



► PMI v807/v812/v815

PILZ
THE SPIRIT OF SAFETY

Operating Manual-1005199-EN-08
- Operator terminals



This document is the original document.

Where unavoidable, for reasons of readability, the masculine form has been selected when formulating this document. We do assure you that all persons are regarded without discrimination and on an equal basis.

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SD means Secure Digital

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1 Introduction

1.1 Validity of documentation

This documentation is valid for the product PMI v8XX from Firmware Version 2.0.x.

This operating manual explains the function and operation, describes the installation and provides guidelines on how to connect the product.

1.1.1 Retaining the documentation

This documentation is intended for instruction and should be retained for future reference.

1.2 Definition of symbols

Information that is particularly important is identified as follows:



DANGER!

This warning must be heeded! It warns of a hazardous situation that poses an immediate threat of serious injury and death and indicates preventive measures that can be taken.



WARNING!

This warning must be heeded! It warns of a hazardous situation that could lead to serious injury and death and indicates preventive measures that can be taken.



CAUTION!

This refers to a hazard that can lead to a less serious or minor injury plus material damage, and also provides information on preventive measures that can be taken.



NOTICE

This describes a situation in which the product or devices could be damaged and also provides information on preventive measures that can be taken. It also highlights areas within the text that are of particular importance.



INFORMATION

This gives advice on applications and provides information on special features.

2 Overview

2.1 Product design

The PMI is an operator terminal that is used to operate and monitor technical processes.

2.1.1 Product features

- ▶ Capacitive touchscreen
- ▶ Memory:
 - 4 GB RAM
- ▶ 64 GB SSD hard disk
- ▶ Interfaces:
 - 2 Gigabit Ethernet (GbE)
 - 1 HDMI
 - 1 VGA
 - 1 USB 3.0
 - 2 USB 2.0
- ▶ LEDs (only on PMI v812 and PMI v815):
 - Power
 - Drive Activity
- ▶ Pre-installed software:
 - PMI v8 Assistant
 - PASvisu Server and Client
 - PNOZmulti OPC Server
 - PSS 4000 Firmware (OPC Server UA)

2.2 Front view

2.2.1 PMI v807

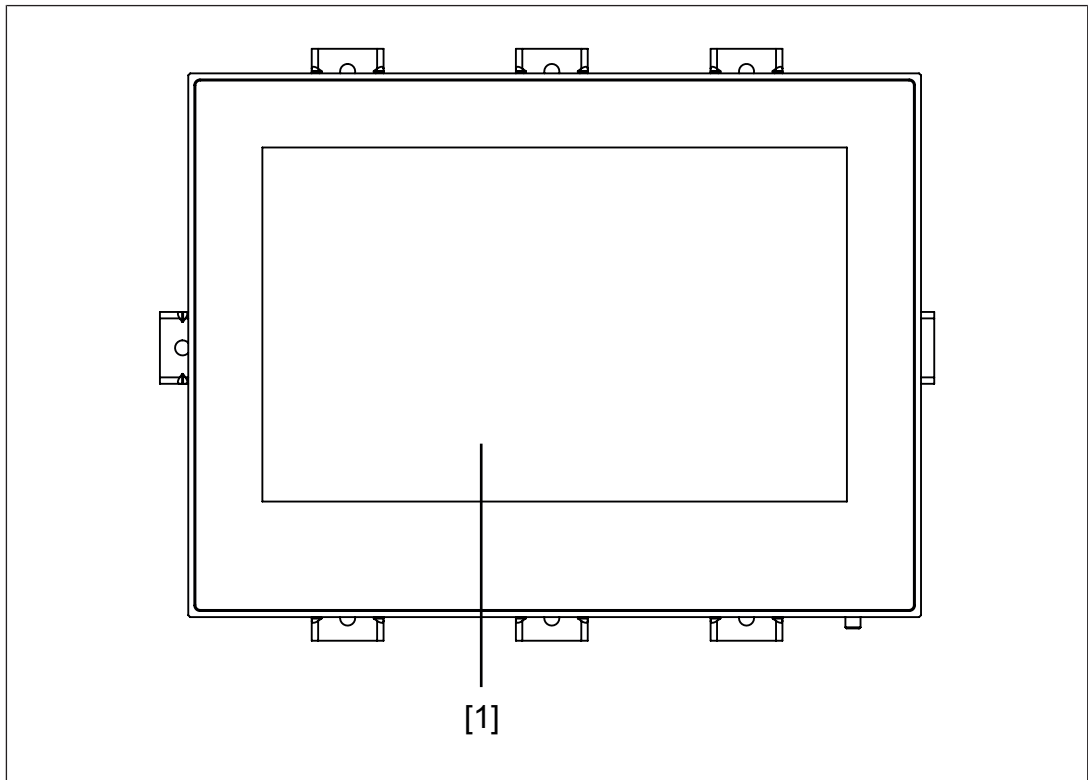


Fig.: Front view PMI v807

Legend

[1] Touchscreen (see [Technical details](#)  42)

2.2.2 PMI v812

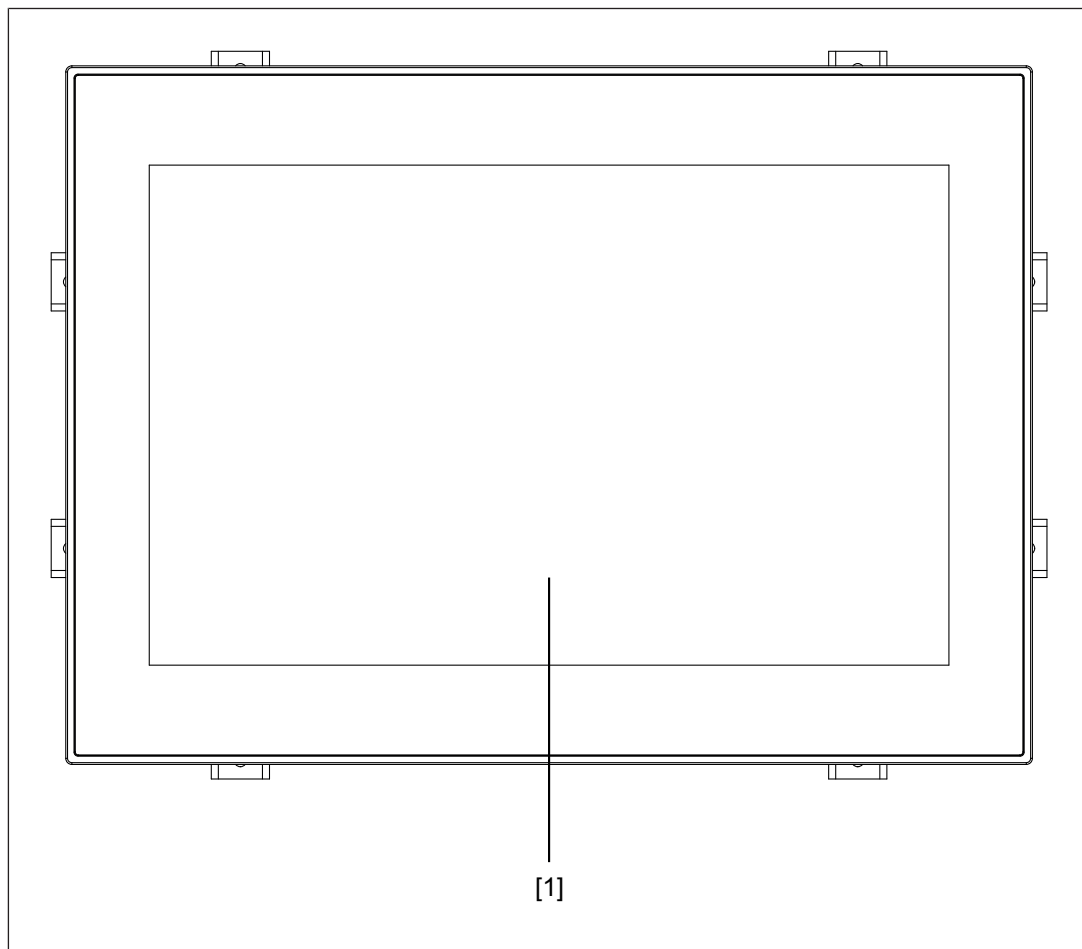


Fig.: Front view PMI v812

Legend

[1] Touchscreen (see [Technical details](#)  42)

2.2.3 PMI v815

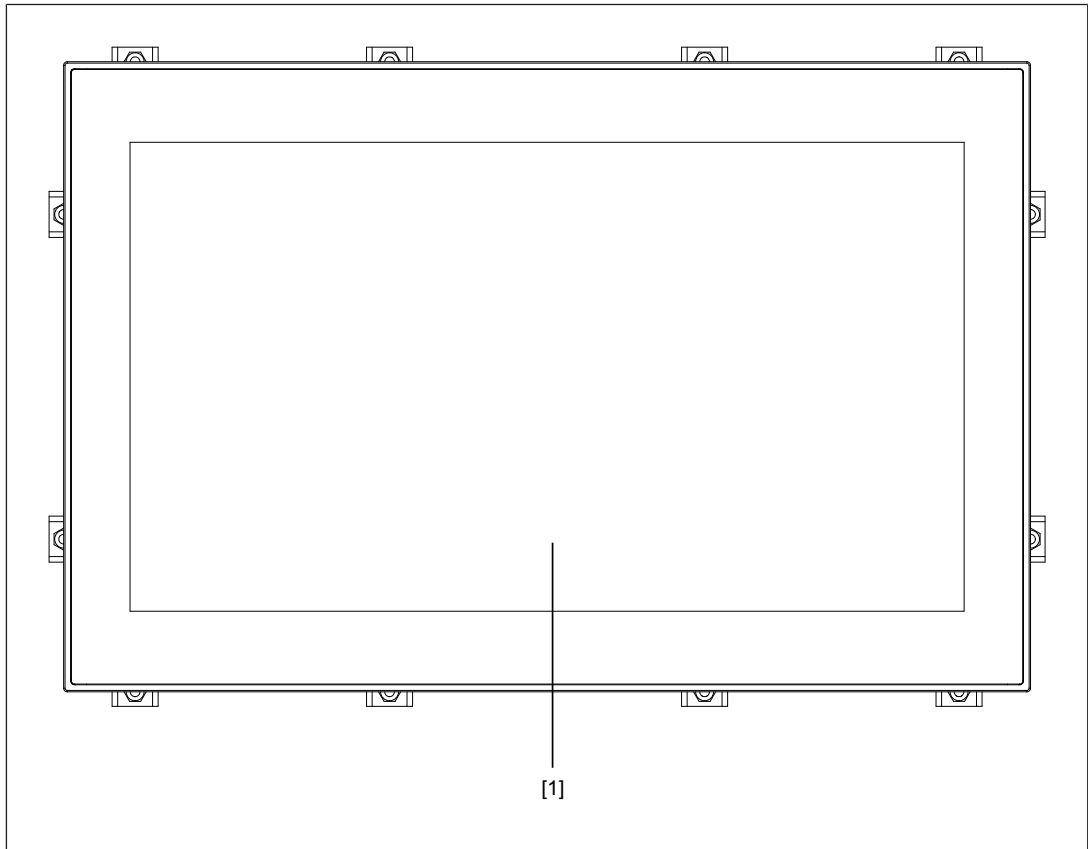


Fig.: Front view PMI v815

Legend

[1] Touchscreen (see [Technical details](#)  42)

2.3 Scope of supply

- ▶ Operator terminal
- ▶ Fastening kit with screws and clamping brackets
- ▶ Connector plug for power supply

3 Safety

3.1 Intended use

This product is used to operate and monitor technical processes.

