

SIEMENS

SIMATIC

Programming device SIMATIC Field PG M4




Getting Started

<u>Introduction</u>	1
<u>Description</u>	2
<u>Application planning</u>	3
<u>Installing and connecting</u>	4
<u>Commissioning</u>	5
<u>Appendix</u>	A

Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

 DANGER
indicates that death or severe personal injury will result if proper precautions are not taken.
 WARNING
indicates that death or severe personal injury may result if proper precautions are not taken.
 CAUTION
indicates that minor personal injury can result if proper precautions are not taken.
NOTICE
indicates that property damage can result if proper precautions are not taken.


If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

 WARNING
Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

Trademarks

All names identified by ® are registered trademarks of Siemens AG. The remaining trademarks in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owner.

Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

Table of contents

1	Introduction	4
2	Description	5
2.1	Exterior design	5
2.2	Operator controls	8
2.2.1	On/off button	8
2.2.2	Touchpad	10
3	Application planning	11
3.1	Unpacking and checking the delivery unit	11
3.2	Device identification data	11
4	Installing and connecting	13
4.1	Positioning the device	13
4.2	Connecting peripherals	14
4.3	Connecting the device to power.....	15
5	Commissioning	17
5.1	Requirements for commissioning.....	17
5.2	Initial commissioning - initial startup	17
A	Appendix	20
A.1	Guidelines and declarations.....	20
A.2	Certificates and approvals	21
A.3	Service and support	22

Introduction

Purpose of this documentation

This Getting Started documentation contains instructions and information that you need for commissioning and using the SIMATIC Field PG M4.

Where is this documentation valid?

This documentation is valid for all available versions of the SIMATIC Field PG M4 and describes the delivery state as of December 2012.

SIMATIC Field PG M4 operating instructions

The operating instructions are available on the included "Software for Field PG" DVD. To read and print the operating instructions, select the corresponding document in the Welcome.pdf.

The operating instructions provide many useful topics dealing with items such as hardware expansion options, changing the device configuration and technical data.

The operating instructions also contain a Declaration of Conformity for the device, with respect to safety and EMC requirements.

Safety information

Always follow the instructions in this manual and in the operating instructions in order to avoid personal injury and damage to assets. The warnings are highlighted by a warning triangle and presented in different forms based on the degree of hazard.

Conventions

The terms "PG" or "device" are also used to refer to the SIMATIC Field PG M4 product in this documentation.

Description

2.1 Exterior design

View with closed display



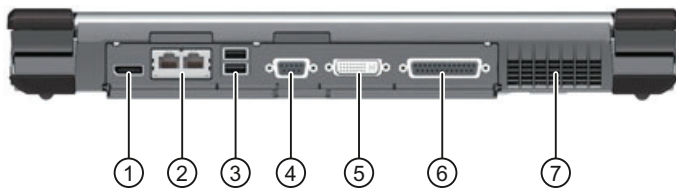
- ① System and keyboard LEDs
- ② Display latch
- ③ Device handle

Front view with display open

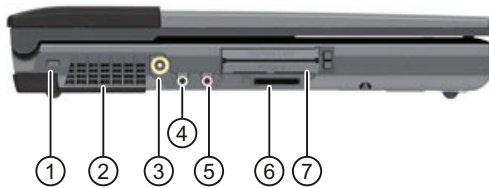


- ① Display latch
- ② Display
- ③ Stereo speakers
- ④ On/off button (power)
- ⑤ Keyboard
- ⑥ Touchpad
- ⑦ Mouse buttons

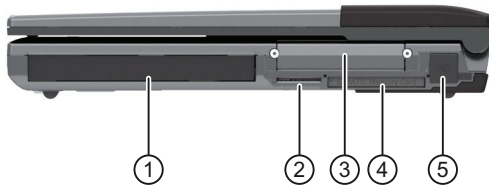
View from rear



- ① DisplayPort
- ② 2 x Ethernet
- ③ 2 x USB 3.0
- ④ MPI/DP
- ⑤ DVI-I
- ⑥ RS232/TTY (TTY functionality, depending on the HW configuration variant)
- ⑦ Ventilation air outlet

View of left side

- ① Opening for Kensington lock
- ② Ventilation air inlet
- ③ DC IN 19 V
- ④ Headphones
- ⑤ Microphone
- ⑥ Media Card Reader (port for SMC, SDHC, MMC (Multi Media Card - not SIMATIC MMC), xD, and MS Pro)
- ⑦ Express card and PC card slot

