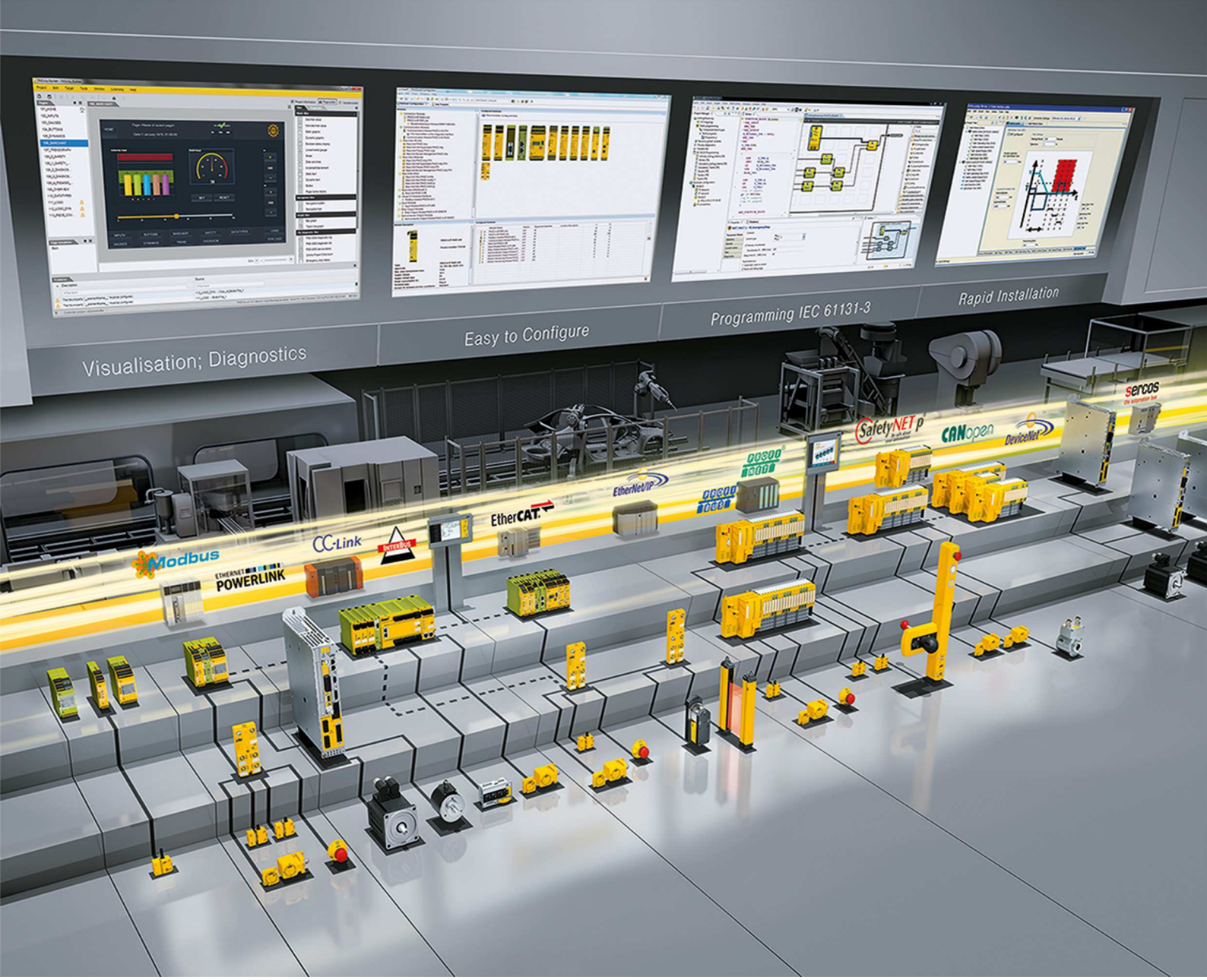


PMI 6

PILZ
THE SPIRIT OF SAFETY

- Operator terminals

Operating Manual 1003280-EN-01

This document is a translation of the original document.

Source code from third-party manufacturers or open source software has been used for some components. The relevant licence information is available on the Internet on the Pilz homepage.


SD means Secure Digital

1 Introduction

1.1 Validity of documentation

This operating manual is valid for the following products

- PMI 607 Control
- PMI 612 Control

It is valid until new documentation is published.

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

1.2 Using the documentation

This document is intended for instruction. Only install and commission the product if you have read and understood this document. The document should be retained for future reference.

1.3 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

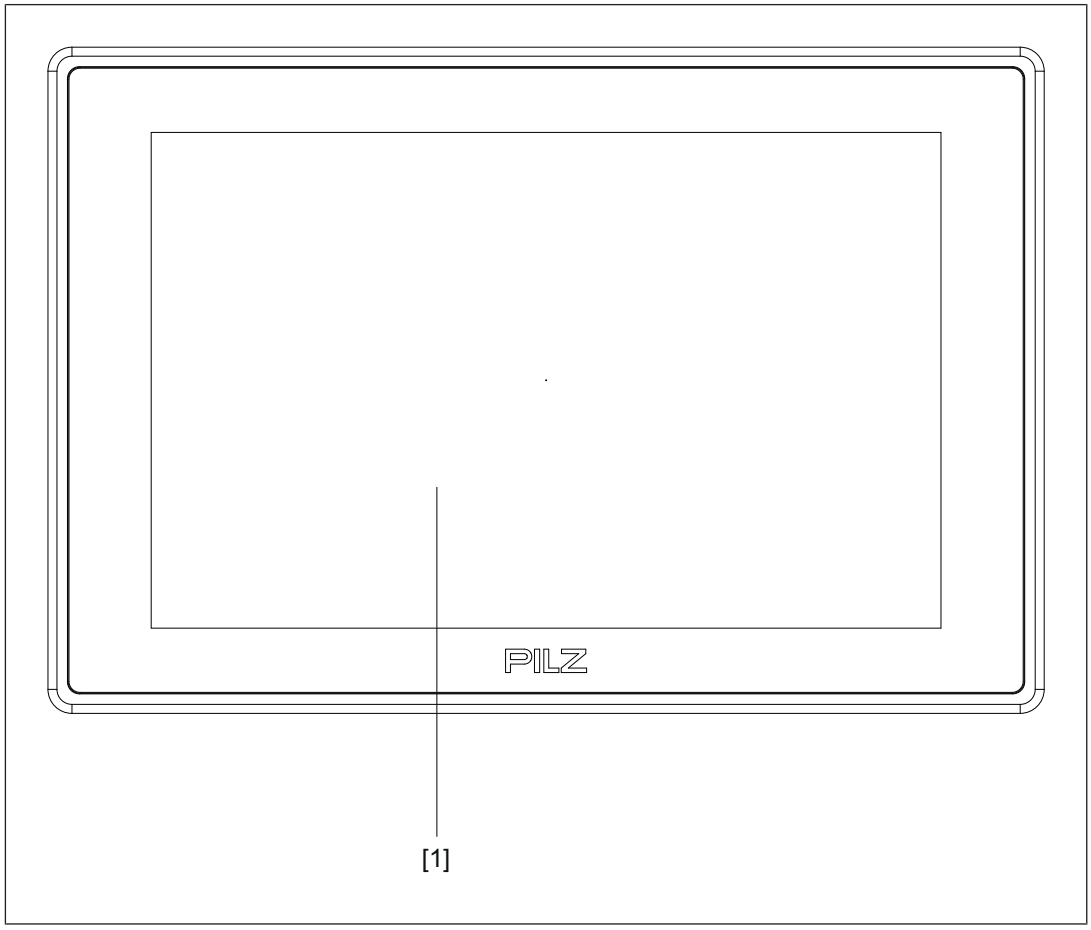
2.1 Unit structure

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

2.1.1 Unit features

- Capacitive touchscreen
- Character set: Unicode
- 1 SD card slot
- Memory:
  512 MB DDR SDRAM
- 1 serial interface
- 1 Ethernet interface
- 1 CANopen interface
- 2 USB host interfaces
- Real-time clock
- User-specific applications and various visualisation software packages can be installed

