Slave devices	19
	7.3.1 Measured values	19
	7.3.2 Configuration	19
	7.3.3 Alarm configuration	22

7.4	Master devices	23
	7.4.1 Configuration	23
	7.4.2 Alarm configuration	23
7.5	Alarm management	24
	7.5.1 Alarm history	24
7.6	User management	25
	7.6.1 User settings	25
7.7	System	27
	7.7.1 Device settings	27
	7.7.2 Modbus TCP	27
	7.7.4 Time setting	28
	7.7.5 Display	28
	7.7.3 TCP/IP settings	28
7.8	Email configuration	29
<b>8.</b>	<b>Service and maintenance</b>	<b>30</b>
8.1	Repair and calibration	30
8.2	Front foil	30
8.3	Disposal	30
8.4	Service	30
<b>9.</b>	<b>Technical data</b>	<b>31</b>
9.1	Dimensional drawings	32

## 1. General information

### 1.1 Disclaimer

It is essential that the information products for the devices are observed to ensure safe operation and achieve the specified performance characteristics and product features. Janitza electronics GmbH assumes no liability for personal injuries, property damage and financial losses resulting from the failure to observe the information products.

Make sure that your information products are legible and accessible.

### 1.2 Copyright notice

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All rights reserved.

Any duplication, processing, distribution and any other kind of use, even in part, is prohibited.

All trademarks and any resulting rights belong to the respective holders of these rights.

### 1.3 Technical changes

- Make sure that the installation instructions match your device.
- First, make sure you have read and understood the document accompanying the product.
- Keep the documents accompanying the product accessible through its service life and hand them over to the subsequent owner where applicable.
- Refer to [www.janitza.com](http://www.janitza.com) for information concerning device revisions and the associated adjustments to the documentation accompanying the product.

### 1.4 Declaration of Conformity

Please refer to the Declaration of Conformity on our web site [www.janitza.com](http://www.janitza.com) for the laws, standards and directives applied by Janitza electronics GmbH.

### 1.5 Comments on the manual

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

[info@janitza.com](mailto:info@janitza.com)

## 2. Safety

Please read the present user manual and all other publications that are applicable for working with this product. This applies in particular for installation, operation and maintenance.

In the process, observe all safety requirements and warning notices. Failure to observe the notices can result in personal injury and/or property damage.

Any impermissible modification or use of this device exceeding the specified mechanical, electrical or other operating limits can result in personal injury and/or property damage.

Any associated impermissible use applies as "misuse" and/or "negligence" with respect to the product warranty and thus voids the guarantee for coverage of potentially resulting damages.

The user manual:

- must be read the manual before using the device.
- must be kept and remain available for reference during the entire service life of the product.

Also observe the applicable legal and safety requirements for the respective application when using the device.

### 2.1 Safety instructions

#### **NOTE**

Points out procedures during which a danger of injuries or property damage does **not** exist.

#### **ATTENTION**

Indicates an imminently dangerous situation that can result in property damage or environmental damage in the event of noncompliance.

Safety instructions are highlighted by a warning triangle and are presented as follows depending on the level of risk:



#### **DANGER**

Indicates an imminent danger that will result in serious and/or fatal injuries.



#### **WARNING**

Indicates a potentially dangerous situation that can result in serious injuries or death.



#### **CAUTION**

Indicates a potentially dangerous situation that can result in minor injuries or property damage.

## 2.2 Safety measures

When operating electrical devices, specific parts of these devices inevitably carry dangerous voltage. As a result, serious bodily harm or property damage can occur if they are not handled correctly.



### WARNING

#### Electrical voltage!

Dangerous voltages can cause serious bodily harm or death.

**Therefore, please note the following:**

- **Before connecting the device, ground it at the ground wire connection if available.**
- **Dangerous voltages may be present in all circuit parts connected to the voltage supply.**
- **There may still be dangerous voltages present in the device even after it is disconnected from the supply voltage.**
- **Fit wire end ferrules on the conductors made of individual wires.**
- **Only connect screw-type terminals with matching numbers of poles and of the same type.**
- **De-energize the system before starting work.**

## 2.3 Qualified personnel

This device must only be operated and maintained by qualified experts.

Qualified experts are persons who, based on their appropriate training and experience, are capable of recognizing risks and avoiding potential hazards which can arise during operation or maintenance of the device.



### WARNING

#### Risk of injury due to improper use

If the device is not operated according to the documentation, protection is no longer guaranteed and danger can emanate from the device.

### 3. Intended use

#### 3.1 Incoming goods inspection

The prerequisites for smooth and safe operation of the device include proper transport, storage, setup and assembly, as well as proper operation and maintenance.

Exercise caution when unpacking the device without using force and only using suitable tools.

Perform a visual inspection of the device to ensure the fault-free mechanical condition.

Please check the scope of delivery for completeness before beginning with the installation of the device.

If you assume that safe operation is no longer possible, the device must be shut down immediately and prevented from unintended re-commissioning. If you assume that safe operation is no longer possible, when, for example, the device:

- has visible damage,
- 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.).

#### 3.2 Intended use

The device is:

- intended for installation in switch cabinets and small installation distributors.
- not intended for installation in vehicles! Using the device in mobile equipment is considered an unusual environmental condition and is only permissible by special agreement.
- not intended for installation in areas exposed to harmful oils, acids, gases, vapors, dust and radiation, etc.

#### 2.4 Scope of delivery

Number	Item no.	Designation
1	15.06.356	JPC70
1	33.03.373	Installation instructions
1		Fastener set

## 4. Product description

The device is intended for:

- visualization of current and voltage measuring devices in a bus system.
- monitoring of measured values and settings of connected measurement devices.
- configuration of the connected slave devices.
- installation in permanently installed switch cabinets or small installation distributors.

### 4.1 Operating concept

You can program the device in several different ways and/or display measured values:

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

Only the operation of the device via touch screen is described in this operating manual.

#### **NOTE**

An input aid is recommended for operation on the touch screen.



## 4.2 Performance features

### General information

- Integrated front panel unit with the dimensions 197 x 140 mm
- Connection via Ethernet to the Janitza gateway devices: UMG 512/509/605/604/96RM-E and ProData
- Representation of up to 10 Janitza UMG 20CM devices
- TFT display 800 x 480 pixels
- Operation via touch screen
- 2 x USB 2.0 type A interfaces
- Ethernet interface
- Operating temperature range -20 °C – +60 °C

### Visualization

- Representation of all current and energy values
- Display of the last maximum value of the connected devices
- Topology view of the bus system
- Visualization of the main and auxiliary measurement
- Monitoring of up to 200 current channels

### Configuration

- Dynamic topology configuration with freely selectable number of devices
- Group transfer of configuration of up to several devices
- Import and export of device configurations via USB
- Labeling of individual current circuits
- Threshold value can be set per channel

### 4.3 Product overview

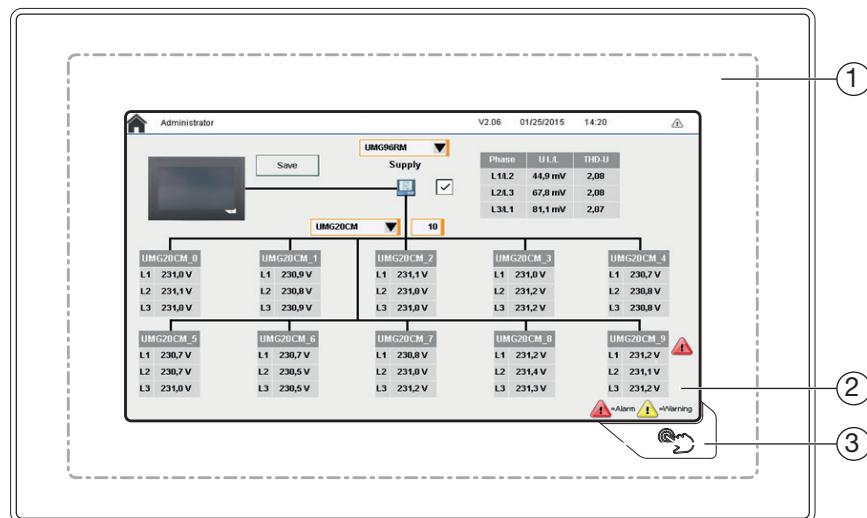


Fig. 1: Front view JPC70

- ① Touch area
- ② Display
- ③ Home button

#### NOTE

Since the analogue-resistive touch screen is not multi-touch capable, a mean value is generated when the screen is touched in multiple places simultaneously.