The following software is pre-installed for this purpose:

- ▶ PMI v8 Assistant
- ▶ PASvisu Server and Client, already licensed:
 - 1 Client
 - 500 external variables
- ▶ PNOZmulti OPC Server
- ▶ PSS 4000 Firmware (OPC Server UA)

This product includes third-party software. Pilz GmbH & Co. KG does not accept liability for updates/patches to the third-party software. Updates/patches are made at your own risk.



CAUTION!

The product is not suitable for use in applications with stringent safety requirements (e.g. E-STOP).

Improper use

The following is deemed improper use in particular:

- ▶ Any component, technical or electrical modification to the product,
- ▶ Use of the product outside the areas described in this operating manual,
- ▶ Use of the product outside the technical details (see chapter entitled [Technical Details](#)  42).



NOTICE

EMC-compliant electrical installation

The product is designed for use in an industrial environment. The product may cause interference if installed in other environments. If installed in other environments, measures should be taken to comply with the applicable standards and directives for the respective installation site with regard to interference.

3.1.1 Supported hardware and software

- ▶ PNOZmulti base units from the following versions:
 - Configurable control systems PNOZmulti 2
 - PNOZ m B0
 - PNOZ m B0.1
 - PNOZ m B1
 - PNOZ m B1 Burner
 - ▶ PMI v8 Assistant from Version 2.2.x
 - ▶ PNOZmulti Configurator from Version 11.4.0
 - ▶ PAS4000 from Version 1.28.0
 - ▶ PASvisu Builder from Version 1.15.0
- Further information on PASvisu can be found in the PASvisu online help.

3.1.2 Third-party manufacturer licence information

The product contains open source software, whose terms of use could further limit the product's application area. It is essential that you observe the third-party manufacturer licence information.

Further information is available by calling up the **Control** → **Legal version information** tab in the PMI v8 Assistant for the PMI v8XX.

3.2 Safety regulations

3.2.1 Use of qualified personnel

The products may only be assembled, installed, programmed, commissioned, operated, de-commissioned and maintained by persons who are competent to do so.

A competent person is a qualified and knowledgeable person who, because of their training, experience and current professional activity, has the specialist knowledge required. In order to inspect, assess and handle products, devices, systems, plant and machinery, this person must be familiar with the state of the art and the applicable national, European and international laws, directives and standards.

It is the company's responsibility only to employ personnel who

- ▶ Are familiar with the basic regulations concerning health and safety / accident prevention,
- ▶ Have read and understood the information provided in the section entitled Safety
- ▶ Have a good knowledge of the generic and specialist standards applicable to the specific application.

3.2.2 Warranty and liability

All claims to warranty and liability will be rendered invalid if

- ▶ The product was used contrary to the purpose for which it is intended,
- ▶ Damage can be attributed to not having followed the guidelines in the manual,
- ▶ Operating personnel are not suitably qualified,
- ▶ Any type of modification has been made (e.g. exchanging components on the PCB boards, soldering work etc.).

3.2.3 Disposal

- ▶ When decommissioning, please comply with local regulations regarding the disposal of electronic devices, such as the Electrical and Electronic Equipment Act.

3.3 Product-specific safety regulations

Before you install or commission the system, you should refer to any guidelines laid down by the control manufacturer or operator.

- ▶ Use only the supplied connector for the supply voltage.
- ▶ For DC connection:
It should be possible to switch the DC source on and off using an isolating switch. The product is separated completely from the DC main current source only when the DC cable is separated either from the power source or from the product. Therefore, the DC cable and its connections must always be easily accessible.
- ▶ For connecting to the supply via an external AC/DC adapter:
The main power cable of the external AC/DC adapter is used as a separating device. Therefore, the socket of the AC source must be near the product and must be easily accessible.
- ▶ Do not set up the product in direct sunlight, near a heat source or at a damp location. Ensure that the product has sufficient ventilation.
- ▶ At the system interfaces, only those devices and components can be connected that meet the requirements of a SELV circuit (Safety Extra Low Voltage) in accordance with EN 60950.
- ▶ All the connector cable plugs must be screwed or latched to the housing.
- ▶ The product generates heat during operation. Ensure that there is sufficient ventilation. Do not cover the product's air inlets and outlets.
- ▶ The external supply must meet the criteria for SELV (Safety Extra Low Voltage) and be < 240 VA in accordance with UL 60950-01.
- ▶ UL Canada:
The external power supply must meet the criteria for SELV (Safety Extra Low Voltage) and be < 240 VA in accordance with UL 60950-1.
- ▶ Clean the display
Clean the surface of your display using a dry and clean cloth to remove dust and dirt particles.
Further information on care and maintenance of the touchscreen can be found under [Cleaning the touchscreen](#) [ 41].

4 Security

To secure plants, systems, machines and networks against cyberthreats it is necessary to implement (and continuously maintain) an overall industrial security concept that is state of the art.

Perform a risk assessment in accordance with VDI/VDE 2182 or IEC 62443-3-2 and plan the security measures with care. If necessary, seek advice from Pilz Customer Support.

4.1 Implemented security measures

- ▶ Automatic updates for Windows are activated.
Updates on productive plants should only be carried out intentionally. If you do not require automatic Windows updates, they can be deactivated via the corresponding services.
- ▶ To protect against manipulation, the product's supply voltage is protected by a sealed cover in its original delivery status.

4.2 Required security measures

- ▶ The product is not protected from physical manipulation or from reading of memory contents during physical access. Use appropriate measures to ensure that there is no physical access by unauthorised persons. You should also use security seals so that you can detect any manipulation of the product or interfaces. Installation inside a lockable control cabinet is recommended as a minimum measure.
- ▶ The configuration computer that accesses the product has to be protected from attacks by a firewall or other suitable measures. We recommend that a virus scanner is used on this configuration computer and updated regularly.
- ▶ If necessary, protect the configuration computer and the product from unauthorised use by assigning passwords and taking further measures if required. We also recommend that the user logged on to this configuration computer does not have administrator rights.
- ▶ Protect the product from unauthorised data exchange via the network by using a firewall or providing other appropriate measures. Only allow the data exchange that's required for the application. Any data exchange that is not required for the application must be prevented by the firewall.
- ▶ The "User" and "Admin" users are created on the product. When the product is started, the "User" user is logged in by default, without a password prompt (automatic login). The "Admin" user, with a password prompt, is required to start the PMI v8 Assistant, for example. When logging in for the first time with the default password, use the PMI v8 Assistant to assign a new password for the "Admin" user. When assigning the password, the Windows 10 password rules apply (see also [User \[📖 27\]](#)).
- ▶ Only assign strong passwords and handle the passwords carefully. Be guided by generally accepted guidelines such as NIST 800-63b for example.
- ▶ As soon as possible, install firmware updates that Pilz provides for the product.
- ▶ The product permits firmware downgrades. Before you downgrade, you should check what firmware version you install to prevent re-opening up safety gaps that are already known and that were closed by a firmware update.
- ▶ Use only one USB memory from a secure source. A manipulated USB memory could compromise the system.

- Before disposal, the product must be safely decommissioned. To do this, all the data must be deleted from the device.
 - Set the configuration back to its default settings or delete the configuration.
 - Switch off the product.
 - If the product includes a removable data medium, remove it and format it at the computer. Do not carry out a quick formatting. Alternatively, you can use a program to safely delete data or destroy the memory mechanically.

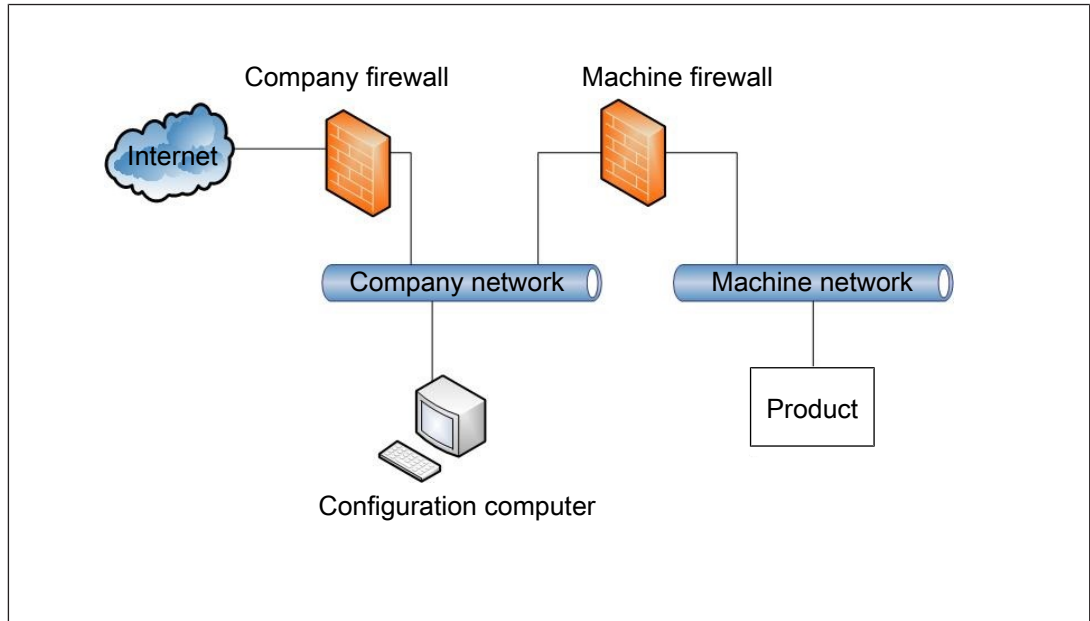


Fig.: Example network topology

- Note the [network data](#) [44] for risk analysis and the security measures.

5 Function description

5.1 Product properties

The operator terminal has a memory, on which the software PMI v8 Assistant, PASvisu Server, PNOZmulti OPC Server and PSS 4000 firmware (OPC Server UA) is pre-installed. With the help of this software, processes can be shown on the display and directly influenced via the touchscreen. An Ethernet interface is available for the transfer of data, e.g. diagnostic data, and for communication with other subscribers.