2.2 Front view



Legend

[1] Touchscreen (see Technical details [40])

2.3 Scope of supply

- Operator terminal
- Retaining clamps
- Connector plug for power supply
- Projection stand
- RJ45 cable for fieldbus junction box
- SD card as application memory

3 Safety

3.1 Intended use

This device is used to operate and monitor technical processes.
The PMI offers the possibility of installing software from third-party suppliers. Pilz GmbH & Co. KG accepts no liability for any damages, nor does it provide support or any guarantee for the functional efficiency of the installed software.

INFORMATION

Ensure that the visualisation software is suitable for the processor type X86 and the operating system Windows Embedded Compact 7.

CAUTION!

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

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 manual
- Use of the product outside the technical details (see Technical details [📖 40]).

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.

3.2 Safety regulations

3.2.1 Use of qualified personnel

The products may only be assembled, installed, programmed, commissioned, operated, maintained and decommissioned by competent persons.

A competent person is someone who, because of their training, experience and current professional activity, has the specialist knowledge required to test, assess and operate the work equipment, devices, systems, plant and machinery in accordance with the general standards and guidelines for safety technology.

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 this description under "Safety"
- And 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 (e.g. Electrical and Electronic Equipment Act).

3.3 Unit-specific safety regulations

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

3.3.1 Installation site

- Do not position PMI close to highly flammable materials.
- When installing the device within a control cabinet, you must ensure the ventilation slots are not obstructed, otherwise the device could be damaged through overheating.
- Protect the device from direct sunlight and dust.
- Please note the guidelines given under “Installation”.

3.3.2 Measures to protect against interference

- If necessary, use bulkhead separators to protect the unit from sources of interference.
- Inductive loads within the environment (e.g. contactor, relay and solenoid valve coils) should be wired using suppression elements (e.g. RC elements). This is particularly important if these inductive loads are fed from the same supply.
- The power cables and the data cables should be physically separated from each other in their own conduits (recommended minimum distance: 10 cm/3.94"). This will avoid inductive and capacitive interference.
- The prescribed earth point ⏚ for the functional earth guarantees compliance with noise immunity requirements.
  Connect the functional earth to the central earth point in star form. A cable cross section of at least 1.5 mm² should be used for the connection. Connections should be kept as short as possible.

3.3.3 Supply voltage

- The supply voltage must be +24 V DC

CAUTION!

Safe electrical isolation must be ensured for the external power supply generating the 24 V voltage supply. Failure to do so could result in electric shock. Power supplies must conform to DIN VDE 0551/EN 60742 and EN 50178.

3.3.4 Operation

- Plan the system correctly to ensure that a communication error between the PMI and the host computer does not cause a malfunction.
- Do not operate the touchscreen interface using hard or heavy objects or apply excessive pressure.
- The maximum ambient temperature must not be exceeded when using the unit.
- Do not pour liquids over the unit or insert any objects into the unit.
- When in storage and during operation, protect the unit from vibration and shock.
- Avoid using chemicals close to the system.

3.3.5 Maintenance

- Do not use thinners or organic solvents to clean the unit and touchscreen surface.

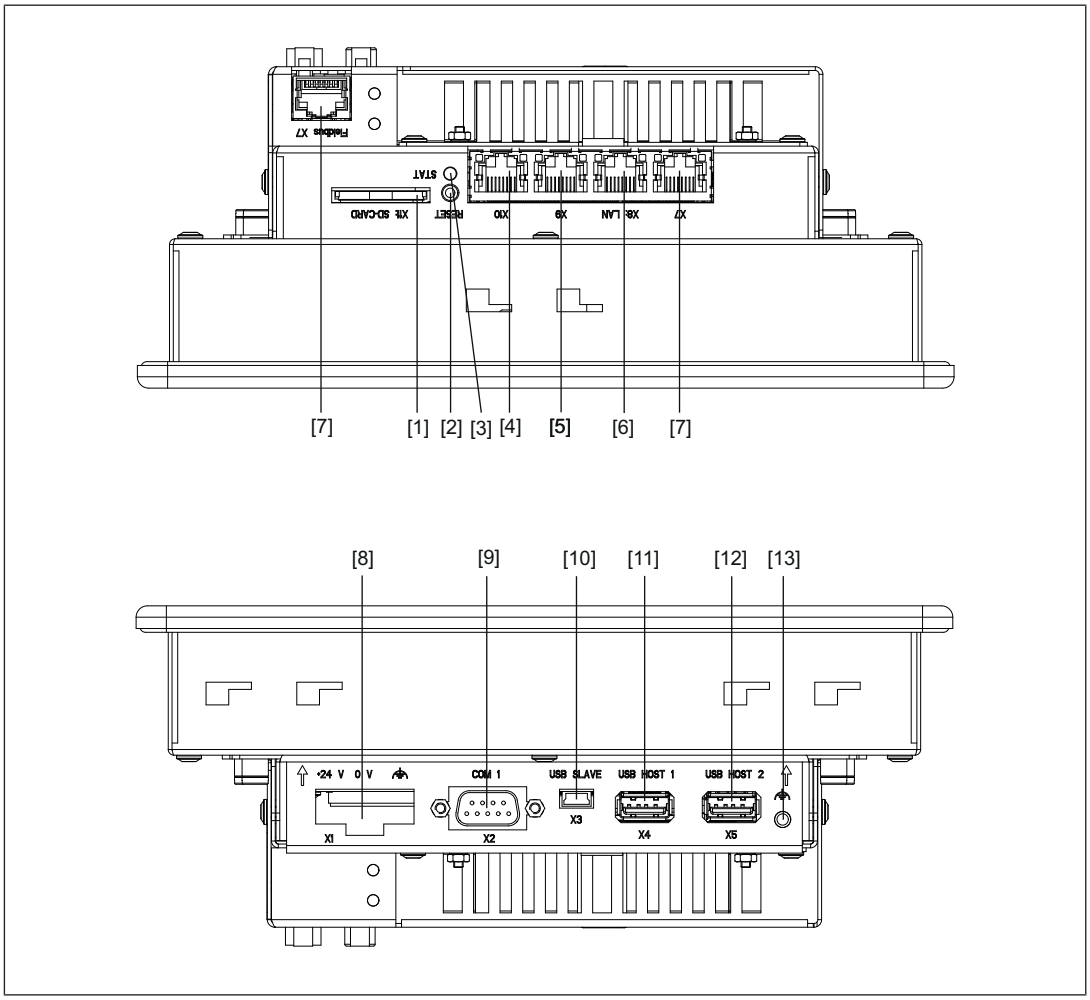
Further information on care and maintenance of the touchscreen can be found in the chapter "Care and Maintenance".