This averaged position value is evaluated by the application. Therefore, since the entire touch area is larger than the display itself, multiple touches (including outside of the display) can trigger undesired commands.

This can take place when the operator holds the JPC70 in their hands.

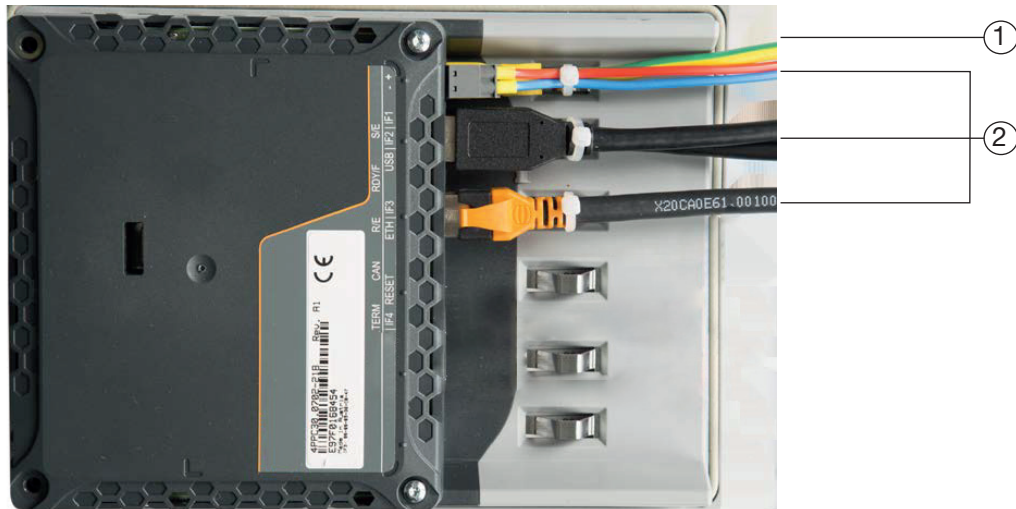


Fig. 2: Rear view JPC70 with connections

① **Ground conductor:**

The connection to the ground potential must be made as short as possible and adequately strong ( $\geq 4 \text{ mm}^2$ ) via the provided flat plug connection (Faston 6.3 mm).

② **Unshielded conductors:**

All unshielded conductors must be relieved of tensile stress with cable ties on the ground plate.

## 5. Assembly

### 5.1 Installation location

The device is suitable for indoor installation in a stationary and weather-protected switch board.

Ensure that grounding is provided for switchboards.

### 5.2 Installation position

The cut-out size in the switchboard is 186<sup>+0.8</sup> mm x 129<sup>+0.8</sup> mm with a wall thickness of 2 to 6 mm.

In order to achieve adequate ventilation, the following must be observed:

- Install the device vertically.
- Observe a minimum clearance of 60 mm above and below.
- Observe a minimum clearance of 40 mm to the sides.

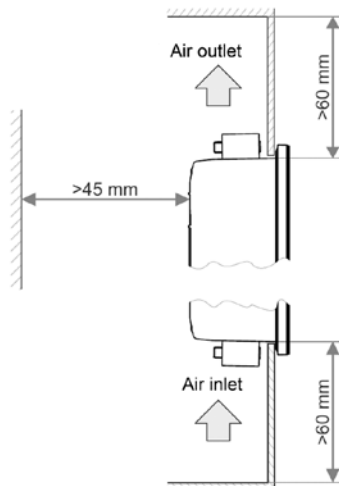



Fig. 3: Installation position of the JPC70

 <b>CAUTION</b>
<p><b>Property damage due to noncompliance with the assembly instructions!</b>                  Noncompliance with the assembly instructions can result in damage or destruction of your device.  <b>Observe the specifications for the installation position in the sections "Assembly" and "Technical data".</b></p>

### 5.3 Fastening

The device must be installed using the supplied retaining clamps (see Fig. 6) on a level, clean and burr-free surface. Unevenness can cause damage to the display and result in the penetration of dust and water.

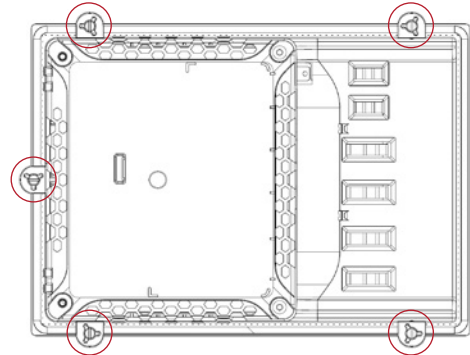


Fig. 4: Rear view with retaining clamps

1. Insert the front side of the device in the provided installation cut-out.
2. Insert the retaining clamps in the recesses provided on the device.

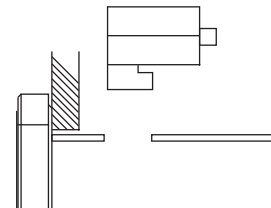


Fig. 5: Inserting the retaining clamps

3. Slide the retaining clamps towards the rear until they are flush with the back side of the recess.

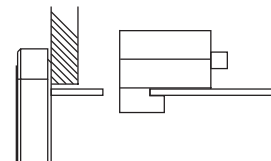


Fig. 6: Sliding the retaining clamps towards the rear

4. Fix the retaining clamps by tightening the fastening screws on the wall and/or the switch cabinet sheet metal.

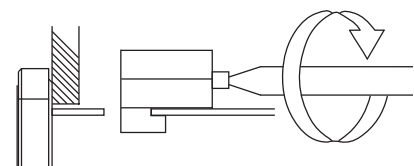
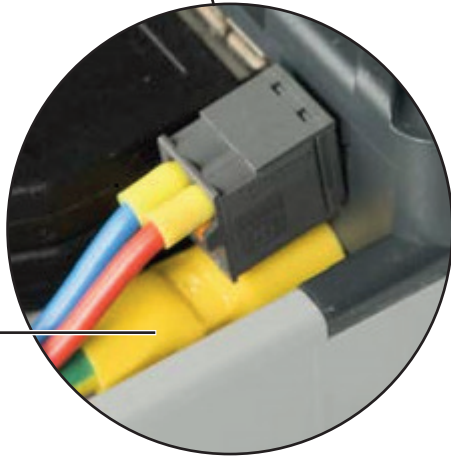
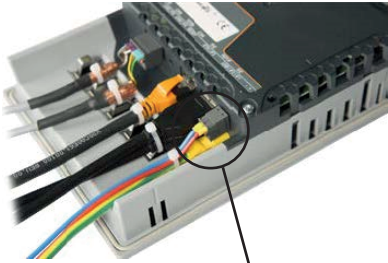


Fig. 7: Fixing the retaining clamps

## 5.4 Ground

Faults are discharged effectively via a grounding lug. The cable shield (e.g. Ethernet) is discharged via the ground plate.