5.2 Side view

5.2.1 PMI v807

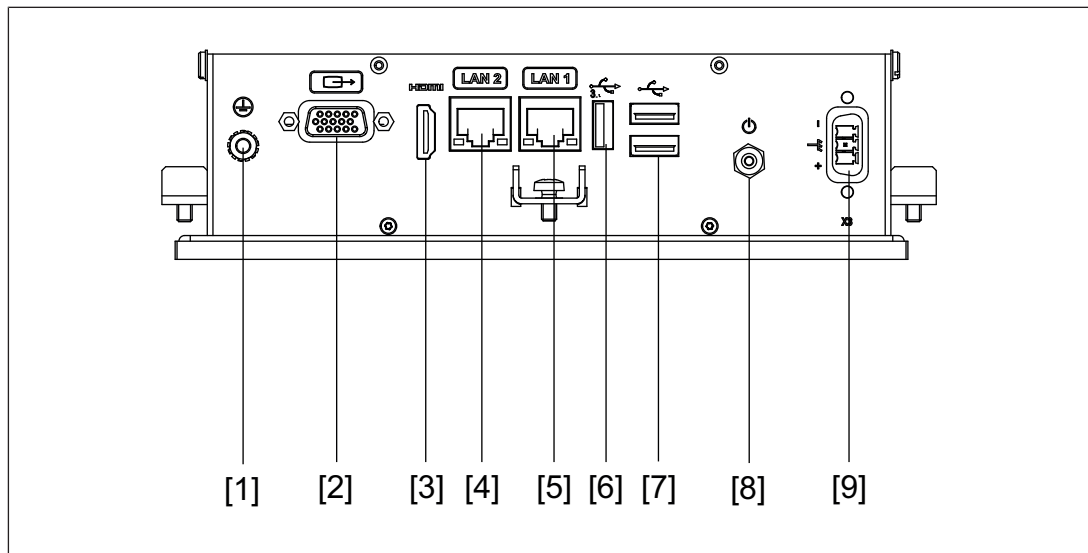


Fig.: Side view PMI v807

Legend

- [1] Functional earth
- [2] VGA interface
- [3] HDMI interface
- [4] Ethernet interface (GbE)
- [5] Ethernet interface (GbE)
- [6] USB 3.0 interface
- [7] 2 USB 2.0 interfaces
- [8] Power button
- [9] Supply voltage

5.2.2 PMI v812

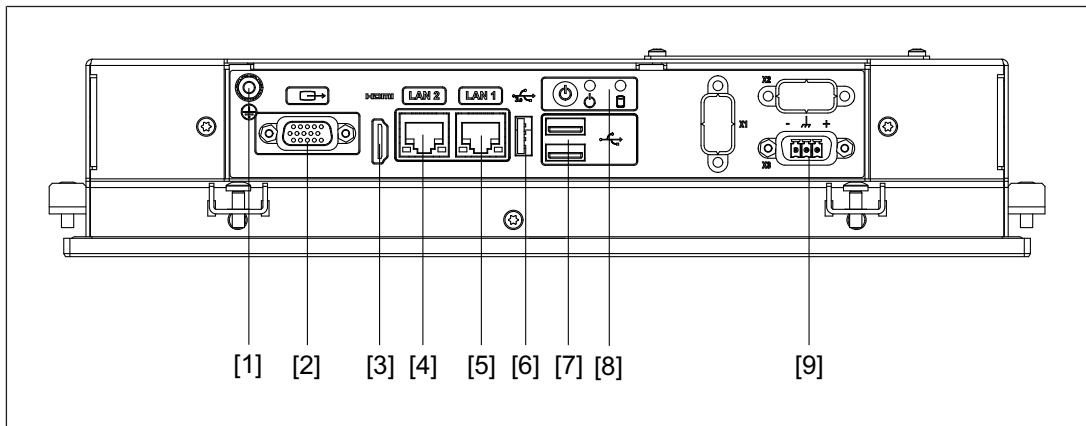


Fig.: Side view PMI v812

Legend

- [1] Functional earth
- [2] VGA interface
- [3] HDMI interface
- [4] Ethernet interface (GbE)
- [5] Ethernet interface (GbE)
- [6] USB 3.0 interface
- [7] 2 USB 2.0 interfaces
- [8] Power button/LEDs
- [9] Supply voltage

5.2.3 PMI v815

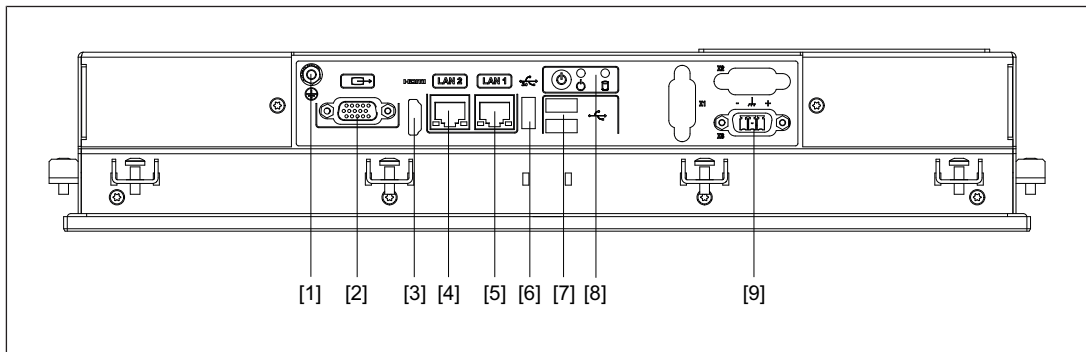


Fig.: Side view PMI v815

Legend

- [1] Functional earth
- [2] VGA interface
- [3] HDMI interface
- [4] Ethernet interface (GbE)
- [5] Ethernet interface (GbE)
- [6] USB 3.0 interface
- [7] 2 USB 2.0 interfaces
- [8] Power button/LEDs
- [9] Supply voltage

6 Installation

6.1 Safety



NOTICE

Damage due to electrostatic discharge!

Electrostatic discharge can damage components. Ensure against discharge before touching the product, e.g. by touching an earthed, conductive surface or by wearing an earthed armband.

Please read the safety guidelines before assembling and installing the product.

Before you install or commission the system, you should refer to any guidelines laid down by the plant manufacturer or operator.

6.1.1 Installation site and product environment

- ▶ Keep as large a distance as possible between the system and any electromagnetic fields. This is particularly important when frequency converters are nearby.
- ▶ Ensure that there is sufficient ventilation. Do not cover the product's air inlets and outlets.
- ▶ Do not set up the product in direct sunlight, near a heat source or at a damp location.
- ▶ Do not use chemicals close to the product.
- ▶ Ensure the maximum ambient and operating temperatures are not exceeded.
- ▶ Ensure that neither liquids nor objects can enter the product at any time.
- ▶ Do **not** use the product in environments with flammable materials.