4 Function description

4.1 Features

The operator terminal has a memory in which visualisation software can be installed. With the help of this software, processes can be shown on the display and directly influenced via the touchscreen. A fieldbus interface (CANopen), Ethernet (e.g.: Modbus) and an RS232 interface are available for the transfer of data, e.g. diagnostic data, and for communication with other subscribers.
The device is equipped with a real-time clock.

4.2 Side view



Legend

[1] SD/SDHC card slot
[2] Reset button
[3] Status LED
[4] Reserved
[5] Reserved
[6] Ethernet interface

[7] Fieldbus junction box
[8] Supply voltage +24 VDC
[9] Serial interface COM1 (RS232)
[10] USB Slave
[11] USB Host 1
[12] USB Host 2
[13] Functional earth

5 Installation

5.1 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 PMI.

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

5.1.1 Installation site and unit surroundings

NOTICE

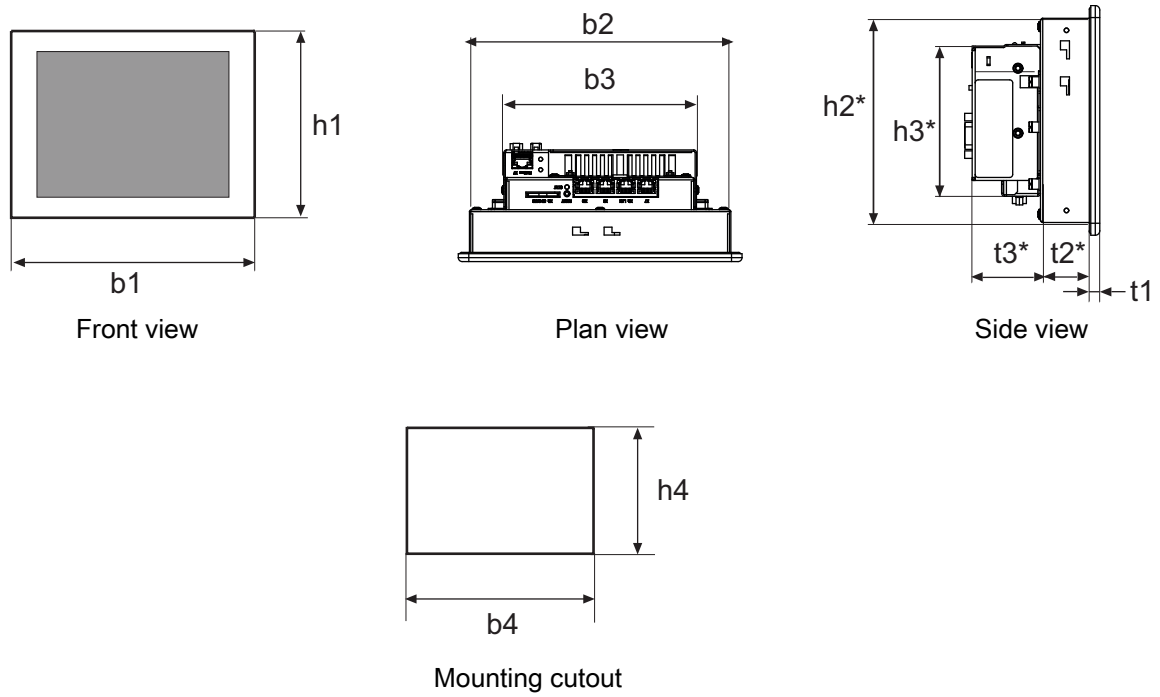
Damage due to heat accumulation!

To avoid the accumulation of heat, a distance of 10 cm/3.94" should be maintained around the device.

To achieve optimum air circulation, install the device at an angle of 45° - 90°.

- Keep as large a distance as possible between the system and any electromagnetic fields, particularly when frequency converters are nearby.
- Protect the system from direct sunlight and dust.
- Do not use chemicals close to the system.
- Ensure the maximum ambient and operating temperatures are not exceeded.
- Ensure that neither liquids nor objects can enter the device at any time.
- Do **not** position the system close to flammable materials.

5.2 Dimensions



	PMI 607 Control	PMI 612 Control
b1/mm h1/mm	216 (8.504") 153 (6.024")	332 (13.071") 222 (8.740")
b2/mm h2*/mm t2*/mm	199 (7.835") 136 (5.354") 33.5 (1.319")	315 (12.402") 205 (8.071") 31.5 (1.240")
b3/mm h3*/mm t3*/mm	146.6 (5.772") 101 (3.976") 45.5 (1.791")	146.6 (5.772") 101 (3.976") 45.5 (1.791")
t1/mm	6 (0.236")	6 (0.236")
b4/mm h4/mm	200 + 1 (7.874" + 0.039") 137 + 1 (5.394" + 0.039")	316 + 1 (12.441" + 0.039") 206 + 1 (8.11" + 0.039")

h*/t* = Dimensions without connections

Allow extra for hardware connections!

5.3 Installing the unit

When installing the device, please note the following:

- For reasons of stability, the front panel, console or control cabinet should have a wall thickness of at least 2.5 mm.
- To avoid the accumulation of heat, a distance of 10 cm/3.94" should be maintained around the device.
- Ensure the information given for the ambient and operating temperatures in the technical details is observed.
- IP65 protection can only be guaranteed when
  - the device's fixing screws are tightened with the following torque: min. 0.2 Nm, max. 0.4 Nm.
  - the gasket is not damaged.
  - the wall thickness is at least 2.5 mm.