Ground connection

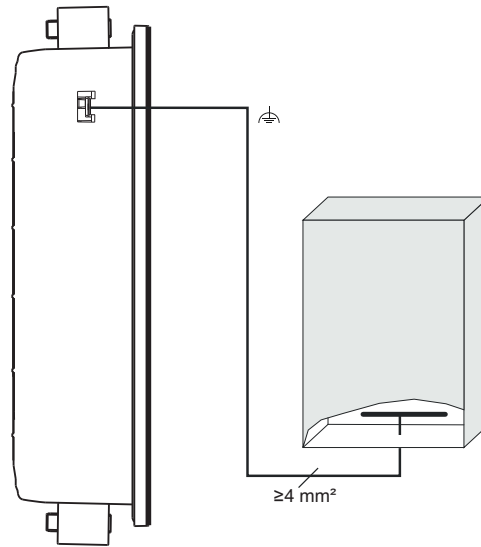


Fig. 8: Ground in the switch cabinet



### WARNING

The ground potential (ground lug on the device) and the GND connection of the voltage supply are connected internally. Use at least one PELV power supply unit.

## 6. Installation

### 6.1 Connection to a master device

The device is connected via Ethernet to the gateway device / master device of a bus system:

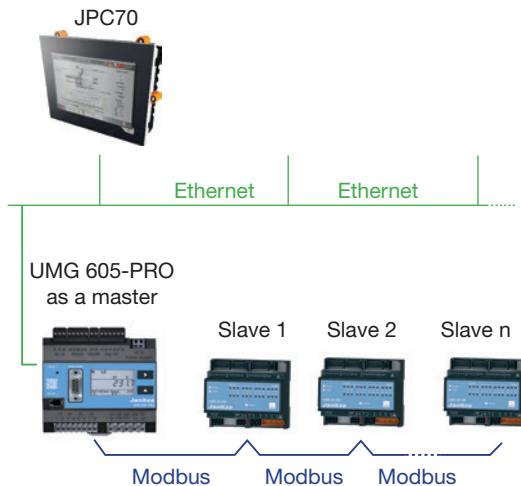


Fig. 9: Bus topology with a UMG 605 as a master and connected JPC70

Connect the supply voltage via a UL/IEC-approved fuse.

After connecting the supply voltage, a display appears. If no display appears, check whether the supply voltage is within the rated voltage range.



### WARNING

#### Risk of injury due to electric voltage!

It may result in serious bodily harm or death due to:

- Touching live exposed or stripped cores.
- Device inputs that are dangerous to touch.

Therefore, please note the following:

- **The inputs for the supply voltage are dangerous to touch.**
- **De-energize your system before beginning to work!**

### 6.2 Disconnectors

Provide a suitable disconnector for the supply voltage in the building installation in order to de-energize the device from current and voltage.

- Install the disconnector near the device in a location that is easily reachable for the user.
- Mark the switch as a disconnecting device for this device.

### 6.3 Supply voltage

A supply voltage is required for operation of the device. Refer to the technical data for the type and level of the supply voltage for your device.

The connection of the supply voltage is made via the plug-type terminals on the rear side of the device.

Before connecting the supply voltage, ensure that the supply voltage matches the specifications from the technical data.

(See section 9 on Page 31)

#### 6.4 Bus structure

- All devices are connected in a bus structure (line).
- Each device has a dedicated address within the bus.
- Up to 32 participants can be connected in a segment.
- The cable is terminated with resistors (bus terminator, 120 Ohm, 1/4 W) at the start and end of a segment.
- Repeaters (regenerative repeaters) must be used for more than 32 participants in order to connect the individual segments.
- Devices with an activated bus terminator must be supplied with power.
- We recommend only placing the master at the end of a segment.
- If the master is replaced with bus terminator activated, the bus is deactivated.
- If a slave is replaced with bus terminator activated or is de-energized, the bus can become unstable.
- Devices which do not participate in the bus terminator can be replaced without making the bus unstable.

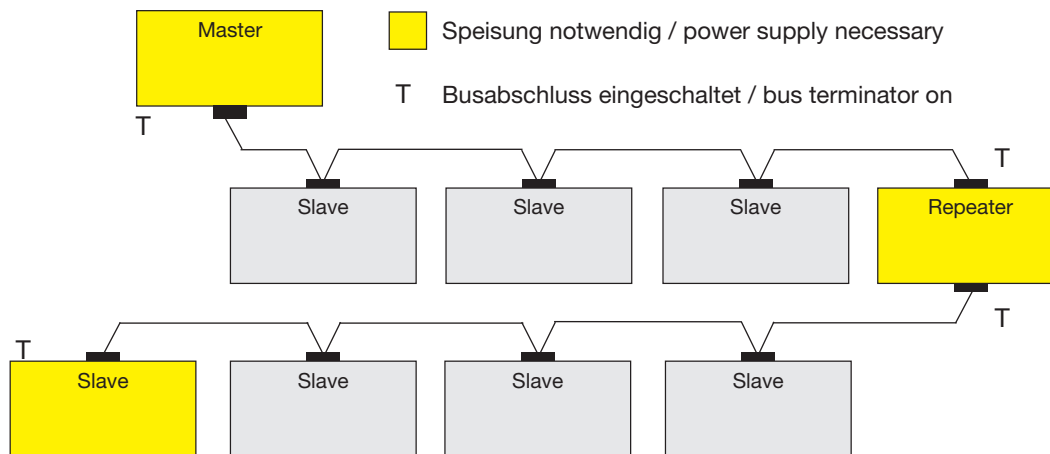


Fig. 10: Bus structure representation

## 7. Configuration

Operation of the device takes place either on the device itself via touch screen or via remote access with the PC connected to the device in the network.

### 7.1 Start screen

A topology overview of the integrated bus system is represented on the main screen of the device.

An overview of the current voltage values of the integrated slave devices is shown on the start screen.

By touching the values in the overview of a slave device, you open its other values, the configuration menu and the alarm configuration for this device.

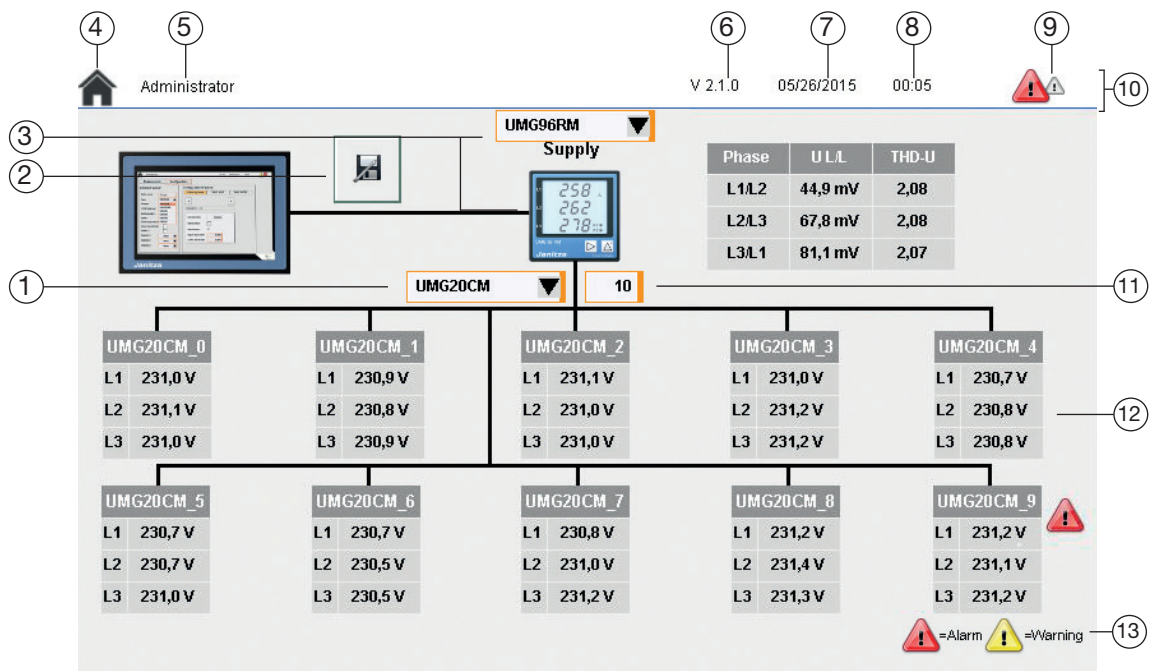


Fig. 11: Start screen

- |   |                        |    |                                  |
|---|------------------------|----|----------------------------------|
| 1 | Selected slave device  | 8  | Current time                     |
| 2 | Save button            | 9  | Warnings/alarms                  |
| 3 | Selected master device | 10 | Status bar                       |
| 4 | Home button            | 11 | Number of slave devices          |
| 5 | Active user role       | 12 | Representation of a slave device |
| 6 | Software version       | 13 | Legend                           |
| 7 | Current date           |    |                                  |



## 7.2 Show bus system

In order to be able to manage a bus system via the JPC70, the IP and Modbus address of the master device and the Modbus address of the slave devices must be configured in the device.