6.2 Dimensions

6.2.1 PMI v807

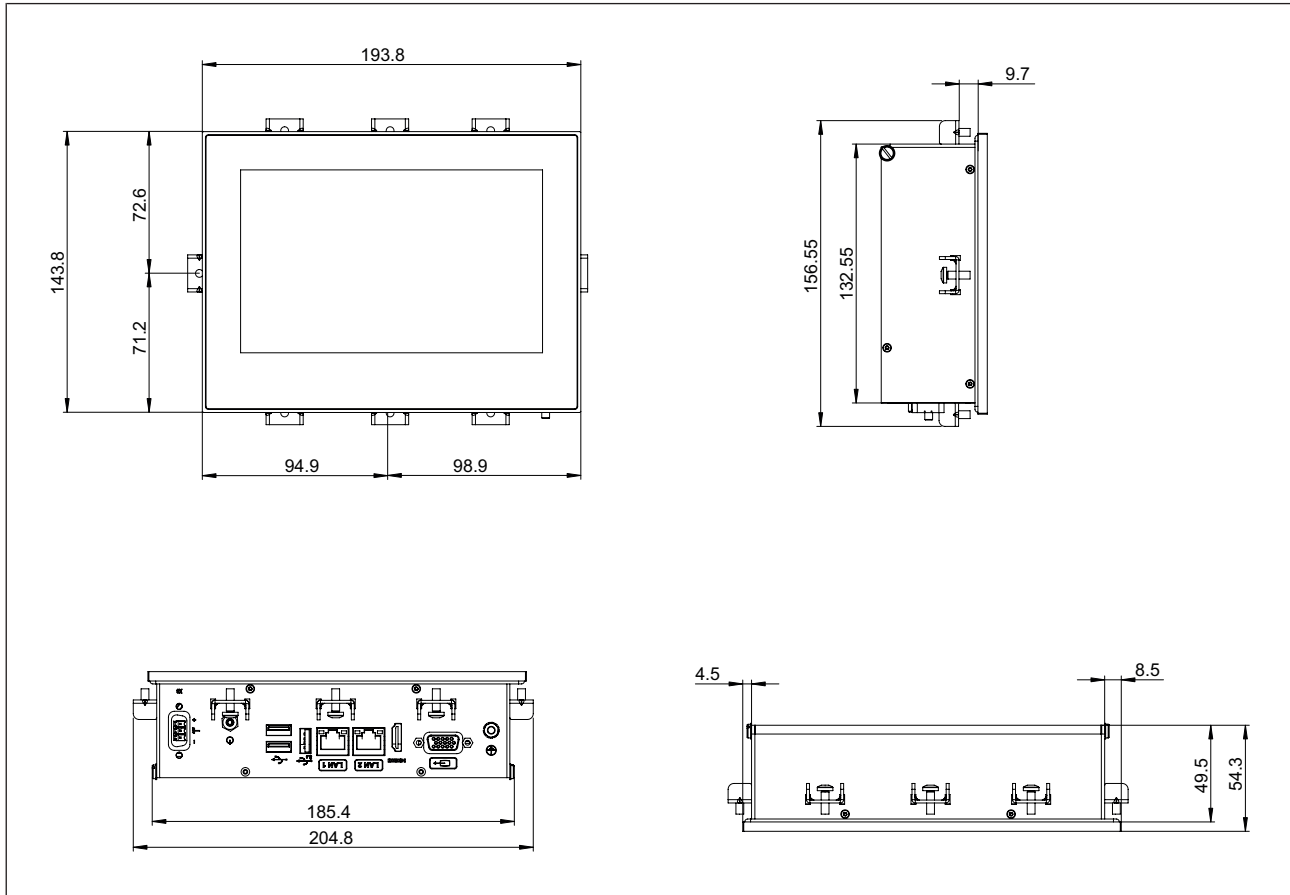


Fig.: Dimensions PMI v807

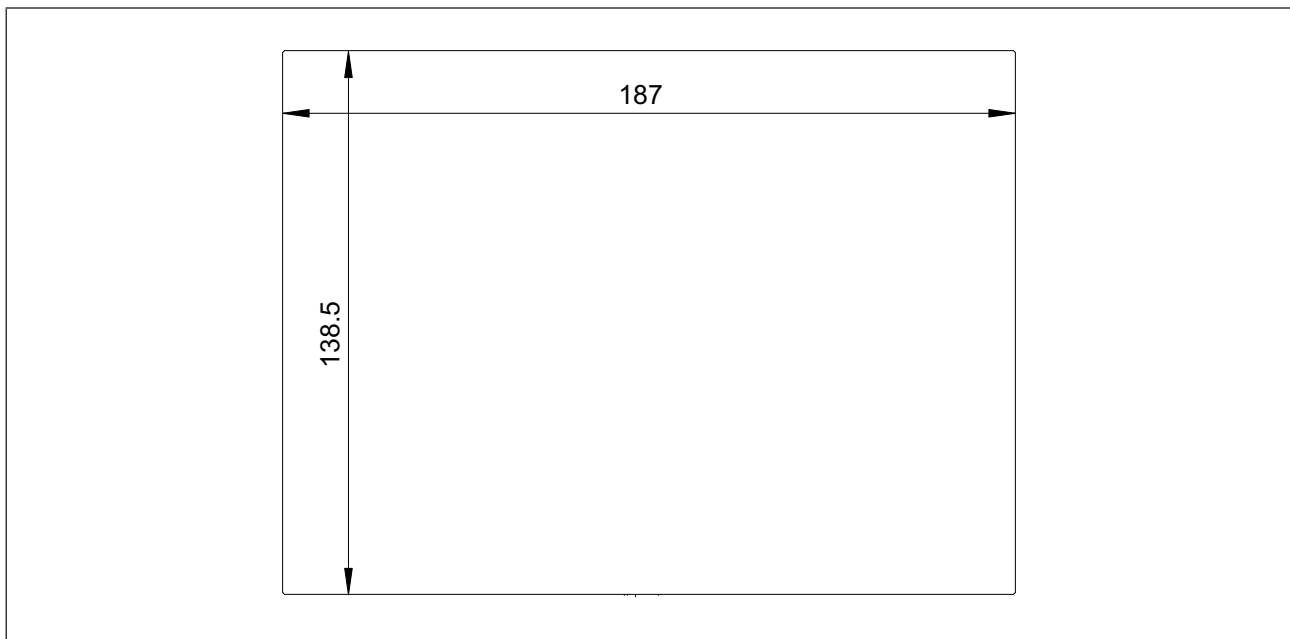


Fig.: Mounting cutout PMI v807

6.2.2 PMI v812

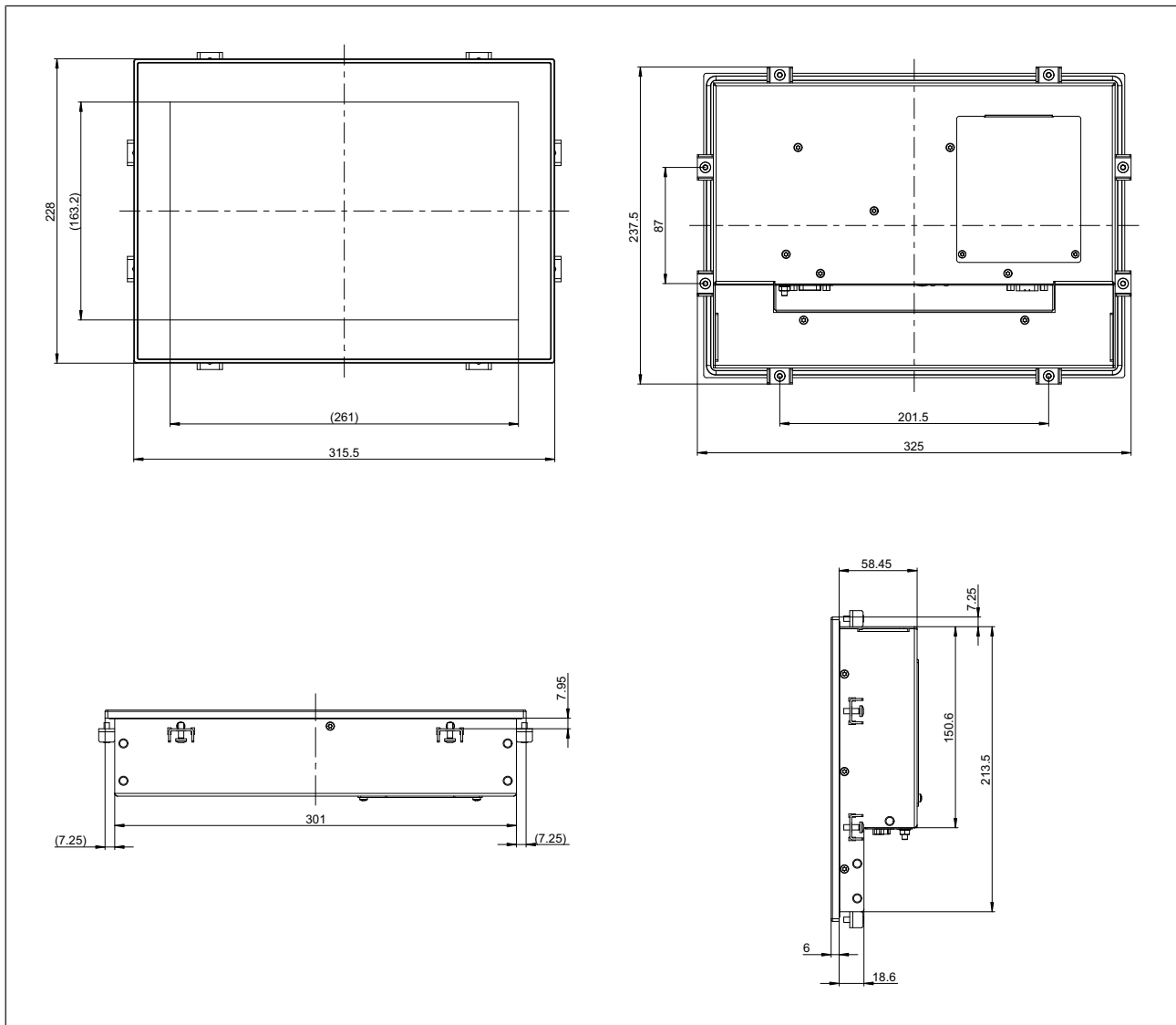


Fig.: Dimensions PMI v812

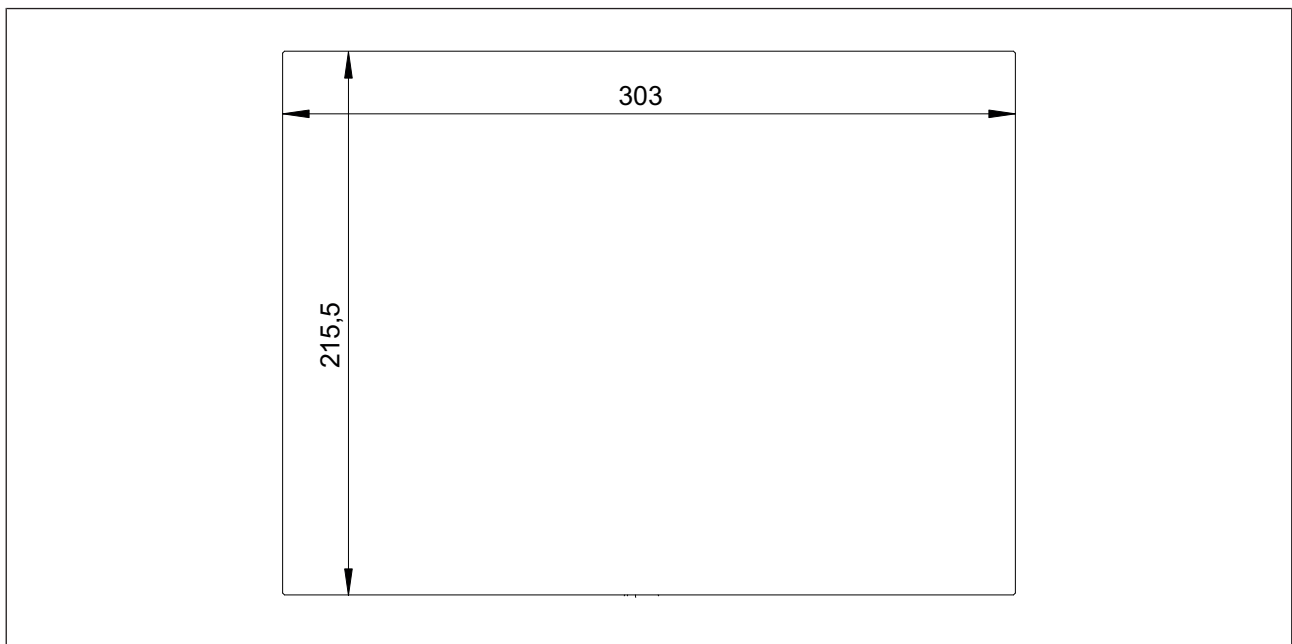


Fig.: Mounting cutout PMI v812

6.2.3 PMI v815

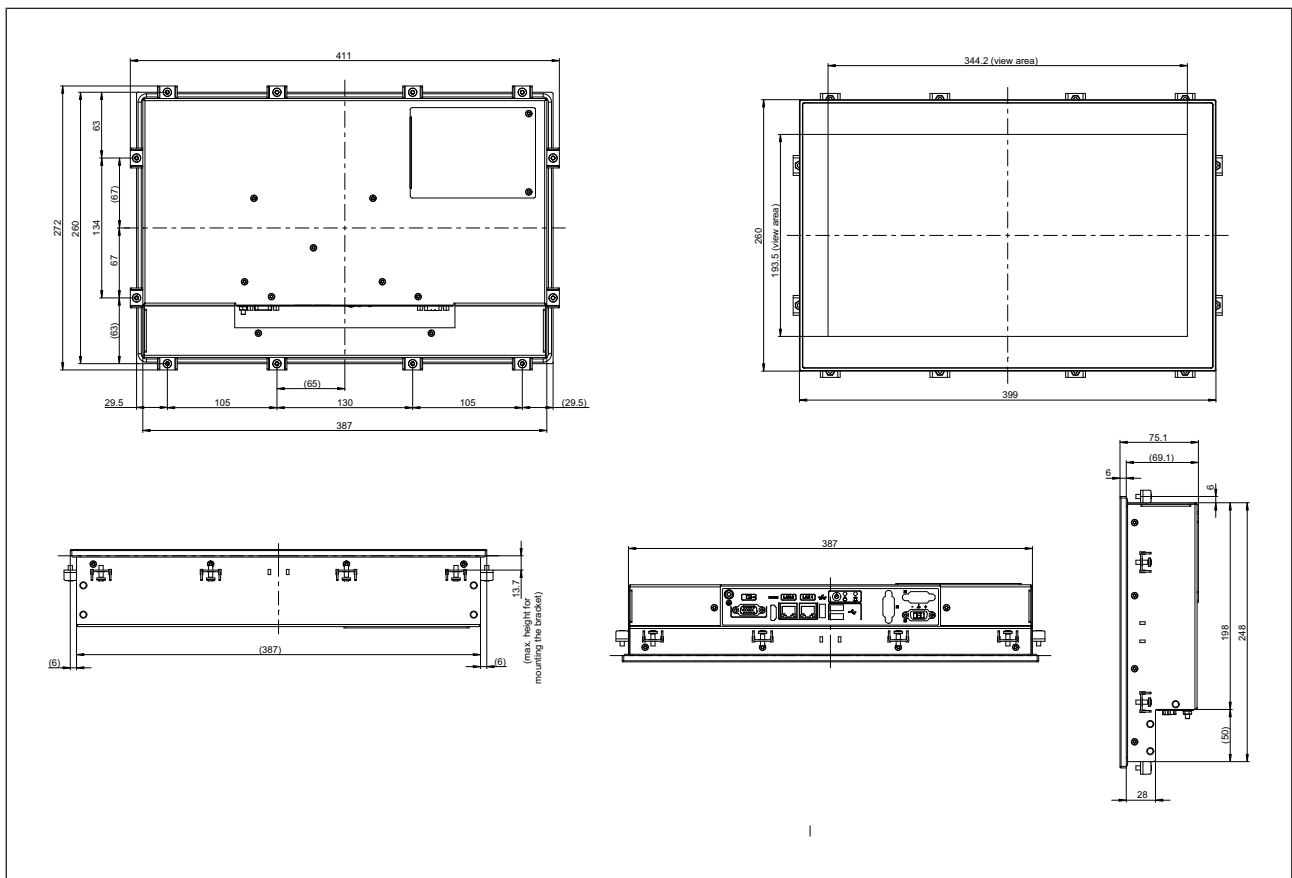


Fig.: Dimensions PMI v815

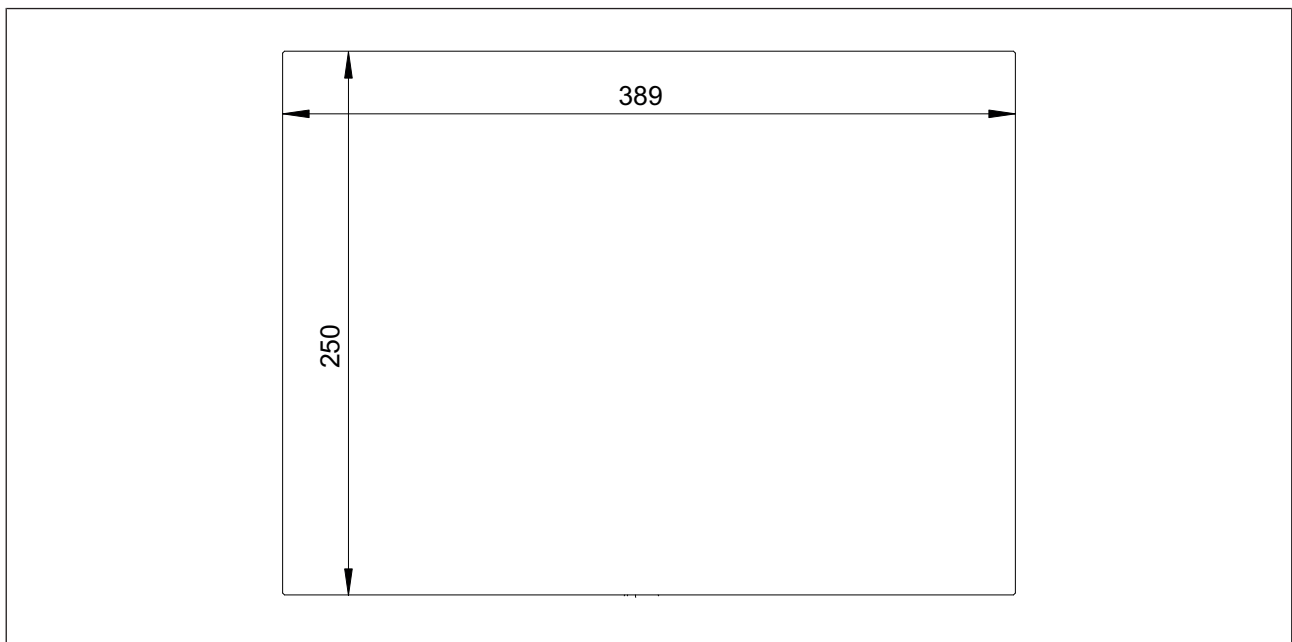
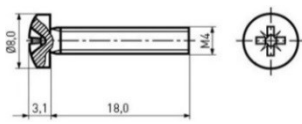
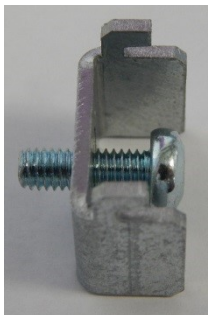
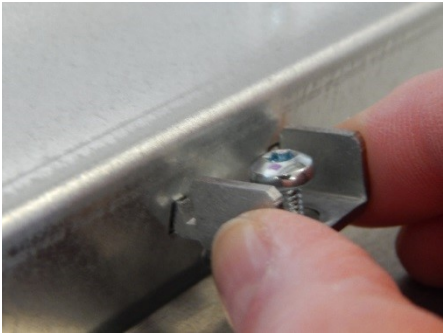


Fig.: Mounting cutout PMI v815

6.3 Installing the product

► Note the torque setting of the fixing screws of 0,8 Nm +/- 0.2 Nm.

Step	Installation	Description
1	 	► Use the fastening kit with screws and clamping brackets ► Raised head screw Philips M4x12 ► DIN 7985 – ISO 7045 ► Use a Philips head screwdriver
2		► Pre-installation: Insert the screw in the clamping bracket ► Ensure that the direction is right!

Step	Installation	Description
3		► Insert the clamping bracket into your system
4		► Use the screw to fix the bracket to the housing
5		► Repeat step 4 for all the positions of the clamping bracket

7 Wiring

7.1 Supply voltage

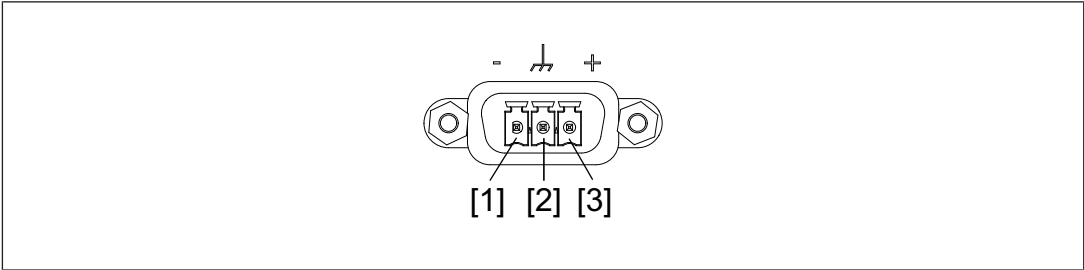
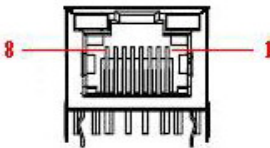
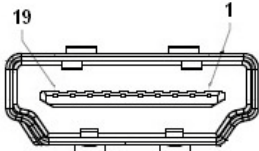


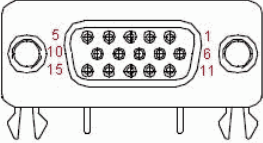
Fig.: Layout of supply voltage connector

- ▶ 1: 0 V