5.4 Installation

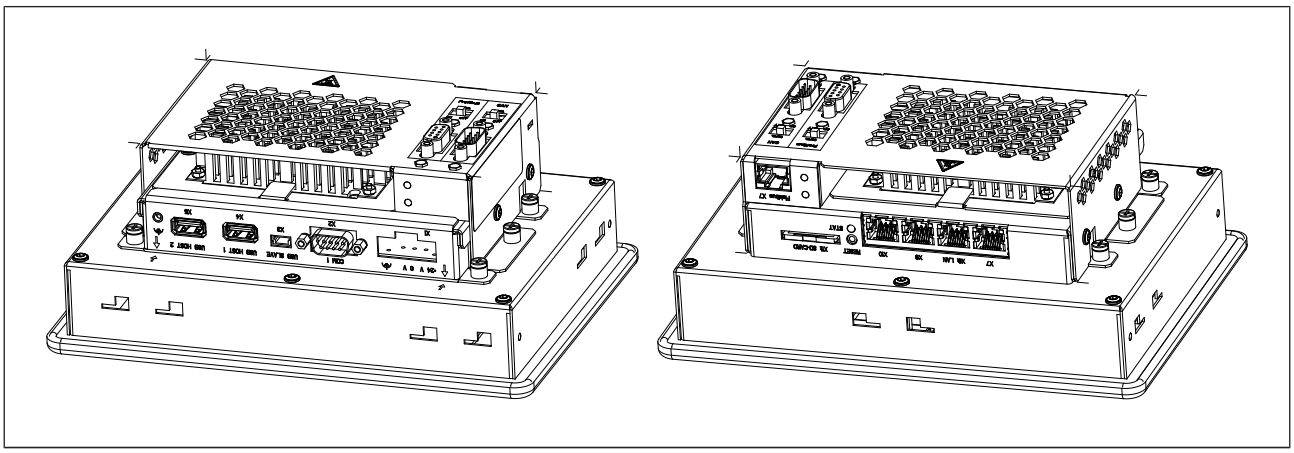


Fig.: Installing the PMI 607 Control

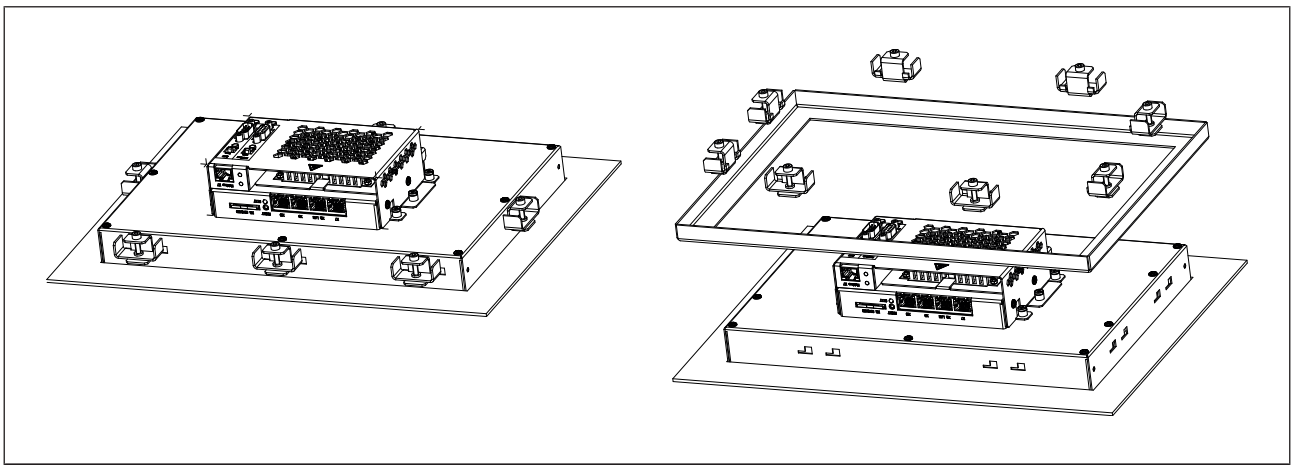


Fig.: Installing the PMI 612 Control

6 Wiring

6.1 General wiring guidelines

- Electrical or electronic components that could cause interference (contactors, thyristors, relay coils and solenoid valve coils) should be physically separate from data cables. We recommend you use a sheet metal (MU metal) bulkhead between both areas.
- Data cables and power cables should be laid separately to avoid capacitive and inductive transmission (recommended minimum distance = 10 cm/3.94").
- Shielded data cables should also be laid in a different cable duct to the main power cables.
- Power cables should be as short as possible.
- Power cables should be twisted pair cables.
- We recommend a max. length of 2 m for the USB cable, to guarantee reliable data transfer.
- Use cables with a cross section of 0.5 … 1.0 mm², ferrules without plastic collar in accordance with DIN 46228/1 for the fieldbus terminal connections.

6.1.1 Shielding

- Connect the power cable shield with low impedance to earth.
- Use only shielded data lines.
- For high-frequency reasons, we recommend that the shielding on the data line cable (RS 232 cable) is earthed on both sides. If you are using longer cables and there is the possibility of transient currents, we recommend one of the following methods:
  - Use equipotential bonding conductors
  - Use electrical isolation
- Connect data line shields to a bus bar.
- Make the connection of the bus bar to the control cabinet/system as short and with as low impedance as possible.
- Fasten the braided shield to the shield bar over as large a surface area as possible (e.g. with metal hose clips or PUK cable clips).

6.1.2 Measures to protect against interference voltages

- Wire-up inductive loads (e.g. contactor coils, relay coils and solenoid valve coils) using suppression elements (e.g. RC networks). This is particularly important if these inductive loads are very close to the power supply or are fed from the same supply.
- If strong magnetic fields are present, we recommend you use a bulkhead separator, i.e. metal sheet (MU-metal).

6.2 Supply voltage

The connection for the 24 V DC supply is located on the side of the housing.

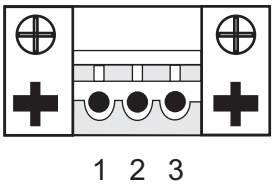


Fig.: Layout of supply voltage connector

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

6.3 Connection example

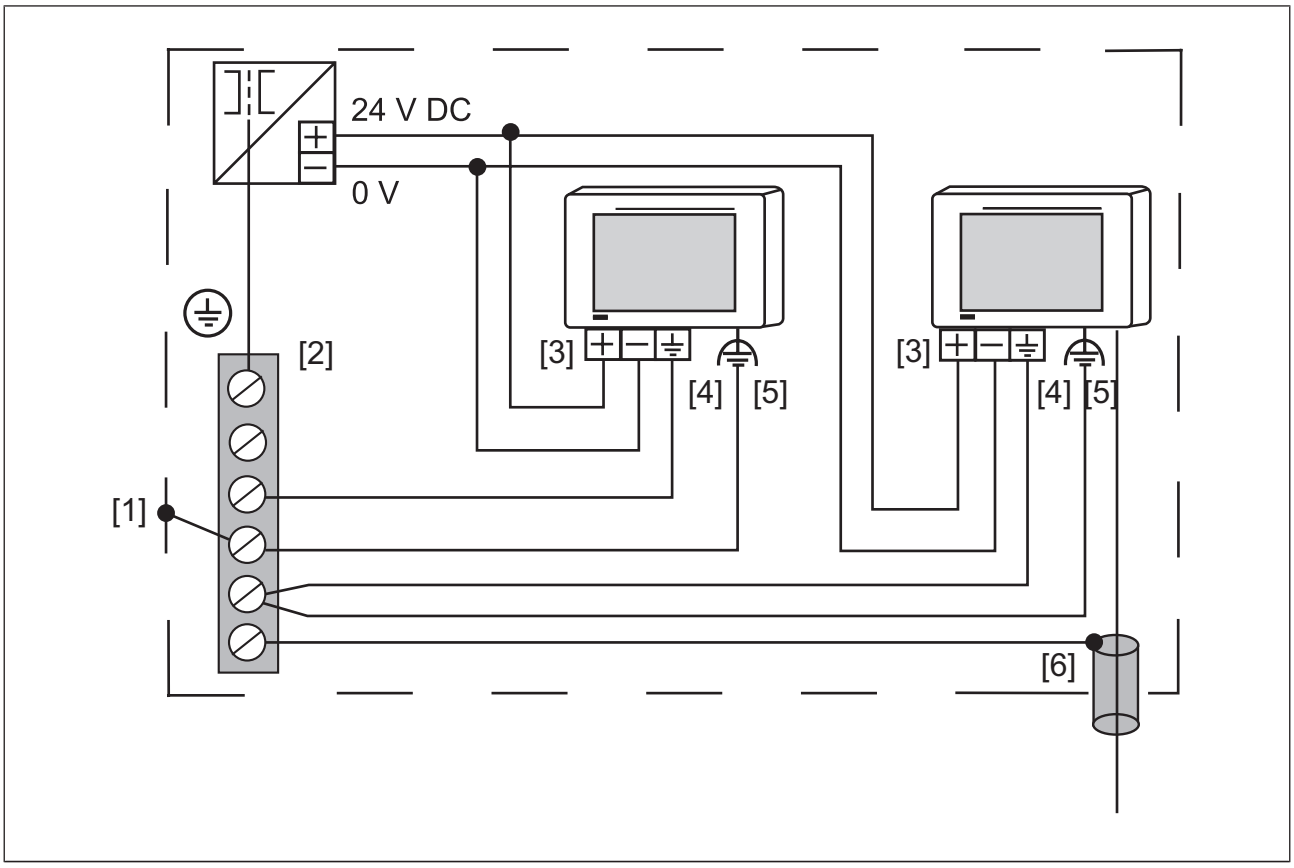


Fig.: Connection example

Legende

[1] Earth star point of the unit or control cabinet

[2] Earth bus bar

[3] Supply voltage

[4] Functional earthing terminal (electronic)