View of right side

- ① Optical drive
- ② SIMATIC Micro Memory Card interface
- ③ Exchangeable hard disk unit
- ④ Memory card interface
- ⑤ 2 x USB port, with cover
Top port: USB 2.0
Bottom port: USB charger

View from below



- ① Cover for memory modules
- ② Rating plate
- ③ Rechargeable battery

2.2 Operator controls

2.2.1 On/off button



- ① The on/off button (power) has the following functions:
 - Switch PG on/off (hold the button down for approximately 1 second; the response depends on the Windows power options settings)
 - Switch PG off in the event of a fault (hold down for more than 5 seconds)

Possible operating states

You may press the ON/OFF button (power button), or close the display panel (lid switch), or use the Windows Start menu to switch the PG from normal mode to one of the following operating states:

- Standby mode (Save to RAM),
- Hibernate (save to disk), default setting
- Off (Windows is brought down).

When the device is brought down from Windows, the device automatically switches off. If the device is not in Windows, it can be switched off using the on/off button.

Note

You can use Settings > Control Panel > Power Options in Windows XP to assign a response to the on/off button and the lid. You can also assign these settings to the hot keys FN + F5 and Fn + F6.

Note

In accordance with the settings in the Windows Power Options, the Field PG supports different operating states. The Power Options have been preset by the factory in such a way that in the factory state the device always adopts defined operating states (On, Standby, Hibernation, Off).

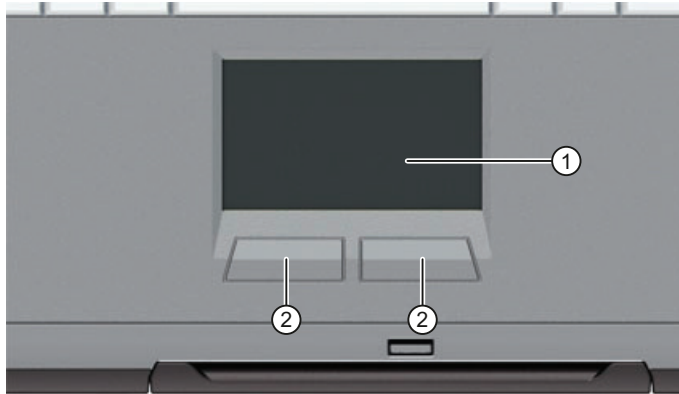
By changing these settings, and by adding extra hardware (such as USB components) or software to the device, you can modify the operating states so that the device cannot switch to Hibernation or Standby mode. Even though the screen display is dark, relevant consumers remain switched on in the device.

Please remember to always bring down the Field PG or set it to Hibernation prior to transporting in the backpack. When the device is in these states, all the status LEDs on the device go off when you disconnect the power supply. This way you can ensure the device is not switched on and the battery is not unintentionally discharged during transportation.

Press the on/off button briefly to reactivate the PG from Standby mode or Hibernation. In Standby mode the device LED flashes, and in Hibernation all the displays are switched off.

2.2.2 Touchpad

Touchpad and mouse buttons



- ① The touchpad can be used in many programs (with mouse operation) as an input device for controlling the cursor and selecting menus.
- ② Pressing the left mouse button selects an object. The response to the right button depends on the user program.

Note

The touchpad function (mouse pointer and mouse buttons) can be enabled and disabled with the hotkey Fn + F4.

You can configure the advanced touchpad functions under "Mouse" in the Windows Control Panel. The technical principle used means that it is possible to make unintentional mouse clicks with the touchpad when it is used in a "noisy" environment. In such environments, it is a good idea to disable the tap function in the touchpad driver, and to use the mouse buttons.

Application planning

3.1 Unpacking and checking the delivery unit

Unpacking the device

Note the following points when you unpack the unit

- It is advisable not to dispose of the original packing material. Keep it in case you have to transport the unit again.
- Please keep the documentation in a safe place. It is required for initial commissioning and is part of the device.
- Check the delivery unit for any visible transport damage.
- Check the delivery and your specially ordered accessories against the packaging list to ensure nothing is missing. Please inform your local dealer of any disagreements or transport damages.

3.2 Device identification data

Noting the device identification data

The device can be identified uniquely with the help of these numbers in case of repairs or theft.