Before beginning with configuration of the JPC70, you must accept the device settings.

1. Touch the display of the current role in the status bar to open the login mask.
2. Log in as an administrator. The user name and password of the administrator are pre-configured in the factory as "Admin".
3. Switch back to the system settings by pressing the *System* tab.
4. Press the *ACK* button in the *Device* menu.
  - A fixed standard IP address is loaded. We recommend only correcting the TCP/IP settings at first, because assigning a permanent IP address can cause problems in networks. (See 7. 7. 3 on Page 28)

### 7.2.1 Integrating the master device:

Proceed as follows to connect the device to a master:

1. Log in as an administrator.
2. Press the Home button to switch to the start screen.
3. Select the type of your master device in the selection list.
4. Touch the miniature representation of the master device (see Fig. 11) in order to open these settings.
5. Enter the IP address of the master device in the *TCP/IP address* input field.
6. Enter the Modbus address of the master device in the *Modbus UnitID* input field.
7. Press the Save button to save the changes.
8. Proceed with the configuration of the slave devices.

You can display additional measured values with the *Show L4*, *L5* and *L6* selection boxes.

Activate/deactivate the representation of the measured values on the start screen with the *Show values on startpage* selection box.

The screenshot shows the configuration interface for the JPC70. At the top, there is a status bar with a home icon, the user 'Administrator', version 'V 2.1.1', date '05/09/2018', time '10:49', and a warning icon. Below the status bar are three tabs: 'Measurement', 'Configuration' (which is active and highlighted with an orange border), and 'Alarm configuration'. The main content area is titled 'Details of supply' and contains the following fields:

- Active:** A checked checkbox.
- Meter name:** A text input field containing 'Supply'.
- Type:** A dropdown menu showing 'UMG96RM'.
- Bustype:** A dropdown menu showing 'Modbus TCP'.
- TCP/IP address:** An empty text input field.
- Modbus unitId:** A text input field containing '0'.
- Show L4:** An unchecked checkbox.
- Show L5:** An unchecked checkbox.
- Show L6:** An unchecked checkbox.
- Show values on startpage:** An unchecked checkbox.

Fig. 12: Master device configuration

### 7. 2. 2 Integrating slave devices

1. Open the start screen as an administrator. (See 7. 2. 1)
2. Select the type of your slave devices in the selection list.
3. Enter the number of slave devices connected in the bus in the window next to the selection list. (max. 10)
4. Open the view of the respective slave device by touching the corresponding tabular representation.
5. Switch to the configuration menu by pressing the *Configuration* tab.
6. Enter a name for the corresponding slave device in the *Name* input field.
7. Enter the Modbus address of the device in the *Modbus address* input field. (Refer to the documentation of the corresponding slave device to determine the Modbus address).
8. Configure the addresses of all connected slave devices in this manner.
9. Save the settings by pressing the *Save* button.
10. Touch the version number, date or time in the status bar to open the JPC70 settings.
11. Press the *Reboot* button in the *Device* section to restart the JPC70.

### 7. 2. 3 Starting communication

After the bus system has been configured completely in the JPC70, you can start communication via Modbus/TCP:

1. Log in as an administrator.
2. Navigate to the system settings.
3. Activate the *Overwrite all* selection box if you want to overwrite the configuration of the connected devices with the configuration from the JPC70.
4. Press the *Start* button under *Modbus TCP*.
  - The update symbol appears next to the *Modbus TCP* menu item and displays an active transmission.

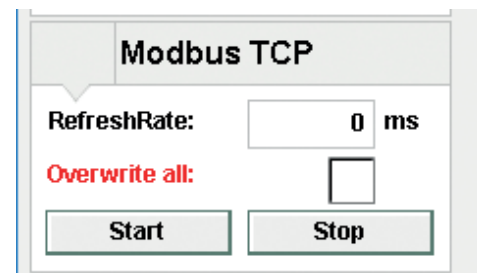


Fig. 14: Modbus TCP system settings

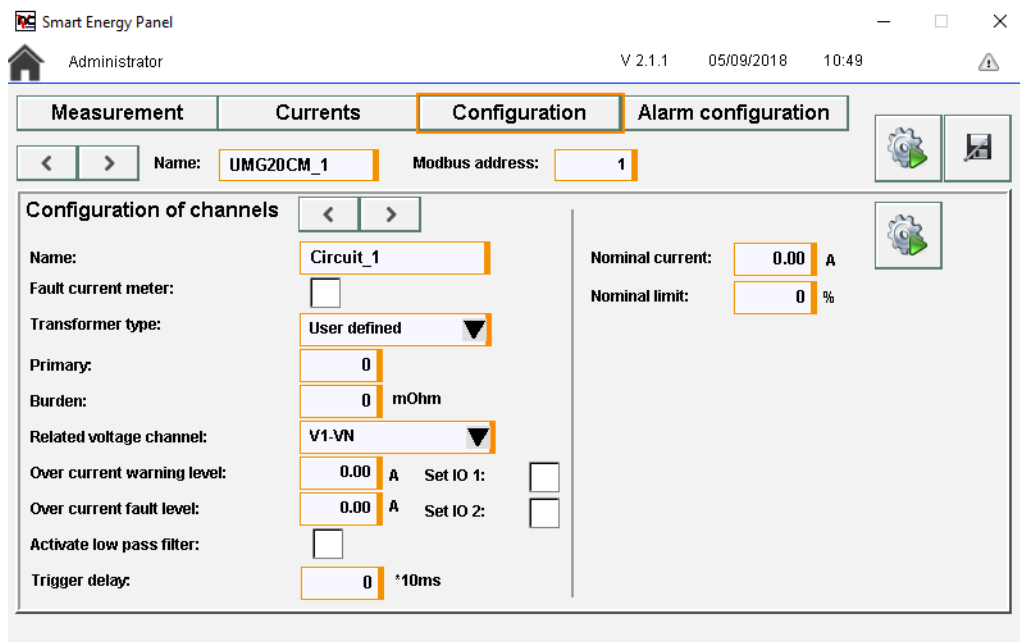


Fig. 13: Slave device configuration

### 7.3 Slave devices

With the JPC70, you can

- configure the integrated slave devices.
- View measured values of the slave devices.
- Create alarms for the slave devices.

#### 7.3.1 Measured values

You can have an overview of the measured values of all channels of the slave device with the *Measurement* and *Currents* tabs.

You can switch between the slave devices with the << and >> buttons.

#### 7.3.2 Configuration

You enter the configuration menu of the slave device via the *Configuration* tab.

You must be logged in as an administrator to make configurations on the devices (see „7.2 Show bus system“).

The measuring inputs of all integrated slave devices can be configured with the JPC70.

For this purpose, open the configuration menu of a slave device as described in 7.2.2.

You switch between the available measuring channels of the device with the arrow buttons.

#### Name

You can assign a name for the measuring channel in the *Name* input field.

#### Fault current measurement

You can specify whether the device should measure fault current or operating current with the *Fault current meter* selection box.