[5] Functional earthing bolts (housing)

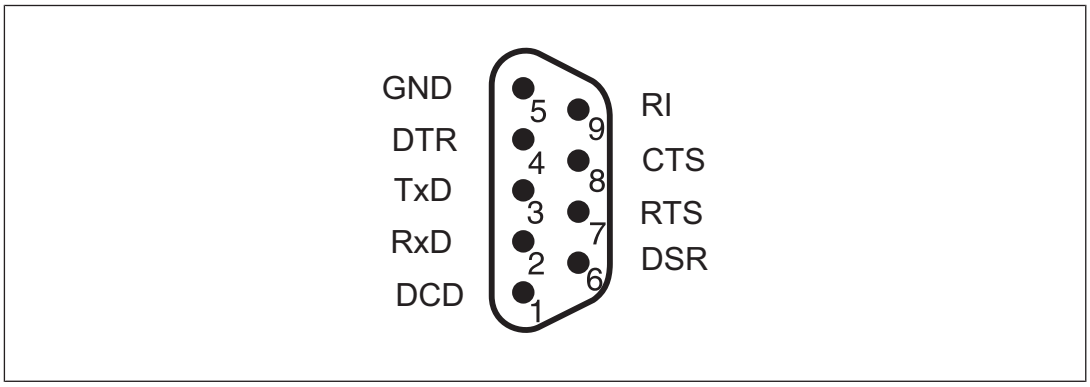
[6] Data line shield

0 V and ⏚ are connected internally.

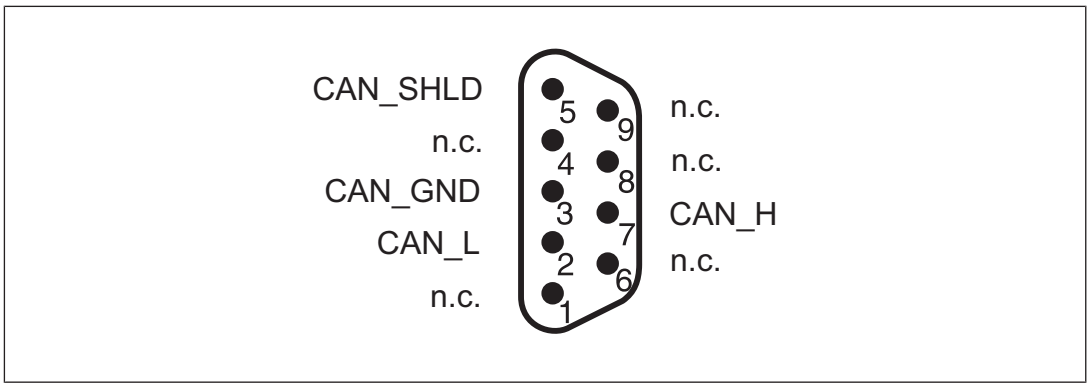
6.4 Interfaces

Connect X7 and X7 fieldbus to the fieldbus junction cable.

6.4.1 RS232 interface (COM1)



6.4.2 CANopen interface



▶ n.c. = not connected

7 Putting into Service

Procedure after power-up

There may be a delay of up to 60 seconds between power-up and the device being ready for operation. The application software can then be installed and started.

7.1 Activating the setup

Click on ***Setup*** to start the PMI Assistant. The SD card supplied on which the PMI Assistant is installed must be connected to do this. When the SD card is not connected, the Control Panel is started.

Further information on the PMI Assistant can be found in the "PMI Assistant Operating Manual".

7.2 Control Panel

All system settings can be made from the Control Panel of Windows Embedded Compact 7.

Special features and device-specific settings are described in the following!

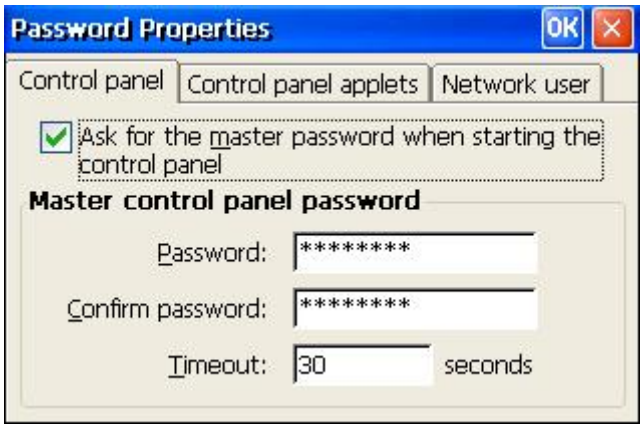
7.2.1 Backup and restore

Program which you can use to save or restore an entire directory structure.

7.2.2 Password settings

Assign a password for the Control Panel to protect the settings in this area. Two levels can be protected with different passwords.

Level 1: Master Control panel password
The whole Control Panel can be protected with a password.



Defining a password: Enter a password. Enter the password again under "Confirm password".
Change password: Same as for defining a password
Delete password: Deselect *Ask for master password ….*

If you select *Ask for master password ...*, then the system will request that the master password is entered before the Control Panel opens.

Timeout
If an incorrect password is entered three times or no valid password is entered within the selected time, then the Control Panel is closed.

Level 2: Control panel applets
Individual Control Panel "applets" can be protected with a password.

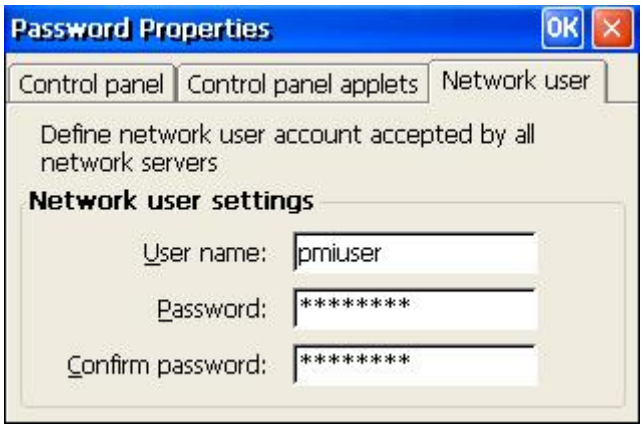
Add
Add Control Panel "applets" to the password protected area. This area is protected with a password.

Remove
Remove Control Panel "applets" from the password protected area. This area is not protected with a password.

INFORMATION

Add **Password Settings** to the password protected area, otherwise the password you enter will be unprotected and can be changed.

Level 3: Network user
Access to the network servers is controlled by a central user.