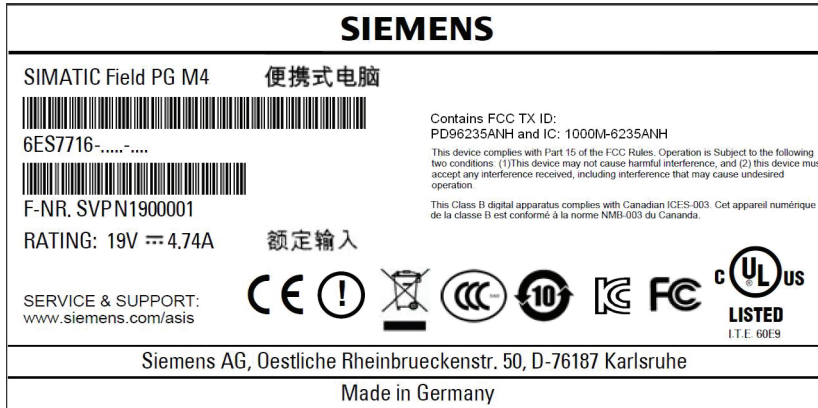
Serial number	S VP ...
Order No.	6ES ...
Microsoft Windows Product Key	
Ethernet address 1	
Ethernet address 2	

Enter the following data in the table:

- Serial number

The serial number (S VP) is located on the rating plate on the bottom of the device.

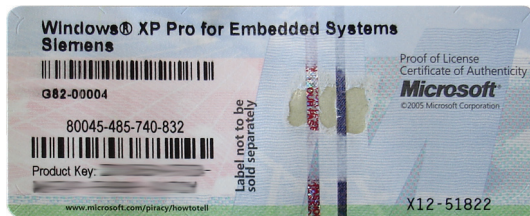
Rating plate



- Order number of the device
- Ethernet address
The Ethernet addresses of the device are listed in the BIOS Setup (ESC key > Icon "SCU") at Advanced > Peripheral Configuration.
- Microsoft Windows "Product Key" on the "Certificate of Authenticity" (COA). The Product Key is always required to reinstall the operating system.

COA label

The COA label is stuck to the bottom on the device.



Installing and connecting

4.1 Positioning the device

⚠ WARNING

The outer housing is made of Magnesium. If it comes into contact with open flame, there is a risk of fire / spreading fire.

NOTICE

Always set the PG down on its underside, otherwise there is a risk that it will fall over and damage sensitive components.

- Position the programming device to ensure comfortable operation and safety.
- Position the programming device with its bottom on a flat surface and at a comfortable height and distance.
- Ensure that a power outlet is easily accessible near your workplace.
- Ensure that there is enough space for connecting peripherals.
- Do not obstruct any ventilation slots when you position the device.
- Open the display by sliding the latch in the direction of the arrow.
- Flip the display open and adjust it to a convenient viewing angle. The display can be adjusted to any inclination angle between 0 and 150°.



4.2 Connecting peripherals

To be noted before you connect the device

NOTICE
I/O devices that do not support hot-plugging Peripheral devices that are incapable of hot-plugging may only be connected after the device has been disconnected from the power supply.

NOTICE
Observe the documentation of your I/O devices Strictly adhere to the specifications for peripheral equipment.



WARNING
Equipotential bonding of the signal cable shields When you connect long signal cables (particularly with connections between buildings), make sure the signal cables are always integrated into the local equipotential bonding system (connecting the cable shielding to the protective conductor).

Connect USB devices

Connect devices such as drives, mouse, keyboard, and printer to the USB 2.0 and USB 3.0 ports.

Connect the microphone

You can connect an external microphone to the 3.5 mm jack for the microphone (pink).

To run a microphone recording, select:

- The Windows XP Start menu: **All Programs > Accessories > Multimedia > Audio recorder**
- In Windows 7: **All Programs > Accessories > Audio recorder**.

Connect headphones

You can connect headphones or external speakers that are equipped with a 3.5 mm stereo jack plug to the headphones jack (green).

You can control the volume using the speaker button on the taskbar, or using hotkey Fn + F7 / F8.

4.3 Connecting the device to power

To be noted before you connect the device

Note

The external power unit supplies power to the Field PG in line operation with 120 V and 230 V power supply networks. The setting of the voltage range takes place automatically.

 WARNING

Do not connect or disconnect power and data cables during thunderstorms.

 WARNING

The device is designed only to be used in grounded power supply systems (TN systems to VDE 0100, part 300, or IEC 60364-3).

It must not be used in ungrounded, or impedance-grounded power systems (IT systems).

 WARNING

The Field PG may only be operated using the supplied power supply and / or using the supplied battery.

The external power supply may not be covered (risk of overheating).

 CAUTION

The mains connector must be disconnected to fully isolate the device from mains.

Localized information

Outside of the USA and Canada, operation on a 230 V power supply:

This device is equipped with a safety-tested power cord. If you choose not to use this cable, you must use a flexible cable of the following type: At least 18 AWG (0.82 mm²) conductor cross-section, and 15 A/250 V connector. The cable set must conform to the safety regulations of the country in which the devices are installed, and bear the prescribed markings in each case.