This configuration option is only available if the measurement device is suitable for fault current measurement.

#### Transformer settings

Configure the current transformers with the *Transformer type* selection list.

The primary side and apparent power input fields must be filled in manually for the transformer type setting *User-defined*.

#### Voltage channel

You can assign a voltage channel to the measurement channel with the *Related voltage channel* selection list.

Administrator										
V 2.1.0 05/26/2015 00:02										
<span>Measurement</span> <span>Currents</span> <span>Configuration</span> <span>Alarm configuration</span>										
UMG20CM_1										
	Circuit_1	Circuit_2	Circuit_3	Circuit_4	Circuit_5	Circuit_6	Circuit_7	Circuit_8	Circuit_9	Circuit_10
MaxCurrent	0,0 µA	0,0 µA	0,0 µA	0,0 µA	0,0 µA	0,0 µA	0,0 µA	0,0 µA	0,0 µA	0,0 µA
MaxRealPower	4,0 W	807,0 W	7,0 W	817,0 W	2,0 W	802,0 W	0,0 W	810,0 W	1,0 W	815,0 W
ApparentPower	0,0 W	0,0 W	0,0 W	0,0 W	0,0 W	0,0 W	0,0 W	0,0 W	0,0 W	0,0 W
Energy	0,0 Wh	0,0 Wh	0,0 Wh	0,0 Wh	0,0 Wh	0,0 Wh	0,0 Wh	0,0 Wh	0,0 Wh	0,0 Wh
PowerFactor	1	1	1	1	1	1	1	1	1	1
	Circuit_11	Circuit_12	Circuit_13	Circuit_14	Circuit_15	Circuit_16	Circuit_17	Circuit_18	Circuit_19	Circuit_20
MaxCurrent	0,0 µA	0,0 µA	466,7 A	465,4 A	465,3 A	466,1 A	465,2 A	465,2 A	0,0 µA	0,0 µA
MaxRealPower	1,0 W	805,0 W	667,0 W	807,0 W	655,0 W	810,0 W	603,0 W	808,0 W	1,0 W	808,0 W
ApparentPower	0,0 W	0,0 W	183,0 W	183,0 W	183,0 W	183,0 W	183,0 W	183,0 W	0,0 W	0,0 W
Energy	0,0 Wh	0,0 Wh	0,0 Wh	0,0 Wh	0,0 Wh	0,0 Wh	0,0 Wh	0,0 Wh	0,0 Wh	0,0 Wh
PowerFactor	1	1	0	0	0	0	0	0	1	1

Fig. 15: Measured values overview

**Overcurrent warning level and alarm level**

The warning level and alarm level for overcurrent can be configured with the JPC70.

With the *Set IO* selection box, you can define whether outputs should be activated when the warning level or alarm level is exceeded.

**Low-pass filter**

You can activate the low-pass filter as necessary by activating the *Low-pass filter* selection box. For more information about the low-pass filter function, refer to the device documentation for the respective device.

**Delay time**

Messages of temporary threshold violations are hidden with parameterization of delay times for warning and alarm messages. They are displayed when the delay time has elapsed and the current path increases further above the upper threshold. The delay times can be adjusted separately for each measuring channel.

**Actions for this UMG**

Additional configuration options to facilitate the handling of multiple slave devices are available with the *Actions for this UMG* button (see Fig. 17).

Here, you can:

- Reset energy meters and minimum/accident current values of individual channels.
- Reset energy meters and minimum/accident current values of all channels of the selected device.
- Carry out configuration of a channel for all channels of the device.

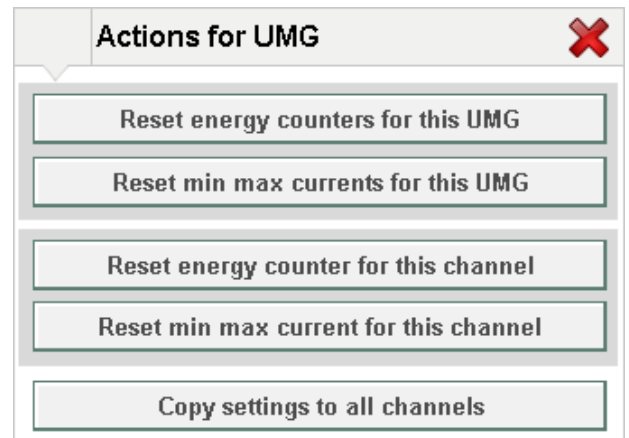


Fig. 16: Actions for this UMG in the JPC70

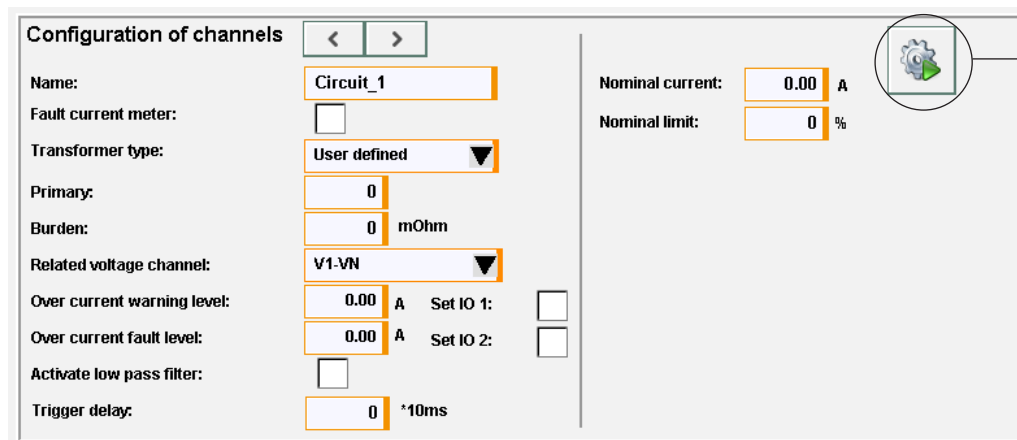


Fig. 17: Configuration interface of the slave devices in the JPC70

### Actions for all UMG

Similar to the actions for one measurement device, there are also actions for all measurement devices connected in the bus.

Measurement    Currents    **Configuration**    Alarm configuration

<   >   Name:     Modbus address:

**Configuration of channels**    <   >

Name:

Fault current meter:

Transformer type:  ▼

Primary:

Burden:  mOhm

Related voltage channel:  ▼

Over current warning level:  A    Set IO 1:

Over current fault level:  A    Set IO 2:

Activate low pass filter:

Trigger delay:  \*10ms

Nominal current:  A

Nominal limit:  %

Button  
Actions for all  
UMGs

Fig. 18: Configuration interface of the slave devices in the JPC70

Here, you have the option

- to adopt energy meters and minimum/maximum current values for all slave devices.
- to transfer the configuration of a slave device to all other devices.

**Actions for all UMGs** ✕

Fig. 19: Actions for all UMG in the JPC70

### 7.3.3 Alarm configuration

You have the option of configuring any arbitrary number of alarms/warnings for each individual measuring channel of each slave device in the interface of the JPC70.

These warnings and alarms independent of the warnings and alarms for overcurrent and undercurrent configured in the device. (For more information, refer to the user manual of the slave device).

In the process, the threshold values for triggering a warning and threshold values for triggering an alarm are defined.

If the respective threshold value is exceeded, a blinking warning triangle is shown in the status bar. In the process, a red warning triangle shows current alarms and a yellow warning triangle shows current warnings.