To change the default settings, follow the instructions below:

User name: Enter a user name
Password: Enter a password for the network user
Confirm password: Enter the new password again

INFORMATION

The ex-works setting for the network user is:
User name: pmiuser
Password: 1234

7.2.3 Date/time

Setting the date, time, time zone and winter/summer time

7.2.4 Display

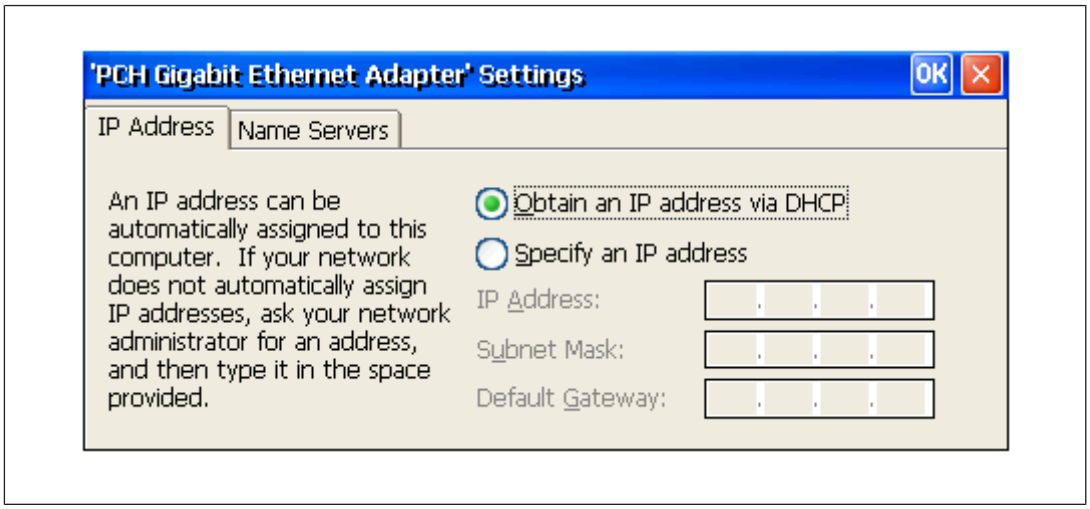
Setting the background image and backlighting

7.2.5 Keyboard & soft keyboard

Setting the keyboard layout (German or English) and setting the soft keyboard (small, large or no keyboard)

7.2.6 Network and dial-up

Modify existing connections (e.g. IP address) or set new connections (PPP over Ethernet)



7.2.7 Regional settings

Regional settings (number format, currency, time, date)

7.2.8 Storage Manager

Format/partition memory

7.2.9 System

Display/modify system properties (relationship between program memory/file management)

7.2.10 Edit PMI Start

Edit or create the batch file PMI-Start.cmd

7.2.11 Taskbar and desktop

Set taskbar properties and show/hide desktop icons

7.2.12 Network servers

Start and stop various services (Telnet, SMB, FTP, SNTP, Web Server)

7.2.13 Internet options

Internet Explorer settings

7.3 Start mode

7.3.1 Automatically copy to system folder (\windows)

A folder can be created in*BOOT\Windows*\ to add additional libraries or fonts (TTF) to the system. All files and directories are copied to the system folder *Windows* on start-up. Fonts (TTF) in the folder *BOOT\Windows\Fonts*\ are also registered.

Tip: Memory-intensive fonts should be installed on the external **Storage Card** using *fontreg* (see Windows CE Shell commands - Pilz expansions [📖 35]).

7.3.2 Batch file PMIStart.cmd

PMIStart.cmd is a CE Shell command batch file, which is executed sequentially after booting. Commands can be found under Windows CE Shell commands [📖 34] and Windows CE Shell commands - Pilz expansions [📖 35]. The batch file PMIStart.cmd can be found in the directories *Hard Disk*, *Storage Card* and *BOOT*.
If the batch file exists in one of the above directories, then it is executed once, i.e. if the batch file exists in all three directories, only *Hard Disk\PmiStart.cmd* will be executed and not the other two batch files. The sequence is as follows: *Hard Disk,* *Storage Card* and finally *BOOT.*

7.3.3 Running services

All network services (FTP, Telnet, HTTP, SMB, SNTP) are switched off on start-up (see Network servers [📖 26]).

7.3.4 Network settings

IP over DHCP is active. To enter a static IP address, see Network and dial-up [24].

7.3.5 Various basic settings

- Regional settings: English (currency, date, time, numbers)
- User input language: English (fixed)
- Input language: English (keyboard) (see Regional settings [25])
- Network:
  - User: pmiuser
  - Password: 1234 (see Password settings [21])
- Network device name: PMI6xx (see System [25])

8 Care and Maintenance

8.1 Cleaning the touchscreen

Clean the unit's touchscreen at regular intervals. Use a damp cloth to do this.

NOTICE

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

Cleaning agents

Only use water and washing-up liquid or window cleaner to dampen the cloth. Never use aggressive solvents or abrasive cleaning agents.

9 Attachment

9.1 Supported Windows components

The devices work with the operating system "Microsoft Windows Embedded Compact 7"; the following Windows components are supported:

Applications

- Active Sync (Microsoft Windows Mobile Device Center)
- CAB File Installer/Uninstaller
- WordPad

Application and Service Development

- .NET Compact Framework 3.5
- Active Template Library (ATL)
- C Libraries and Runtimes (except OEM Floating Point CRT)
  - C++ Runtime Support for Exception Handling and Runtime Type Information
  - Full C Runtime
  - Standard IO (STDIO)
  - Standard IOASCII (STDIO)
  - Standard String Functions - ASCII (corestra)
- Component Services (COM)
- Lightweight Directory Access Protocol (LDAP) Client
- Message Queuing (MSMQ)
- OBEX Client
- SOAP Client
- Smart Device
- String Safe Utility Function
- XML - MSXML 3.0
  - XML Core Services and Document Object Model (DOM)
    - XML Query Languages (XQL)
    - XML SAX
  - XML Minimal Parser

Communication Services and Networking

- Connection Manager
  - Connection Manager All Modules
- Networking General
  - Extended DNS Querying and Update (DNSAPI)
  - NDIS Packet Capturing DLL
  - NDIS User-mode I/O Protocol Driver
  - Network Driver Architecture (NDIS)
  - Network Utilities (IPConfig, Ping, Route)

- TCP/IP
  - It includes support for IP, ARP, ICMP, IGMP, TCP, UDP, name resolution and registration, DHCP.
- Windows Networking API/Redirector (SMB/CIFS)
- Winsock Support

- Networking - Local Area Networking (LAN)
  - Wired LAN (802.3, 802.5)
- Networking - Wide Area Networking (WAN)
  - Dial Up Networking (RAS/PPP)
  - Telephony API (TAPI 2.0)
- Servers
  - Core Server Support
  - DHCP Server
  - File Server (SMB/CIFS)
  - FTP Server
  - Simple Network Time Protocol (SNTP)
    - SNTP Client with DST
    - SNTP Server
  - Telnet Server
  - Web Server (HTTPD)
    - Active Server Pages (ASP) Support
    - Web Server Administration ISAPI
    - WEBDAV Support

Core OS Services

- System Event Log
- Debugging Tools
  - Toolhelp API
- Device Manager
- Display Support
- Kernel Functionality
  - Fiber API
  - Format Message API - System Error Messages
  - Memory Mapped Files
  - Message Queue - Point-to-Point
  - Target Control Support (Shell.exe)
- UI based Notification
- Notification LED Support
- Power Management (Full)
- Serial Port Support
- UI Proxy for Kernel-Mode-Drivers
- Windows Embedded CE Driver Development Kit Support Library

File System and Data Store

- Compression
- Database Support (CEDB Database Engine)
  - CEDB Database Engine
  - EDB Database Engine
- File and Database Replication (Bit-based)
- File System - Internal (RAM and ROM File System)
- Registry Storage (Hive-based Registry)
- Storage Manager
  - CD/UDFS File System
  - exFAT File System
  - FAT File System
  - Partition Driver
  - Release Directory File System
  - Storage Manager Control Panel Applet
  - Transaction-Safe FAT File System (TFAT)
- System Password

Fonts

The following fonts are pre-installed in Windows 7 EC:

- Arial
- Comic Sans
- Courier New
- Georgia
- Impact
- Lucida Sans
- Microsoft San Serif
- Segoe UI
- Display
- Tahoma
- Times New Roman
- Trebuchet MS
- Verdana
- Webdings
- Wingdings

INFORMATION

TTF formats can be post-installed (see Automatically copy to system folder (\windows) [📖 26]).