- ▶ 2: Functional earth
- ▶ 3: + 24 V DC

7.2 Interfaces

USB 2.0	Pin	Assignment
	1	+USB_VCC
	2	USBA_A-
	3	USBA_A++
	4	GND
	5	+USB_VCC
	6	USBB_B-
	7	USBB_B++
	8	GND
USB 3.0	Pin	Assignment
	1	+USB_VCC
	2	USB_D-
	3	USB_D+
	4	GND
	5	USB_RX-
	6	USB_RX++
	7	GND
	8	USB_TX-
	9	USB_TX++

Ethernet	Pin	Assignment
	1	TX1+
	2	TX1-
	3	TX2+
	4	TX3+
	5	TX3-
	6	TX2-
	7	TX4+
	8	TX4-
HDMI	Pin	Assignment
	1	TMDS Data2+
	2	GND
	3	TMDS Data2-
	4	TMDS Data1+
	5	GND
	6	TMDS Data1-
	7	TMDS Data0++
	8	GND
	9	TMDS Data0-
	10	TMDS clock+
	11	GND
	12	TMDS clock -
	13	Reserved
	14	Reserved
	15	DDC_CLK
	16	DDC_DATA
	17	GND
	18	+5 V power
	19	Hot Plug detection

VGA	Pin	Assignment
	1	Red
	2	Green
	3	Blue
	4	n.c.
	5	GND
	6	GND
	7	GND
	8	GND
	9	VCC
	10	GND
	11	n.c.
	12	DDC data
	13	Hsync
	14	Vsync
	15	DDC clock

8 Commissioning

Connect the power supply to the power connector on the back of the PMI v8XX. The PMI v8XX starts automatically when the supply voltage has been switched on. If the PMI v8XX was shut down, it must be switched on via the Power button.

Procedure after power-up

There may be a delay of several seconds between power-up and the unit being ready for operation.

8.1 User

When the PMI v8XX is started, the "User" user is logged in by default, without a password prompt. 2 users are created:

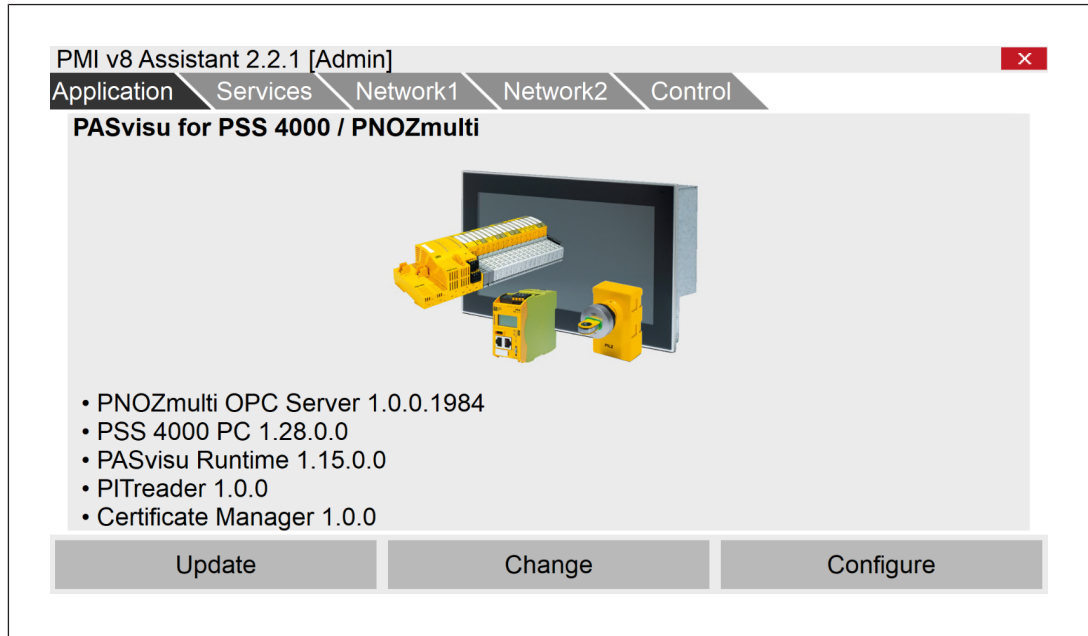
User	Password
Admin	admin
User	user

Using the PMI v8 Assistant, assign a new password for the "Admin" user.