4.3 Connecting the device to power

For the USA and Canada:

For the United States and Canada, a CSA or UL-listed power cord must be used.

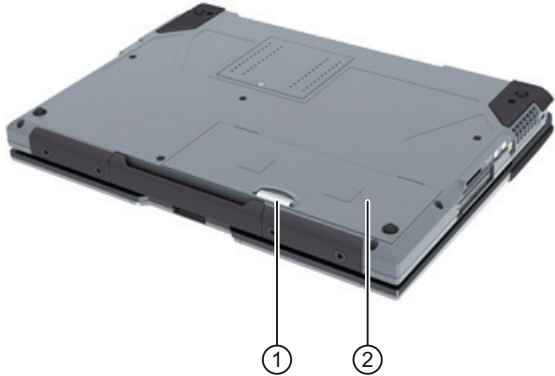
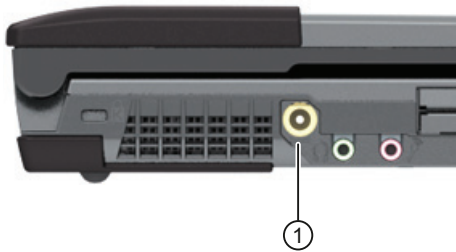
The connector must be compliant with NEMA 1-15P.

120 V/240 V supply voltage

A flexible cable with UL approval and CSA marking must be used. In addition, the cable must exhibit the following properties:

- 3-wire SPT-2 or SVT,
- At least 18 AWG conductor cross-section
- Max. length of 4.5 m
- Connector 15 A, min. 125 V

Connecting

Steps for connecting the device to mains		
1	Turn the PG over so that it is lying on the table with its display unit closed.	
2	Release ① the battery cover ② on the bottom of the device and open it.	
3	Insert the battery.	
4	Close the cover and turn the device over again.	
5	Insert the supplied power supply cable into the external power supply.	
6	Insert the low-voltage connector into the connection ① on the device.	
7	Plug the external power supply into a socket with a grounded protective conductor.	
8	Turn the PG over again.	

Commissioning

5.1 Requirements for commissioning

The operating system and system software of your device are preinstalled on the hard disk.

NOTICE
Risk of damage to the device!
Allow the device to warm up slowly to room temperature before you start it up. If you notice any condensation, wait around 12 hours before you switch on the device.

5.2 Initial commissioning - initial startup

Note

The programming device may not be switched off at any time during the installation process.

Do not change the default BIOS settings, otherwise the operating system setup may become corrupted.

Procedure

The operating system is set up automatically on the programming device when it is **first** started. The following tasks need to be performed:

1. Press the ON/OFF button for approximately 1 second.

The PG conducts a self-test. The following message is output during the self-test:

```
Press Esc for boot options
```

2. Wait until this message is cleared, then follow the instructions on the screen.
3. Type in the Product Key as required.

You find this key on the "Certificate of Authentication", in the "Product Key" line.

4. Automatic restart

After you have entered all necessary information and set up the operating system, the PG is automatically restarted and then displays the user interface of the respective operating system.

From now on, after you switch on the PC, the user interface of the operating system is automatically opened when the startup routine is completed.

Startup with Microsoft Windows

The menus, dialogs, and keyboard layout are set up in English under Windows. Use the Control Panel to change to another language and keyboard layout.

For Windows XP

1. Select:
"Start > Control Panel > Regional and Language"
2. You can make the desired changes in the "Regional Settings", "Languages" and "Advanced" tabs.

For Windows 7

Editing the settings for language, region and formats of the registered user account

1. Select:
"Start > Control Panel > Clock, Language, and Region > Regional and Language Options"
2. You can make your changes in the "Formats" and "Location und Keyboards and Languages" tabs.

Editing the settings for language, region and formats of the system account and default user account

1. Select:
"Start > Control Panel > Clock, Language, and Region > Regional and Language Options"
2. You can make your changes in the "Administrative" tab. Click the respective button to copy the settings.

For more information, refer to chapter "Setting up the language selection by means of Multilingual User Interface (MUI) (<http://support.automation.siemens.com/WW/view/en/10805333/133300>)".

Authorization / License key

A product specific authorization or a License Key (user authorization) is required to use the STEP 5-, STEP 7- and WinCC flexible programming software. This protected software may only be used with the relevant authorization. The License Keys for your SIMATIC software are stored on the included USB memory stick.

Remove the cap from the USB stick and insert the stick into a free USB port of your computer to access the License Keys.