The warning triangle blinks until all current messages have been acknowledged with the JPC70. (See „Alarm management“ on Page 24)

The screenshot displays the 'Alarm configuration' window for the device 'UMG20CM\_1' and channel 'Voltage\_L1\_LN'. The interface is divided into several sections:

- Channel Selection:** A dropdown menu shows 'Voltage\_L1\_LN'.
- Channel Name:** 'Voltage\_L1\_LN' is displayed in a text box.
- Configuration Parameters:**
  - Datatype:** REAL
  - Current value:** 0.000 (with a checkmark)
  - Alarm active:**
  - Alarmlimit:** 0.000 (with a red background and a checkmark)
  - Warninglimit:** 0.000 (with a yellow background and a checkmark)
- Unit Settings:**
  - Recalculate unit:**
  - Show unit:**
  - Fraction digits:** 1
  - Unit 1:** mV, 0.00100
  - Unit 2:** V, 1.00000
  - Unit 3:** kV, 1000.00000

Fig. 20: Alarm configuration

### Alarm configuration

You can configure an alarm or a warning for the master device and for every slave device.

1. Open the menu of the desired device.  
For this purpose, touch the miniature or tabular representation of the device on the start screen.
2. Switch to the alarm configuration in the menu by touching the alarm configuration tab.
3. Select the measured value for which you would like to configure a message in the drop-down menu.
  - You can see the current value of the selected measured value in the *Current value* field.
4. Activate the *Alarm active* check box.
5. Enter the desired upper and lower limits in the > and < text input fields in the *Alarmlimits/Warnlimits* section.
6. Activate the alarm or the warning by activating the check box after the threshold value fields.
7. Navigate to the system settings.
8. Press the *Start* button under the *Alarming* menu item to activate the alarm system.

#### NOTE

You must be logged in as an administrator in order to be able to activate/deactivate the alarm system.

It is possible to receive messages via email in addition to the messages on the JPC70. (See „7. 8 Email configuration“ on Page 29).

### 7. 4 Master devices

Call up additional options for the master device by touching the symbol for the device on the start screen of the JPC70.

Here, you can:

- Configure communication and representation of the measured values of the master device.
- View measured values of the master device.
- Create alarms for the master device.

View the key measured values of the device under the *Measurement* tab.

#### 7. 4. 1 Configuration

In order to call up the configuration menu, you must be logged in as an administrator.

Here, you can configure the communication parameters required by the JPC70 to establish a connection to the master device.

You can activate/deactivate the display of additional measuring channels with the L4/L5 and L6 selection boxes.

Activate/deactivate the display of the measured values on the start screen with the *Show values on startpage* selection box.

#### 7. 4. 2 Alarm configuration

Configuration of the alarms for a master device in the JPC70 is analogue to the alarm configuration of the slave devices (see 7. 3. 3).

### 7.5 Alarm management

Once an alarm message or warning message has been triggered, it is stored with time stamp in the list of current alarms and a corresponding message appears in the status bar.

This message remains active until the list is viewed and the corresponding message has been acknowledged.

You open the list of current alarms by pressing the warning triangle in the status bar.

Messages can be acknowledged individually with the *Acknowledge selected alarm* button or all at once by pressing the *Acknowledge all alarms* button.

#### 7.5.1 Alarm history

You open the alarm history by pressing the *Alarm history* button in the display of the current alarms.

A list of all of the alarms which have occurred, including time stamp, is shown in the alarm history. When the message was issued is also recorded here. When this alarm was acknowledged is also shown in this list.

Button	Designation
	Acknowledge all alarms
	Acknowledge selected alarm

**Current alarm overview**

Timestamp	Message	State
2015-05-18 21:08:26	ModbusTcpError: Code: 34206 Station: Supply Register: 1000	

Buttons: Alarm history

Fig. 21: "Current alarms" view

**Alarm history**

Search:

Timestamp	Message	State old / new
2015-05-18 22:00:24:65	ModbusTcpError: Code: 34201 Station: UMG20CM_1 Register: 1132	>
2015-05-18 22:00:24:24	ModbusTcpError: Code: 34201 Station: UMG20CM_1 Register: 1132	>
2015-05-18 22:00:24:05	ModbusTcpError: Code: 34201 Station: UMG20CM_1 Register: 1132	>
2015-05-18 22:00:23:83	ModbusTcpError: Code: 34201 Station: UMG20CM_1 Register: 1132	>
2015-05-18 22:00:23:43	ModbusTcpError: Code: 34201 Station: UMG20CM_1 Register: 1132	>
2015-05-18 22:00:23:03	ModbusTcpError: Code: 34201 Station: UMG20CM_1 Register: 1132	>
2015-05-18 22:00:22:59	ModbusTcpError: Code: 34201 Station: UMG20CM_1 Register: 1132	>
2015-05-18 22:00:22:16	ModbusTcpError: Code: 34201 Station: UMG20CM_1 Register: 1132	>
2015-05-18 22:00:22:03	ModbusTcpError: Code: 34201 Station: Supply Register: 10867	>

Buttons:

Fig. 22: "Historical alarms" view



## 7.6 User management

The possible actions differ according to the active user role/group with operation of the JPC70. You open user management by touching the active user role in the status bar.

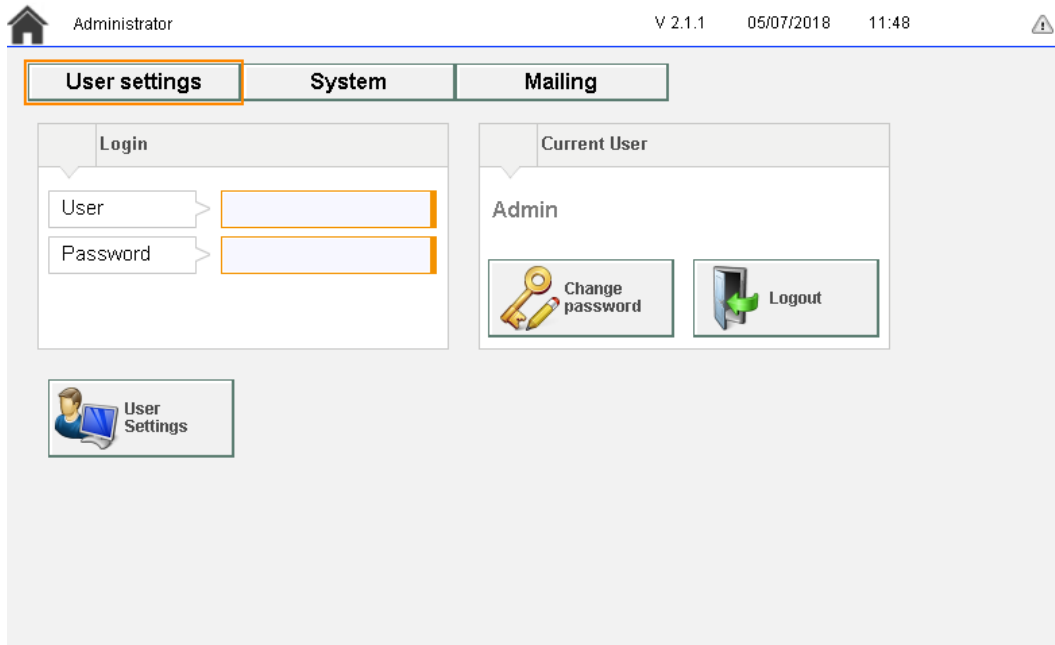


Fig. 23: JPC70 User management

The JPC70 recognizes the following user roles:





- **ViewOnly:** Is active as long as the user is not logged in. With this role, measured values can be viewed and alarms/warnings can be acknowledged.
- **Operator:** Standard role for logged-in users. They can also acknowledge and configure alarms and warnings in addition to the ViewOnly user.
- **Administrator:** Device settings can be carried out, users can be managed and the system settings of the JPC70 can be changed.

In the user management, you can:

- change the user.
- log the user out.
- change the user password.
- open the user settings.

### 7.6.1 User settings


You can create, delete, edit or block users in the user settings.

Button	Designation/function
	Create new user
	Delete user
	Edit user
	Block user

You must be logged in as an administrator to manage users.