8.2 Setting up the product with the PMI v8 Assistant

After starting the PMI v8XX, you have the option to make basic settings for the product in the PMI v8 Assistant. To do this, confirm the licence information, click on **Start PMI Assistant** within 5 seconds and then enter the password for the "Admin" user.

The PMI v8 Assistant is opened with the following view:



In this view you have the following options:

- ▶ Update PMI v8 Assistant, see [Update the PMI v8 Assistant](#) [28]
- ▶ Change application package, see [Change application package](#) [31]
- ▶ Configure application package, see [Configure application package](#) [32].

8.2.1 Update the PMI v8 Assistant



NOTICE

After reinstalling or updating an application package, it may be necessary to transfer the projects (PASvisu, PAS4000) to the PMI v8XX again. For this reason, you should make sure that the projects are available.

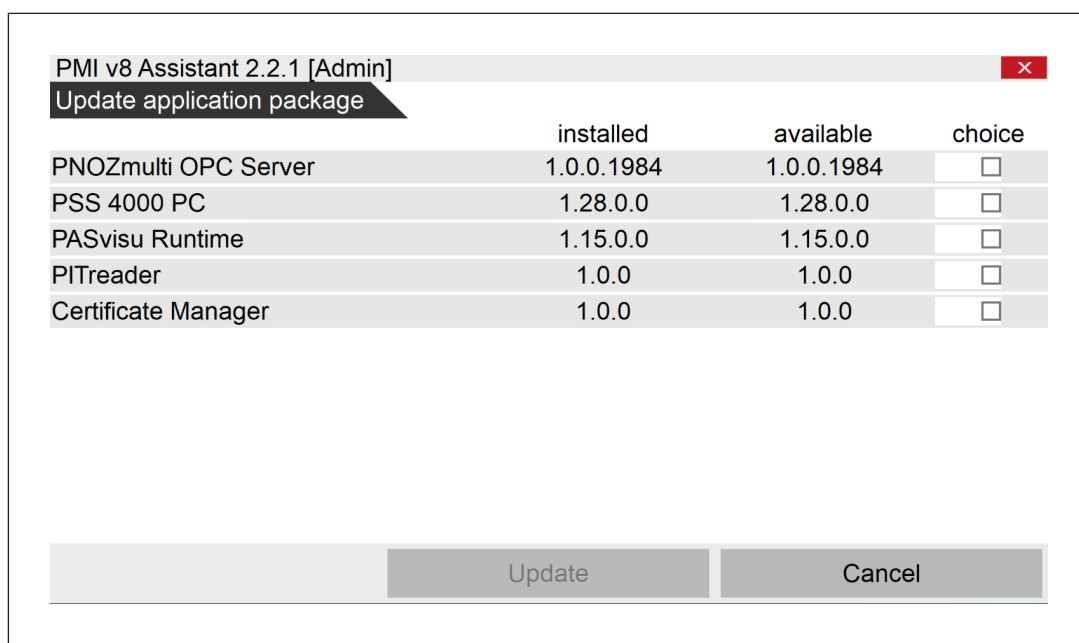
The PMI v8 Assistant can be updated when an update is available. Before updating to the latest version of the PMI v8 Assistant, make sure that you have installed the latest PMI v8 Recovery Image.

The current installation file is available as a zip file in the download area of the Pilz homepage (www.pilz.de -> Downloads).

If you wish to update the PMI v8 Assistant, proceed as follows:

1. Download the new version of PMI v8 Assistant and unpack the Zip file.
2. Exit the PMI v8 Assistant on the PMI v8XX.
3. Rename the folder "PMIAssistant" in the directory C:\Pilz (e.g. to "PMIAssistant_old").

4. Rename the folder "PMIStarter" in the directory C:\Pilz (e.g. to "PMIStarter_old").
5. Using a USB stick or via FTP, transfer the unpacked folders "PMIAssistant" and "PMIStarter" to the PMI v8XX in the directory C:\Pilz.
6. Restart the PMI v8XX.
7. Click on **Start PMI Assistant**.
8. Update the currently installed application package under **Application -> Update**. For each component, the installed version and, if applicable, the latest available version are shown. Select the component that is to be updated and click on **Update**. We recommend that you always update all the components at the same time.



9. After installation, you can delete the two renamed folders (see item 3 and 4).

8.2.2 Downgrading PMI v8 Assistant



NOTICE

After reinstalling or downgrading an application package, it may be necessary to transfer the projects (PASvisu, PAS4000) to the PMI v8XX again. For this reason, you should make sure that the projects are available.

If you wish to replace the PMI v8 Assistant with an older version, proceed as follows:

1. Download an earlier version of the PMI v8 Assistant from the Pilz homepage and unpack the Zip file.
2. Start the PMI v8 Assistant on the PMI v8XX.
3. Select **Application -> Change -> Uninstall Application Package** and click on **Install**.
4. Once installed successfully, exit the PMI v8 Assistant.
5. Rename the folder "PMIAssistant" in the directory C:\Pilz (e.g. to "PMIAssistant_new").
6. Rename the folder "PMIStarter" in the directory C:\Pilz (e.g. to "PMIStarter_new").
7. Using a USB stick or via FTP, transfer the unpacked folders "PMIAssistant" and "PMIStarter" to the PMI v8XX in the directory C:\Pilz.
8. Restart the PMI v8XX.
9. Click on **Start PMI Assistant**.
10. You can select and install the desired application package under **Application -> Change**.
11. After installation, you can delete the two renamed folders (see item 5 and 6).

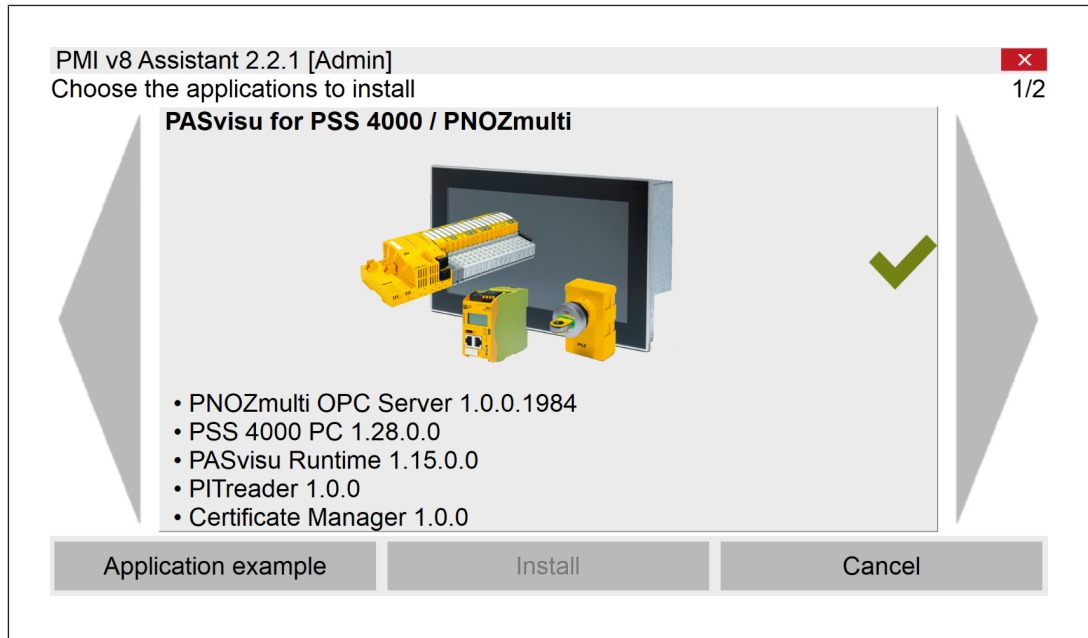


NOTICE

We recommend that you always use the latest version of the PMI v8 Assistant.

8.2.3 Change application package

In the tab **Application -> Change** you can see the selection of the currently available application packages. The currently installed application package is marked with a green tick.



Use the arrows left and right to navigate to the currently available application packages and then you can uninstall the installed application package.

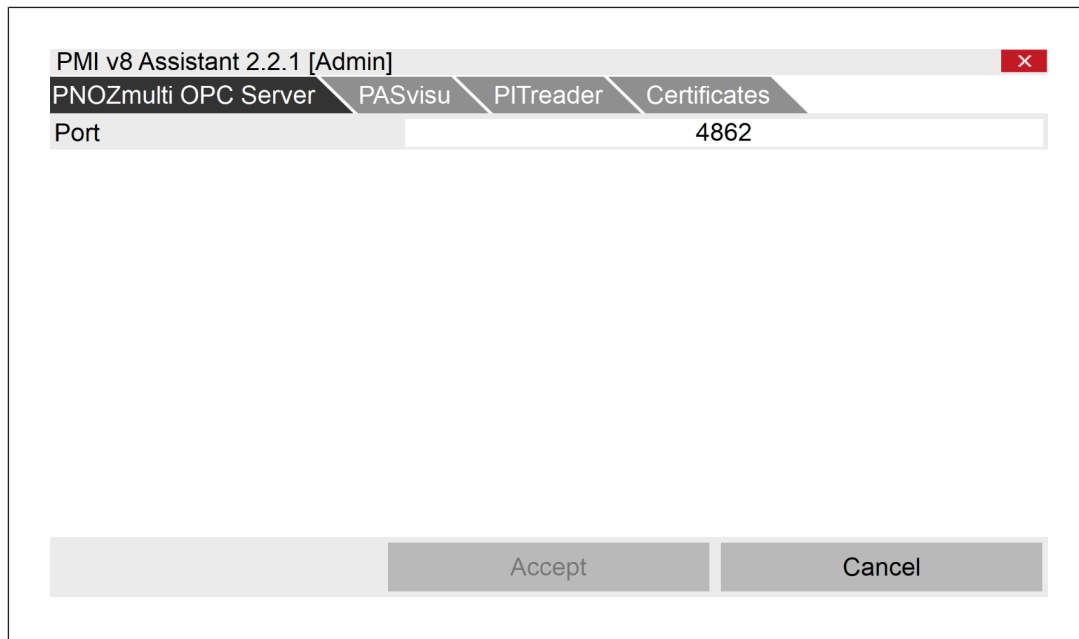
- ▶ Button **Install**: Starts the installation of the selected application package, then the message **Please wait...** is displayed. It may take a few minutes to install the application package.
- ▶ Button **Application example**: Displays an application example for the selected application package.