After a short time a drive named "License_Key" will appear in Windows Explorer.

During a new installation, you will be notified by the Setup program if a matching license key has not been installed on your computer. You can then choose to have the Setup program install the license or to install the license later with the Automation License Manager you are going to install.

If you want to transfer the license key later, follow these steps:

1. Close the Automation License Manager. Locate the drive named "License_Key" in the left pane.
2. Click the drive named "License_Key".
This displays an overview of the license keys found on the license stick.
3. Use a drag-and-drop operation to move the desired license key to one of your drives.
4. After the transfer, the license key is located on the corresponding drive and you can now use the activated software.

Prior to removing the license stick, make sure to give notice according to Windows specifications ("Safely remove hardware").

You may also use the USB License Stick to transfer the License Keys to a different computer, or for intermediate storage of the License Keys.

Note

Software installed on the PG for which there is no authorization or a license key in the delivery package, cannot be used or will only run in Trial mode.

Transferring the SIMATIC STEP 5 authorization

Run "install.exe" from the License Key in the **USB_Stick:>UCL** directory to transfer the STEP 5 authorization. Follow the instructions on the screen to transfer the authorization.

Appendix

A.1 Guidelines and declarations

Notes on the CE mark



The following applies to the SIMATIC product described in this documentation:

RTTE directive

This product is designed for the following applications:

Application	Requirement for	
	Emissions	Immunity
Residential, business and commercial operations, and small businesses	EN 61000-6-3	EN 61000-6-1
Industrial applications	EN 61000-6-4	EN 61000-6-2

The devices are compliant with EN 61000-3-2 (Transient currents) and EN 61000-3-3 (Voltage fluctuation and Flicker).

This product meets the requirements of EC directive 1999/5/EEC "Radio Equipment and Telecommunications Terminal Equipment - Use of the Radio Spectrum": EN 300 328 / EN 301 893 / EN 301 489-17 / EN 302 489-1

Directive 1999/5/EC contains the requirements of Directive 2004/108/EC "Directive of the Council on the Approximation of the Laws of Member States relating to Electromagnetic Compatibility (EMC Directive).

- Safety: see Low voltage directive

Low voltage directive

This product fulfills the Directive 2006/95/EEC of the European Parliament and of the Council on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits.

Requirements of EC Directive 2006/95/EEC "Low voltage directive". Compliance with this standard was validated in accordance with EN 60950-1.

Declaration of conformity

The EC declaration of conformity and the corresponding documentation are made available to authorities in accordance with the EC directives stated above. Your sales representative can provide these on request.

Installation guidelines

The installation guidelines and safety notices specified in the supplied documentation must be adhered to during commissioning and operation.

Connecting peripherals

The requirements for noise immunity are met when you connect a peripheral suitable for an industrial environment according to EN 61000-6-2:2005. Peripheral devices must only be connected using shielded cables.

A.2 Certificates and approvals

DIN ISO 9001 certificate

The Siemens quality management system for all production processes (development, production, and sales) meets DIN ISO 9001:2000 requirements.

This has been certified by DQS (the German society for the certification of quality management systems).

Q-Net certificate no.: DE-001108 QM

Software License Agreement

The device is shipped with preinstalled software. Please observe the corresponding license agreements.

Certifications for the United States, Canada, and Australia

Product safety.

The following approval is available for the device:



Underwriters Laboratories (UL) to Standard UL 60950-1 Second Edition and Canadian Standard CAN/CSA-C22.2 No. 60950-1-07 Second Edition.

WLAN

The integrated wireless LAN conforming to IEEE 802.11 a/b/g/n is certified for Europe, the USA and Canada:

A.3 Service and support

You can find additional information and support for the products described on the Internet at the following addresses:

- Technical support (<http://www.siemens.com/automation/service&support>)
- Support request form (<http://www.siemens.com/automation/support-request>)
- After-sales information system for SIMATIC PC / PG (<http://www.siemens.com/asis>)
- SIMATIC Documentation Collection (<http://www.siemens.com/simatic-tech-doku-portal>)
- Your local representative (<http://www.siemens.com/automation/partner>)
- Training center (<http://www.sitrain.com>)
- Industry Mall (<http://mall.automation.siemens.com>)

When contacting your local representative or Technical Support, please have the following information at hand:

- Order number of the device (MLFB)
- BIOS version (industry PC) or image version (HMI device)
- Installed additional hardware
- Installed additional software

Tools & downloads

Please check regularly if updates and hotfixes are available for download to your device. The downloads are available on the Internet under "After Sales Information System SIMATIC PC/PG" (see above).