## Creating users

Proceed as follows to create a new user:

1. Log in as an administrator.
2. Navigate to the user settings.
3. Press the *Create new user* button (see 7. 6. 1).
  - The *Create user* window appears.
4. Enter the login name of the new user in the *User name* input field.
5. Enter the user's fill name in the *Full name* input field (*optional*).
6. Select the desired role in the *Group/role* selection list.
7. Select the system language for the new user in the *Language* selection list.
8. Enter a password with at least 5 characters in the *Password* input field.
9. Enter the password again in the *Confirm password* input field.
10. Press the  button to finish creating the new user.

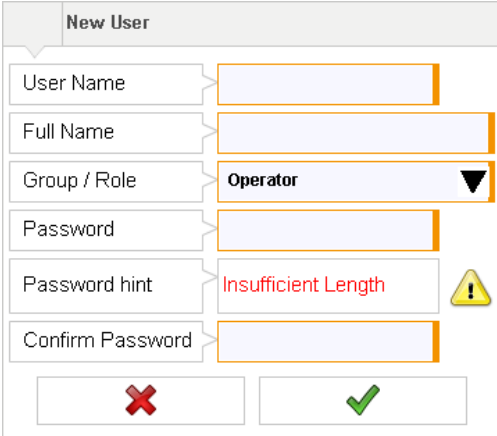
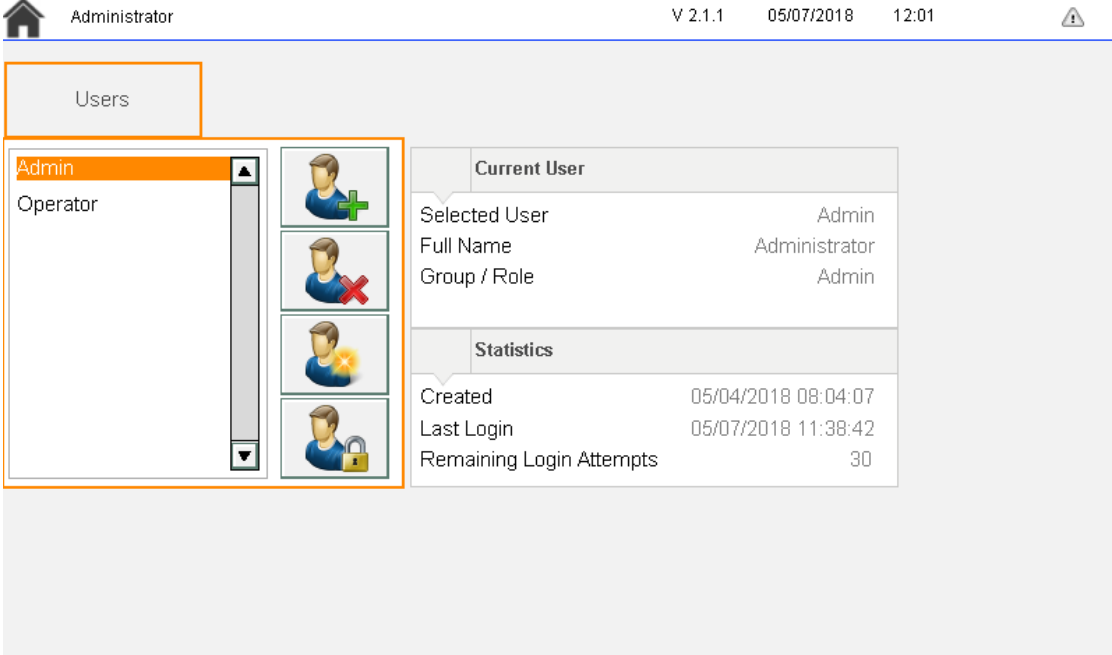


Fig. 24: Create user



Current User	
Selected User	Admin
Full Name	Administrator
Group / Role	Admin

Statistics	
Created	05/04/2018 08:04:07
Last Login	05/07/2018 11:38:42
Remaining Login Attempts	30

Fig. 25: User settings

## 7.7 System

Configure the basic settings of the JPC70 in the system settings.

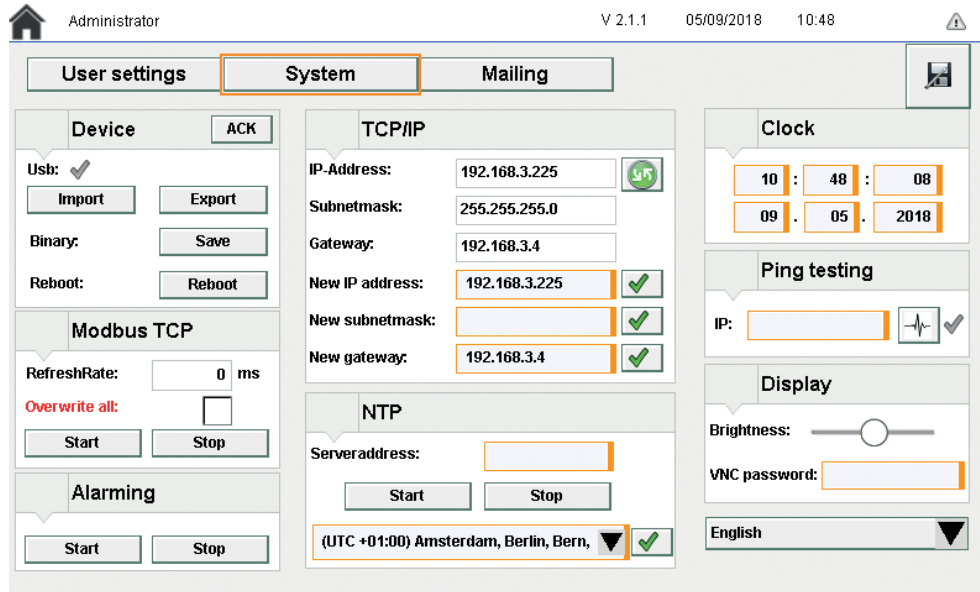


Fig. 26: JPC70 System settings

### 7.7.1 Device settings

You have the following options under the *Device* menu item:

- Import settings from a data carrier via USB interface.
- Export settings to a data carrier via USB interface.
- Save changes to the system settings.
- Initiate a system restart.

#### USB import/export

With the USB interfaces of the JPC70, you have the option of exporting the settings of a device and importing them to another device. For this purpose, proceed as follows:

1. Connect the JPC70 via one of the USB interfaces to a FAT32-formatted USB data carrier.
  - The check mark next to the *USB* labeling turns green and indicates that a USB data carrier was recognized.
2. Press the *Import/Export* button.

- In addition to the *Device* menu item, the updating symbol (🔄) appears and thus an active transfer via the USB interface is displayed.
- Once the import/export has been completed, the updating symbol is hidden.

#### NOTE

Save the configuration by pressing the *Save* button before activating a configuration by pressing  ✓.

### 7.7.2 Modbus TCP

Under the Modbus TCP menu item, you have the option of starting or stopping communication with the master device.

In the process, you can define whether the configuration of the connected devices should be overwritten with the configuration from the JPC70 with the *Overwrite all* selection box. If the devices in the bus are configured with different software, this check mark is not set.

For this purpose, press the *Start/Stop* button.

The time interval that the device currently requires to query the measured values of all slave devices is specified in the *Refresh Rate* field. This interval depends on the number of measurement devices.

### 7.7.3 TCP/IP settings

Configuration of the IP address, subnet mask and gateway is necessary for communication with the device via the Ethernet interface.

1. Enter the appropriate addresses in the New IP address, New subnet mask and New gateway input fields.
2. Confirm the entry by pressing the  button next to the input window.
3. Press the  button next to the IP address input field.
4. Press the Save button to save the configuration.

#### ATTENTION

##### Property 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.**

### 7.7.4 Time setting

The time for the JPC70 can be entered manually with the "Clock" menu item or obtained via an NTP server.