8.2.4 Configure application package

In the **Application** tab, click on **Configure** in order to configure the application packages.

8.2.4.1 PNOZmulti OPC Server

In the **PNOZmulti OPC Server** tab, you can modify the port for the PNOZmulti OPC Server. The default port for the PNOZmulti OPC Server is 4862.



Click on **Accept** to apply the changes.



INFORMATION

Only change the port for the PNOZmulti OPC Server if the default port is already used by another network component.
A change to the port will not take effect until the PNOZmulti OPC Server is restarted (e.g. by restarting the PMI v8XX).

8.2.4.2

PASvisu

In the **PASvisu** tab, you can configure a connection from the local PASvisu Client to the local PASvisu Server (**Use local PASvisu Server**, Default) or to an external PASvisu Server (**Use remote PASvisu Server**).

If you activate **Use local PASvisu Server** and the local PASvisu Server is running, then you can open the corresponding function on the local PASvisu Server by clicking on the respective button (**Reset password**, **Show PASvisu Server log**, **Configure PASvisu Server** or **About PASvisu Server**). See also the PASvisu Builder Online Help.

If you activate **Use remote PASvisu Server**, you can configure the IP address and the HTTPS port (default 40856) of the external PASvisu Server. This can run on another PMI or PC, for example.

PMI v8 Assistant 2.2.1 [Admin] ✕

PNOZmulti OPC Server **PASvisu** PITreader Certificates

Local PASvisu Client

☒ Use local PASvisu Server

Reset password
Show PASvisu Server log

Configure PASvisu Server
About PASvisu Server

☐ Use remote PASvisu Server

IP address 192.168.33.1
 HTTPS port 40856

Accept
Cancel

Click on **Accept** to apply the changes.

The product must be restarted if the configuration is changed. The PMI v8 Assistant automatically prompts a restart when you are finished.

8.2.4.3

PITreader

In the **PITreader** tab, you can establish a connection to the web application of a PITreader that is active in the same network.

The IP address of the PITreader and the corresponding HTTPS port (default 443) can be configured. After the configuration, you can use the **Connect** button to establish a connection to the web application of the PITreader via the browser installed on the product. See also the operating manual for the PITreader.

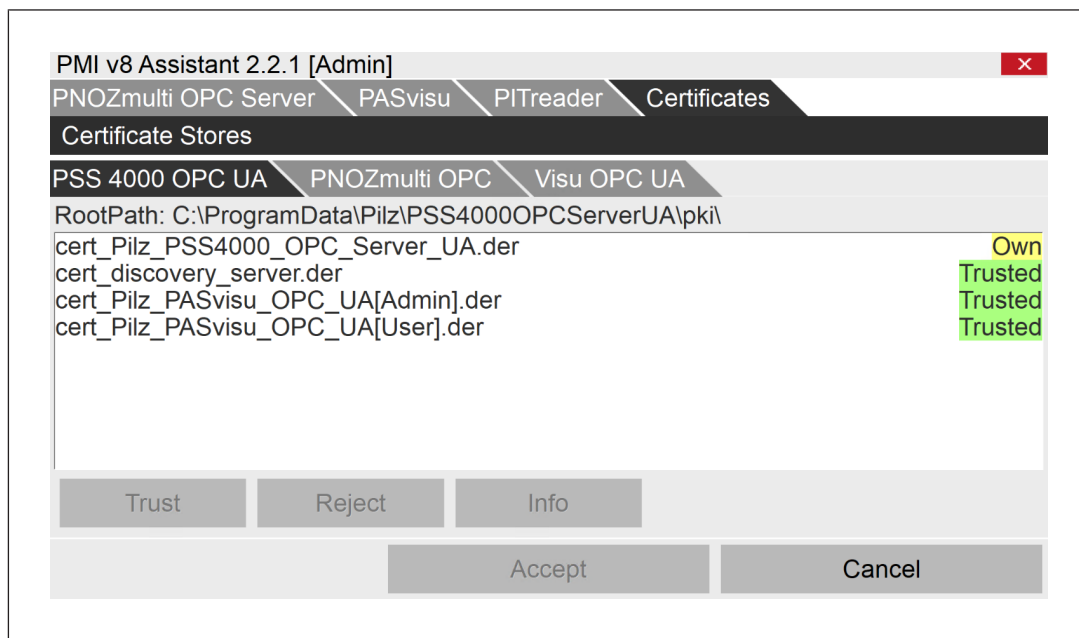
The screenshot shows the 'PMI v8 Assistant 2.2.1 [Admin]' window with a red close button in the top right corner. The interface has four tabs: 'PNOZmulti OPC Server', 'PASvisu', 'PITreader', and 'Certificates'. The 'PITreader' tab is selected and highlighted. Below the tabs, the text 'Remote PITreader' is displayed. To the right, there are two input fields: 'IP address' with the value '192.168.0.12' and 'HTTPS port' with the value '443'. Below these fields is a 'Connect' button. At the bottom of the window, there are three buttons: a greyed-out button on the left, an 'Accept' button, and a 'Cancel' button.

8.2.4.4

Certificates

In the **PSS 4000 OPC UA**, **PNOZmulti OPC** and **Visu OPC UA** tabs, an overview of the respective certificate store is displayed for information security.

You can trust or reject the selected certificates via the **Trust** and **Reject** buttons. Information on the selected certificate is available via the **Info** button.



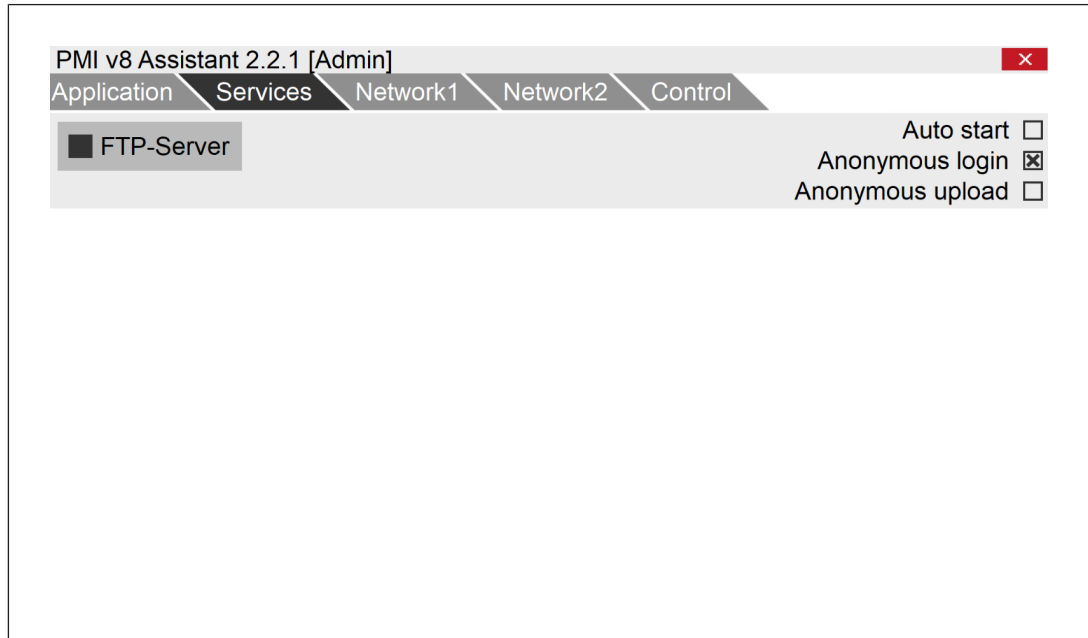
More detailed information on the certificate stores and certificate exchange can be found in the respective documentation.

**NOTICE**

Changes to the certificates have a direct influence on information security and communication between subscribers, and therefore should only be carried out by qualified persons.

8.3 FTP Server

The Service FTP Server can be used to update the PMI v8 Assistant. The FTP Server is deactivated by default (black display).



You can activate the FTP Server by clicking on the **FTP Server** button under **Services**. When the FTP Server is activated, the button will light up yellow and you have access to the directory C:\Pilz.

- ▶ **Auto start** is deactivated by default. When you activate **Auto start**, the FTP Server is activated automatically each time the PMI v8XX is started.
- ▶ **Anonymous login** is activated by default, so it is possible to connect without an additional user login via FTP.
- ▶ **Anonymous upload** is deactivated by default. When you activate **Anonymous upload**, you can transfer data to the PMI v8XX via FTP without an additional user login.



NOTICE

For reasons of security, the FTP Server should only be activated temporarily.

The ports with port number 20 and 21 are used for the FTP Server.

8.4 Network settings

The two Ethernet interfaces enable the PMI v8XX to be integrated into two separate networks simultaneously.

You can make the settings for the Ethernet interface LAN1 in the **Network1** tab, and the settings for the Ethernet interface LAN2 in the **Network2** tab.

Settings for the Ethernet interface LAN1

The screenshot shows the 'Network1' tab of the 'PMI v8 Assistant 2.2.1 [Admin]' application. The 'Address' is set to 'manual'. The IP address is 169.254.60.100, the Subnet mask is 255.255.0.0, and the Gateway address is 0.0.0.0. The Device name is PMI-v812-fd7b, and the Network cable status is 'connected' (highlighted in green).

PMI v8 Assistant 2.2.1 [Admin]	
Application	Services
Network1	Network2
Control	
Address	☐ automatic ☒ manual
IP address	169.254.60.100
Subnet mask	255.255.0.0
Gateway address	0.0.0.0
Device name	PMI-v812-fd7b
Network cable	connected

Manual is the default setting, with the following values:

- ▶ IP address: 169.254.60.100
- ▶ Subnet mask: 255.255.0.0
- ▶ Standard gateway: 0.0.0.0

When **Manual** is active, you can configure the values manually. When you switch to **Automatic**, the IP address is obtained automatically.

- ▶ **Device name** displays the current device name. If possible, the device name should not be changed as this can interrupt communication between the PMI v8XX and the connected Pilz controllers. A changed device name will only be applied once the PMI v8XX is restarted.
- ▶ **Network cable** indicates whether a connected Ethernet cable has been detected at the Ethernet interface LAN1. If an Ethernet cable has been detected, the display switches to **connected** (highlighted in green).

Settings for the Ethernet interface LAN2

PMI v8 Assistant 2.2.1 [Admin] ✕

Application Services Network1 **Network2** Control

Address ☒ automatic
☐ manual

IP address	169.254.86.124
Subnet mask	255.255.0.0
Gateway address	0.0.0.0

Device name PMI-v812-fd7b

Network cable not connected

Automatic is set as the default and the IP address is obtained automatically.