Graphics and multimedia formats

- Graphics
  - Alphablend API (GDI version)
  - DirectDraw
  - Gradient Fill Support
  - Imaging
    - Still Imagine Codec Support (Encode and Decode)
    - Still Image Decoders
      - BMP
      - GIF
      - ICO
      - JPG
      - PNG
      - TIFF
    - Still Image Encoders
      - BMP
      - GIF
      - JPG
      - PNG
      - TIFF
- Windows Codecs

International

- Input Method Manager (IMM)
- Locale Service (National Language Support (NLS))
- Locale Specific Support (English US - US Keyboard)

Internet Client Services

- Browser Application
  - Internet Explorer 7 for Windows Embedded CE - Standard Components
    - Internet Explorer 7 Sample Browser
- Internet Explorer 7 for Windows Embedded CE Components
  - Internet Explorer Browser Control Host
  - Internet Explorer HTML/DHTML API
    - Internet Explorer Plug-in Image Decoder API
      - Internet Explorer PNG Image Decoder
    - Internet Explorer Multi-Language Base API
    - URL Moniker Service
    - Windows Internet Services
    - XML MIME Viewer
  - Internet Option Control Panel
  - Scripting
    - JScript 5.8
      - Script Authoring (Jscript)
    - VBScript 5.8

- MsgBox and InputBox support
- Script Authoring

Security

- Authentication Services (SSPI)
  - NTLM
  - Schannel (SSL/TLS)
- Credential Manager
- Cryptography Service (CryptoAPI 1.0) with High Encryption Provider
  - Certificates (CryptoAPI 2.0)
  - Diffie-Hellman/DSS Provider
- Cryptography API: Next Generation (CNG) Primitives

Shell and User Interface

- Graphics, Windowing and Events
  - Default Gesture Response
  - Gesture Physic Engine
  - Minimal GDI Configuration
  - Minimal GWES Configuration
  - Minimal Input Configuration
  - Minimal Window Manager Configuration
  - Touch Gesture GWES component
- Shell
  - AYGShell API Set
  - Command Shell
    - Command Processor
    - Console Window
  - Graphical Shell - Standard Shell
- User Interface
  - Common Controls
    - Common Control
  - Common Dialog Support
  - Control Panel Applets
  - Customizeable UI
    - Windows XP-like Sample Skin
  - Mouse
  - Network User Interface
  - Software Input Panel
    - Software-based Input Panel (SIP)
      - SIP for Large Screens
      - SIP for Small Screens
    - Software-based Input Panel Drivers
- Windows Embedded Compact Error Reporting
  - Error Report Generator
  - Error Report Transfer Driver

9.2 Windows CE Shell commands

Shell parameter commands

Command	Description
"/C"	Execute command and exit "Command processor shell".
"/K"	Execute command, "Command processor shell" remains active
"string"	Command that is to be executed

Command line syntax

Command	Description
"COMMAND"	Command name
"OPTIONS"	Command specification
">"	Forward the output text to a file
"2>"	Forward the output fault to a file
">>"	Attach the output text to a file
"2>>"	Attach the output fault to a file
"<"	Reads input text from a file
"&"	Separates a command or several commands
"|"	Separates a command or several commands and sends the output of a command as input for the command that follows
"file1"	Name of the file that includes the output
"file2"	Name of the file that includes the input

List of all possible shell commands

Command	Description
"ATTRIB"	Shows or changes the properties of a file
"CALL"	Calls a batch program from another batch program
"CHDIR, CD"	Shows the name of the current directory or changes the current directory
"CLS"	Deletes the screen
"COPY"	Copies one or several files to a different directory
"DATE"	Shows or sets the date
"DIR"	Shows the files and subdirectories contained in a directory
"ECHO [message] [on| off] "	Shows a message or activates/deactivates the echo
"ERASE, DEL"	Deletes a file or several files
"EXIT"	Exits "command processor shell"

Command	Description
"GOTO"	Causes the "command processor" to jump into a highlighted line in a batch program
"HELP"	Shows a list of available commands
"IF"	Executes conditional processing in a batch program
"MKDIR, MD"	Creates a directory
"MOVE"	Moves files from one directory to another
"net"	Executes network-related operations
"PATH"	Shows or sets a search path for executable files
"PAUSE"	Interrupts the processing of a batch program
"PROMPT"	Changes the prompt for the "command processor"
"PWD"	Prints the current directory path
"REM"	Saves comments to a batch file
"RENAME, REN"	Changes the name of one or several files
"RMDIR, RD"	Deletes a directory
"SET"	Sets or removes an environment variable or shows the values of all environment variables
"SHIFT"	Changes the position of variable parameters in a batch file
"START"	Starts a separate window that executes a certain application or command
"TIME"	Shows the system time or sets it
"TITLE"	Sets the title of the "command processor" window
"TYPE"	Shows the content of a text file or several text files

9.3 Windows CE Shell commands - Pilz expansions

INFORMATION

You can use the command **"/?"** to call up the help. There you will find more information on the individual commands.

Common parameters

Command	Description
"/h"	Shows the help
"/H"	Shows the help
"/?"	Shows the help
"/help"	Shows the help

fontreg

Command for registering additional TTF fonts on the device
Syntax: *fontreg FONTNAME*

Parameter	Description
FONTNAME	Can include placeholders, e. g. *.ttf; when "FONTNAME" is a directory, all the fonts are registered in the directory

format

Command for formatting a removable data medium for use with Windows CE
Syntax: *format <volume> [/Q] [/A size] [/FS <File system>]*

Parameter	Description
/FS	Determines the file system (FAT12, FAT16, FAT32, or exFAT)
/Q	Performs quick formatting
/LLF	Performs formatting with a low formatting rate
/PART	Creates a standard partition after formatting with a low formatting rate
/A	Overwrites the standard sizes of memory allocation
/T	Creates a TFAT format
/Y	Confirmation

kill

Command used to force the completion of a process
Syntax: *kill [EXENAME] /[PID]*

Parameter	Description
EXENAME	Completes the process via the process name (e. g. kill *pnotepad.exe)*
/PID	Completes the process via the PID hexadecimal format (e. g. *kill /fa00ce)*

pnotepad

Command used to start a simple text editor
Syntax: *pnotepad file*

Parameter	Description
file	After starting the text editor a file is opened

ps

Shows all the active processes
Syntax: *ps*

reboot

Command used to restart the device
Syntax: *reboot <sec>*

Parameter	Description
<sec>	Waiting period in seconds before the device is restarted

regedit

Command used to start the registration editor
Syntax: *regedit*

regerase

Command used to delete the present registration of the device; in the next boot process the device will use the default registration
Syntax: *regerase [-r]*