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

In order to configure the clock of your JPC70 via NTP, enter the address of the NTP server in the server address input field in the NTP menu item.

In order to configure the time zone choose the corresponding option from the selection list and activate it by pressing the button .

#### NOTE

Save the configuration by pressing the Save button before activating a configuration by pressing .

### 7.7.5 Display

You can adjust the brightness of the display and change the VNC password under the *Display* menu item.

#### VNC

The JPC70 supports the VNC Viewer software for communication with a PC via Ethernet.

For connection, the software requires the IP address of the JPC70 and a password, which you can assign here.

## 7.8 Email configuration

In addition to the messages on the interface, the JPC70 can also be configured to send email notifications.

The screenshot shows the 'Mailing' configuration page in the JPC70 web interface. At the top, there is a navigation bar with three tabs: 'User settings', 'System', and 'Mailing'. Below the tabs is a 'Configuration' section with an 'ACK' button and three buttons: 'Start', 'Stop', and 'Test send'. The configuration fields are as follows:

- Host IP:
- Username:
- Password:
- Sender:
- Receiver:
- Subject:
- Text:
- Interval:  ms

Fig. 27: JPC70Email configuration

An email server by means of which messages can be sent is required for this purpose.

In the process, you define an interval in which the JPC70 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.

In order to set up automatic notification via email, proceed as follows:

1. Enter the host address of the email server in the *Host IP* input field.
2. Enter the valid login data for the email server in the *User name* and *Password* input fields.
  - Learn about the configuration of the email server from your system administrator.
3. Enter a sender in the *Sender* input field. A meaningful sender name helps assign the notification.
4. Enter the email address of the person to be notified in the recipient field.
5. Enter a meaningful subject in the *Subject* field.
6. Enter descriptive text for the message in the *Text* field.
  - Press the *Transmission test* button to send a test email to the recipient.
7. Press the *Save* button to save the changes.
8. Start the email notification by pressing the *Start* button.

## 8. Service and maintenance

The device is subject to various safety tests prior to delivery and marked with a seal. If a device is opened, the safety tests must be repeated. A warranty is only assumed for unopened devices.

### 8.1 Repair and calibration

Repair work and calibration can only be carried out by the manufacturer.

### 8.2 Front foil

The front foil can be cleaned with a soft cloth and conventional household cleansers. Acids and acidic media must not be used for the cleaning.

### 8.3 Disposal

Please observe the national regulations. Dispose of individual parts, where necessary, depending on the properties and existing country-specific regulations, e.g. as:

- Electronic waste
- Plastic
- Metal

or commission a certified disposal company with the scrapping.

### 8.4 Service

In case of any questions which are not described in this manual, please contact the manufacture directly.

We require the following information to handle your inquiries:

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

Replacement of the battery takes place via the battery insert provided on the bottom side. In the process, ensure that the battery type is correct and the polarity is correct during replacement (positive terminal points to the rear side of the device; negative terminal points to the front of the device)!

#### **NOTE**

Grease or dirt on the contact surfaces creates transmission resistance which decreases the service life of the battery. Only hold the battery on the edges.

## 9. Technical data

General information	
Net weight	600 g
Dimensions	197 mm x 140 mm x 47.8 mm
Backlight (LED)	<ul style="list-style-type: none"> <li>Brightness: type 500 cd/m<sup>2</sup></li> <li>Service life in 25 °C ambient temperature <sup>1)</sup>: 50,000 h</li> </ul>
Cooling	Passive
Power button	No
Reset button	Yes
Status display (7 LEDs)	<ul style="list-style-type: none"> <li>Supply voltage OK</li> <li>Operating status</li> <li>Module status</li> <li>Ethernet</li> </ul>
Processor	ARM Cortex-A8, 1 GHz
Working memory	256 Mbyte DDRAM

Interfaces	
USB	2 x USB 2.0 type A rating 0.49 A
Ethernet	<ul style="list-style-type: none"> <li>1x RJ45 shielded</li> <li>Max. transmission rate 10/100 Mbit/s</li> <li>Cable type: 10BASE-T/100BASE-TX</li> </ul>

Display	
Type	Color TFT
Diagonal	7"
Colors	16.7 million (RGB, 8 bits per channel)
Resolution	WVGA, 800 x 480 pixels
Contrast	typically 600:1
Touchscreen	Yes

Electrical properties	
Supply voltage	24 V DC -15% / +20%
Max. power consumption <sup>2)</sup>	6.2 W
Pole reversal protection	Yes

Ambient conditions	
Protection rating according to EN 60529	IP65 front side, IP20 rear side
Installation elevation above sea level	0 to 2000 m
Operating temperature	-20 to 60 °C
Storage and transport temperature	-20 to 70 °C
Air humidity	5 to 96 %, non-condensing

1) Service life indicates the time after which the lighting still achieves 50% of the initial brightness. Reduction of brightness by 50% can increase the service life by about 50%.

2) Without USB interfaces

9.1 Dimensional drawings

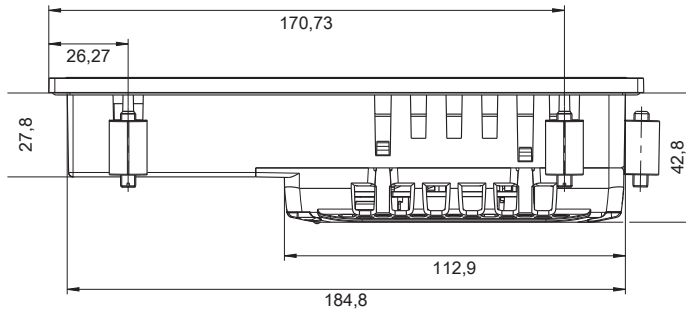


Fig. 28: View from above

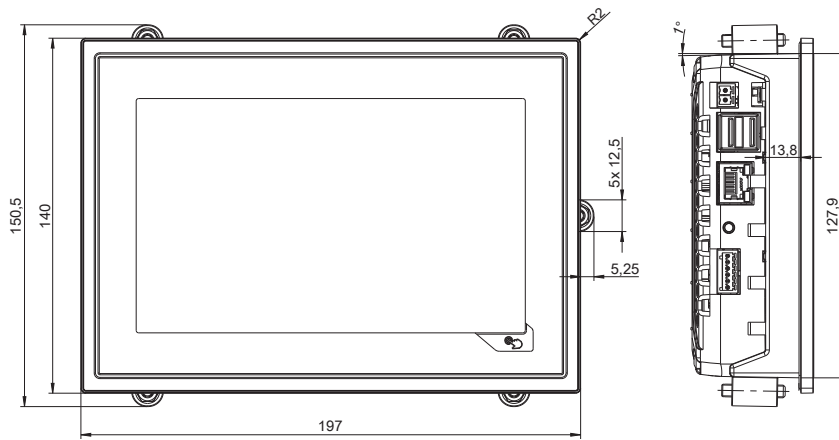


Fig. 29: Front view

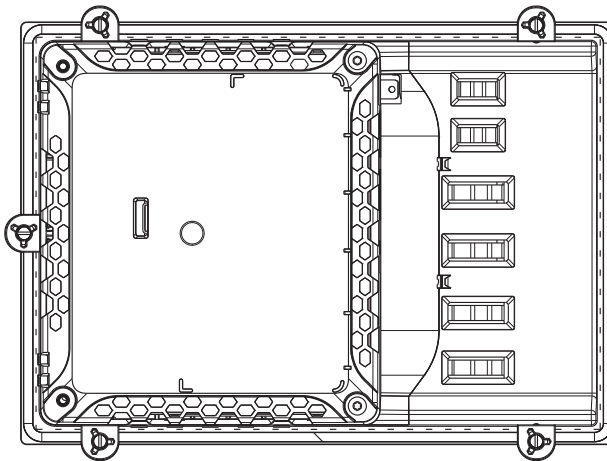


Fig. 30: Rear view