If you switch to **Manual**, you can configure the values manually.

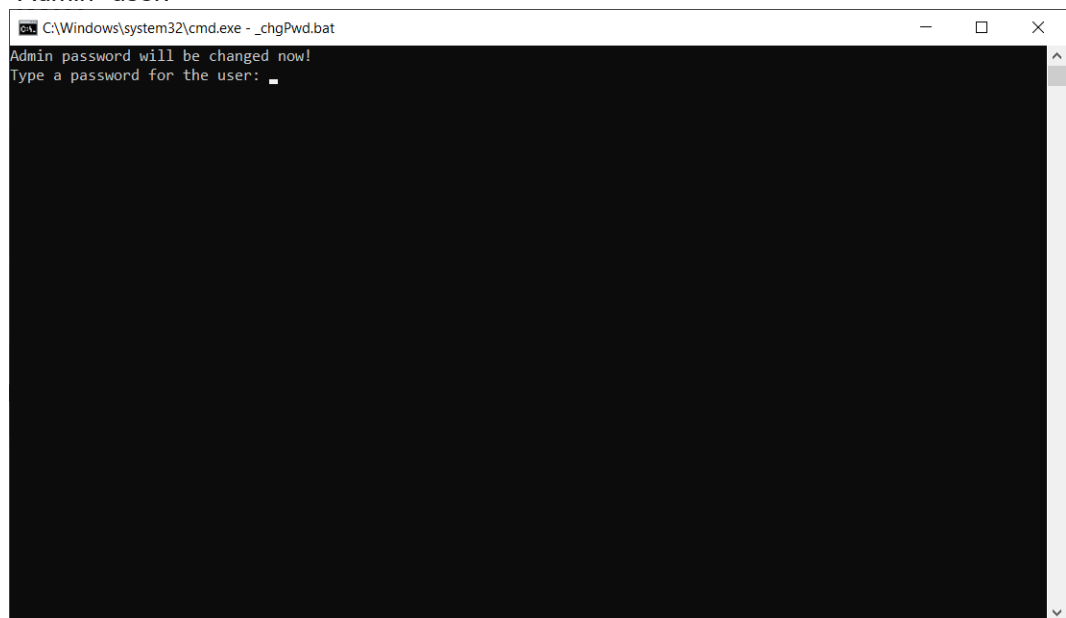
- ▶ **Device name** displays the current device name. You cannot change the device name.
- ▶ **Network cable** indicates whether a connected Ethernet cable has been detected at the Ethernet interface LAN2. If an Ethernet cable has been detected, the display switches to **connected** (highlighted in green).

8.5 Controller



The following settings and information can be found in the **Control** tab:

- ▶ **PMI Assistant Version** indicates the current version of the PMI v8 Assistant.
- ▶ **Date and Time**, with the **Change Date/Time** button for calling up the Windows function "Change Date/Time".
- ▶ **Security**, with the **Change Admin Password** button for changing the password for the "Admin" user.



The new password must be entered twice.

► ***Press and hold for right-clicking***

Via the checkbox, the function of the right mouse button can be activated/deactivated by pressing the touchscreen for a longer period. This function is activated by default and applies for both users ("Admin" and "User"). After making a change, Windows needs to be restarted. When you exit the Assistant a prompt appears, asking whether a restart is to be carried out.

► ***Control Panel*** button: opens the Windows Control Panel

► ***Command Shell*** button: opens the Windows Command Prompt

► ***File Explorer*** button: opens the Windows File Explorer

► ***Reboot*** button: restarts the PMI v8XX

► ***Legal version information*** button: shows the licence information for the PMI v8 Assistant

8.6 Restore delivery status

The original delivery status of the PMI v8XX can be restored via the PMI v8 Recovery Package, available on the Pilz homepage. For further information please contact Pilz Technical Support.



NOTICE

The product will be reset to its original delivery status. Any changes, such as imported projects, licences or configurations, will be lost.

9 Maintenance and testing

It is not necessary to perform maintenance work on the product in normal operation.

- Please return any faulty product to Pilz.

9.1 Cleaning the touchscreen

Clean the surface of your display using a dry and clean cloth to remove dust and dirt particles. Particles may scratch the surface. Do not apply pressure. Use a conventional glass cleaner.



NOTICE

Make sure the product is switched off before cleaning it. This prevents you from accidentally triggering functions when you touch the touchscreen.

10 Technical details

Where standards are undated, the 2014-08 valid editions apply.

General	266807	266812	266815
Certifications	CE, EAC, UKCA, cULus Listed	CE, EAC, UKCA, cULus Listed	CE, EAC, UKCA, cULus Listed
Operating system	Windows 10 IOT	Windows 10 IOT	Windows 10 IOT
Electrical data	266807	266812	266815
Supply voltage			
Voltage	12 - 30 V	12 - 30 V	12 - 30 V
Kind	DC	DC	DC
Output of external power supply (DC)	23 W	29,2 W	38,5 W
Display	266807	266812	266815
Display type	TFT	TFT	TFT
Display diagonal	18 cm	31 cm	40 cm
Display resolution	800 x 480	1280 x 800	1920 x 1080
Display colour depth	16,7 M	16,7 M	16,7 M
Touchscreen	Capacitive	Capacitive	Capacitive
CPU	266807	266812	266815
Processor type	X86	X86	X86
Processor clock speed	2,0 GHz	2,0 GHz	2,0 GHz
Working memory (RAM)	4 GB	4 GB	4 GB
Program memory (Flash)	64 GB	64 GB	64 GB
Real-time clock	Yes	Yes	Yes
USB interface	266807	266812	266815
Number of USB Hosts	1 x USB 3.0, 2 x USB 2.0	1 x USB 3.0, 2 x USB 2.0	1 x USB 3.0, 2 x USB 2.0
Ethernet interface	266807	266812	266815
Quantity	2	2	2
Connection type	RJ45	RJ45	RJ45
Transmission rate	1 Gbit/s	1 Gbit/s	1 Gbit/s
VGA interfaces	266807	266812	266815
External interfaces	1 x HDMI, 1 x VGA	1 x HDMI, 1 x VGA	1 x HDMI, 1 x VGA
Environmental data	266807	266812	266815
Ambient temperature			
Temperature range	0 - 50 °C	0 - 50 °C	0 - 50 °C
Storage temperature			
in accordance with the standard	EN 60068-2-1/-2	EN 60068-2-1/-2	EN 60068-2-1/-2
Temperature range	-10 - 70 °C	-10 - 60 °C	-10 - 60 °C

Environmental data	266807	266812	266815
Climatic suitability			
in accordance with the standard	EN 60068-2-78	EN 60068-2-78	EN 60068-2-78
Humidity	0 ... 90 % at 39 °C (non-condensing)	0 ... 90 % at 39 °C (non-condensing)	0 ... 90 % at 39 °C (non-condensing)
Condensation during operation	Not permitted	Not permitted	Not permitted
EMC	EN 55032 ed.2 Class B 2015, EN 61000-6-2	EN 61000-6-2, EN 61000-6-4	EN 61000-6-2, EN 61000-6-4
Vibration			
in accordance with the standard	EN 60068-2-6	EN 60068-2-6	EN 60068-2-6
Frequency	5 - 500 Hz	5 - 500 Hz	5 - 500 Hz
Amplitude	0,35 mm	0,35 mm	0,35 mm
Acceleration	1g	1g	1g
Shock stress			
in accordance with the standard	EN 60068-2-27	EN 60068-2-27	EN 60068-2-27
Acceleration	15g	15g	15g
Duration	11 ms	11 ms	11 ms
Protection type			
in accordance with the standard	EN 60529	EN 60529	EN 60529
Housing	IP20	IP20	IP20
Front	IP65	IP65	IP65
Mechanical data	266807	266812	266815
Fixing screws torque settings	0,8 Nm	0,8 Nm	0,8 Nm
Dimensions			
Height	193,8 mm	228 mm	260 mm
Width	143,8 mm	315,5 mm	399 mm
Depth	54,3 mm	64,5 mm	75,1 mm
Weight	1.389 g	3.860 g	5.803 g

11 Supplementary data

11.1 Network data

Open TCP/UDP ports:

Protocol	Direction	Transport protocol	Port no.	Can be deactivated	Time-critical	Description
PNOZmulti OPC Server	In	TCP	4862	Yes Default: active	No	X.509 certificate. Signed and encrypted in OPC UA Client.
PSS 4000 OPC Server UA	In	TCP	4853	Yes Default: active	No	X.509 certificate. Signed and encrypted in OPC UA Client.
PVIS PNOZm Online	Out	TCP	9000	Yes Default: active	No	
Syslog client	In/out	UDP	514	Yes Default: active	No	Default: "localhost"
PASvisu web-socket	In/out	TCP	40856, 40857, 40858	Yes Default: active	No	Transport protection by TLSv1.2. Access to the user interface via user name and password. The server is authenticated via an X.509 certificate.
PASvisu server client	Out	TCP	502, 4890	No	No	
Simple Network Time Protocol (client)	Out	UDP	123	No	No	No safety measures implemented
Local Discovery Server ME (mDNS)	In/out	UDP (IPv4)	5353	No	No	
Microsoft lpd (line printer daemon)	In/out	TCP	515	Yes Default: active	No	

Protocol	Direction	Transport protocol	Port no.	Can be deactivated	Time-critical	Description
Microsoft HT-TPAPI httpd 2.0 (SSDP/UPnP)	In/out	TCP	2869	Yes	No	
OPC UA Discovery Service	In/out	TCP	4840	Yes Default: active	No	
Windows Connected Devices Platform	In/out	TCP	5040	Yes Default: active	No	
Microsoft HT-TPAPI httpd 2.0 (SSDP/UPnP)	In/out	TCP	5357	Yes Default: active	No	
Code-Meter WebAdmin	In/out	TCP	22350	Yes Default: active	No	
Code-Meter WebAdmin	In/out	TCP	22352	Yes Default: active	No	
Modbus/TCP	In/out	TCP	502	Yes	No	PASvisu data source via Modbus/TCP

12 Order reference

12.1 Product

Product type	Features	Order no.
PMI v807	Operator terminal, 800 x 480 pixel resolution, capacitive touchscreen	266807
PMI v812	Operator terminal, 1280 x 800 pixel resolution, capacitive touchscreen	266812
PMI v815	Operator terminal, 1920 x 1080 pixel resolution, capacitive touchscreen	266815

Support

Technical support is available from Pilz round the clock.

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China

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Pilz develops environmentally-friendly products using ecological materials and energy-saving technologies. Offices and production facilities are ecologically designed, environmentally-aware and energy-saving. So Pilz offers sustainability, plus the security of using energy-efficient products and environmentally-friendly solutions.



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We are represented internationally. Please refer to our homepage www.pilz.com for further details or contact our headquarters.

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