Parameter	Description
-r	Forces a reboot process

regexp

Commend used to export a registration key including subkeys to a file (*.reg)
Syntax: *regexp /r <BaseKey> /f <OutFile> [/c] [ALL]*

Parameter	Description
/r <BaseKey>	Registration key that is to be exported
/f <OutFile>	Name of the target file
/c	Converts REG_MUI_SZ to REG_SZ
/ALL	Parameter used to export the whole registration to a file (*.reg)

regimp

Command used to import a registration file (*.reg)
Syntax: *regimp <InFile> [/temp] [/info]*

Parameter	Description
<InFile>	File name
/temp	Temporarily saved, the present registration is not overwritten
/info	Status information on the success/failure of the action

regsave

Command used to permanently save the current registration
Syntax: *regsave*

regsvrce

Command used to register ActiveX modules (*.ocx, *.dll)
Syntax: *RegsvrCE [/u] [/n] [/s] [/i[:cmdline]] dllname*

Parameter	Description
/u	Deregisters the server
/n	"DllRegisterServer" is not called up, the parameter must be used with "/i"
/s	Suppresses messages on the display
/i <cmdline>	Transmits an optional command line (cmdline) to DllInstall; when "/i" is combined with "/u", DllUninstall is executed
dllname	DLL name

screenshot

Command used to print a screenshot or save it to file
Syntax: screenshot -p <port> -d <devicename> -x <filename> -f <formsize> -o [p]ortrait [l]andscape -q [d]raft, [h]igh -s <scalefactor> -c [c]olor,[m]ono -n <copies>

Parameter	Description

-p <port>	Printer port
-d <devicename>	Printer name
-x <filename>	Save screenshot as a file
-f <formsize>	Paper size (A4, B5, Legal and Letter)
-o [p] / -o [l]	Print orientation portrait / landscape
-q [d] / -q [h]	Print quality draft / high
-s <scalefactor>	Scaling, format: 1.2 (e.g. 0.5, 2.0,..)
-c [c] /- c [m]	Colour (c) / black and white (m)
-n <Copies>	Number of copies

sleep

Command used to insert a waiting time between two operations (sleep mode);
Syntax: *sleep <ms>*

Parameter	Description
<ms>	Waiting time in milliseconds

usrmgr

Command used to manage network subscribers
Syntax: *usrmgr [-a|-d|-l] [<user name> [<password>]] -gn -gd -gl -gm -gat -grf*

Parameter	Description
-a <user name> <password>	Add or update network subscriber
-d <user name>	Remove network subscriber
-l	Show all network subscribers
-gn <group name>	Add new group
-gd <group name>	Delete group
-gl	Show all groups
-gm	Show group members
-gat <group name> <user name>	Add group member
-grf <group name> <user name>	Delete group member

ver

Command used to show information on the device
Syntax: *ver [/d] [/a] [/hw /p /o /l /s /r /c]*

Parameter	Description
/d	Data mode, display without description, e. g.: .. PMI 515 10000007 264515 ..
/a	Show all information
/hw	Outputs the hardware version
/p	Outputs the processor type

/o	Outputs the build version of the operating system
/l	Outputs the bootloader version
/t	Outputs the device type
/s	Outputs the serial number
/r	Outputs the order number
/c	Outputs the chip set version

xcopy

Command used to copy files and directory structures
Syntax: *xcopy [-c | -h | -y <title>] <sourcedir> <targetdir>*

Parameter	Description
-y	Messages are suppressed
-c	Delete target directory first
<SourceDir>	Absolute path of the source directory
<TargetDir>	Absolute path of the target directory

10 Technical details

General	265607	265612
Approvals	CE	CE
Electrical data	**265607**	**265612**
Supply voltage		
Voltage	24 V	24 V
Kind	DC	DC
Voltage tolerance	-15 %/+20 %	-15 %/+20 %
Output of external power supply (DC)	14,4 W	22,1 W
Display	**265607**	**265612**
Display type	TFT	TFT
Display diagonal	18 cm	31 cm
Display resolution	800 x 480	1280 x 800
Display colour depth	16,2 M	16,2 M
Touchscreen	Capacitive	Capacitive
CPU	**265607**	**265612**
Processor type	X86	X86
Processor clock speed	1,3 GHz	1,3 GHz
Working memory (RAM)	512 MB	512 MB
Program memory (Flash)	512 MB	512 MB
Real-time clock	yes	yes
Removable data medium	**265607**	**265612**
Type	SD card	SD card
USB interface	**265607**	**265612**
Number of USB Hosts	2	2
CANopen interface	**265607**	**265612**
Connection type	9-pin D-Sub male connector	9-pin D-Sub male connector
Device type	Master	Master
Max. number of CANopen subscribers	127	127
Transmission rates	1 MBit/s, 10 kBit/s, 100 kBit/s, 125 kBit/s, 20 kBit/s, 250 kBit/s, 50 kBit/s, 500 kBit/s, 800 kBit/s	1 MBit/s, 10 kBit/s, 100 kBit/s, 125 kBit/s, 20 kBit/s, 250 kBit/s, 50 kBit/s, 500 kBit/s, 800 kBit/s
Ethernet interface	**265607**	**265612**
Number	1	1
Connection type	RJ45	RJ45
Transmission rate	1 Gbit/s	1 Gbit/s
Serial interface	**265607**	**265612**
Number of RS232 interfaces	1	1
Environmental data	**265607**	**265612**
Ambient temperature		
Temperature range	0 - 50 °C	0 - 50 °C

Environmental data	265607	265612
Storage temperature		
In accordance with the standard	**EN 60068-2-1/-2**	**EN 60068-2-1/-2**
Temperature range	**-25 - 60 °C**	**-25 - 60 °C**
Climatic suitability		
In accordance with the standard	**EN 60068-2-78**	**EN 60068-2-78**
Humidity	**90 % r. h. at 40 °C**	**90 % r. h. at 40 °C**
Condensation during operation	**Not permitted**	**Not permitted**
EMC	**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**
Frequency	**10 - 150 Hz**	**10 - 150 Hz**
Acceleration	**max. 1g**	**max. 1g**
Shock stress		
In accordance with the standard	**EN 60068-2-27**	**EN 60068-2-27**
Acceleration	**15g**	**15g**
Duration	**11 ms**	**11 ms**
Protection type		
In accordance with the standard	**EN 60529**	**EN 60529**
Housing	**IP20**	**IP20**
Front	**IP65**	**IP66**
Mechanical data	**265607**	**265612**
Dimensions		
Height	**153 mm**	**222 mm**
Width	**216 mm**	**332 mm**
Depth	**85 mm**	**83 mm**
Weight	**1.740 g**	**2.730 g**

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

11 Order reference

11.1 Product

Product type	Features	Order No.
PMI 607 Control	Operator terminal, 800 x 480 pixel resolution, capacitive touchscreen	265 607
PMI 612 Control	Operator terminal, 1280 x 800 pixel resolution, capacitive touchscreen	265 612

Support

Technical support is available from Pilz round the clock.

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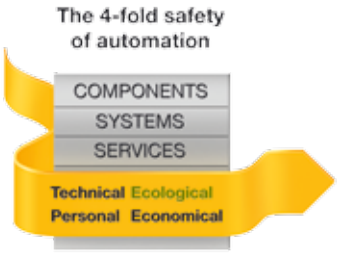

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