Getting Started Edition 04/2006

SIMATIC
Field PG M

simatic

PROGRAMMING DEVICE

SIEMENS

SIEMENS

SIMATIC

**Programming Device
Field PG M**

Getting Started

Safety Guidelines

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

with a safety alert symbol, indicates that minor personal injury can result if proper precautions are not taken.

Caution

without a safety alert symbol, indicates that property damage can result if proper precautions are not taken.

Notice

indicates that an unintended result or situation can occur if the corresponding information is not taken into account.

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 device/system may only be set up and used in conjunction with this documentation. Commissioning and operation of a device/system may only be performed by **qualified personnel**. Within the context of the safety notes in this documentation qualified persons are defined as persons who are authorized to commission, ground and label devices, systems and circuits in accordance with established safety practices and standards.

Prescribed Usage

Note the following:

Warning

This device may only be used for the applications described in the catalog or the technical description and only in connection with devices or components from other manufacturers which have been approved or recommended by Siemens. Correct, reliable operation of the product requires proper transport, storage, positioning and assembly as well as careful operation and maintenance.

Trademarks

All names identified by ® are registered trademarks of the 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

Introduction 1

Purpose of this documentation

This manual contains all the information and instructions you need to commission and use the SIMATIC Field PG M.

Where is this documentation valid?

This documentation is valid for all available versions of the SIMATIC Field PG M and describes the delivery state as of April 2006.

SIMATIC Field PG M, 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 abbreviation PG or device is also used within this documentation for the product name SIMATIC Field PG M.

Description

2

2.1 Exterior design

View with closed display	Pos	Description
	(1)	Device handle
	(2)	Keyboard LEDs
	(3)	System LEDs

Front view with open display	Pos	Description
	(1)	Display latch
	(2)	Display
	(3)	Stereo speakers
	(4)	On/off button (power)
	(5)	Mouse buttons
	(6)	Touchpad
	(7)	Keyboard

Rear view	Pos	Description
	(1)	Ventilation air outlet
	(2)	DC IN 18.5 V
	(3)	USB
	(4)	VGA
	(5)	LPT
	(6)	MPI/DP Multipoint Interface
	(7)	COM1/TTY
	(8)	Ethernet

View of left side	Pos	Description
	(1)	USB with open cover
	(2)	Micro Memory Card interface
	(3)	Memory card interface
	(4)	Ventilation air inlet
	(5)	Opening for Kensington lock

View of right side	Pos	Description
	(1)	PC card slots
	(2)	Microphone
	(3)	Headphones
	(4)	optical drive
	(5)	Floppy disk drive
	(6)	Modem port (RJ11)

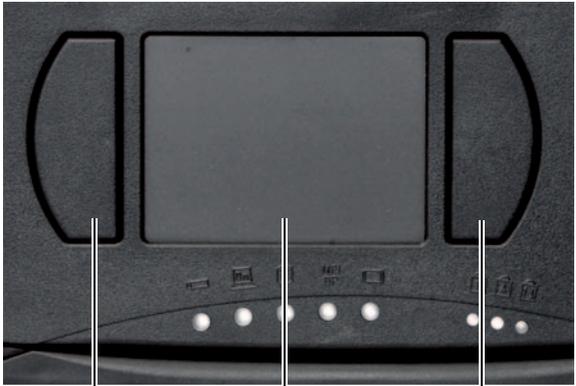| View below	Pos	Description
	(1)	Memory expansion
	(2)	Rechargeable battery
	(3)	Exchangeable hard disk unit
	(4)	Ventilation openings
	(5)	Rating plate and Certificate of Authenticity

2.2 Operator controls

2.2.1 On/off button

On/off button	Description
	The on/off button (power) has the following functions: • Switch on/off the PG (press the button for approximately 1 second, the behavior depends on the Windows Power Options settings) • Switch off the PG (press for more than 7 seconds)

For information on the configuration of the On/Off button, refer to the On/Off button section in the operating instructions.

2.2.2 Touchpad

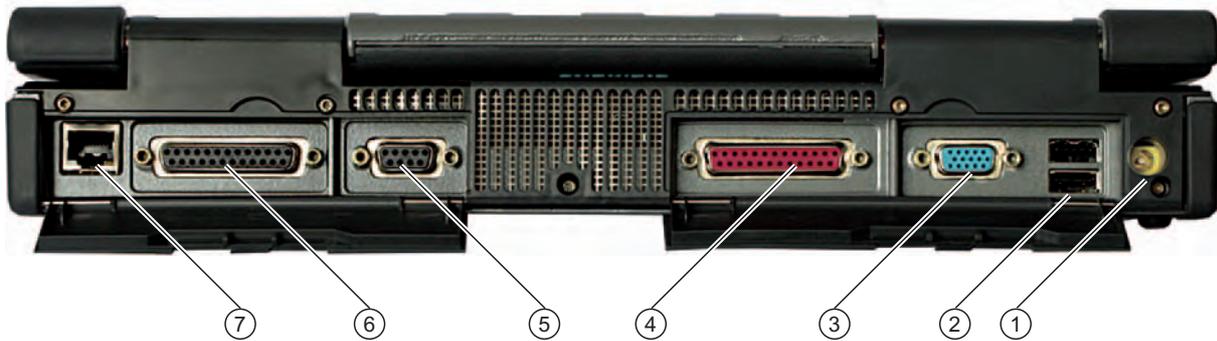| Touchpad	Pos	Description
	(1)	Mouse buttons An object is selected by pressing the left button. The reaction to the right button depends on the user program involved.
	(2)	Touchpad The touchpad is used by many programs (operated by mouse) as an input device for controlling the cursor and menus. You can position the touch sensitive cursor anywhere on the screen.

Note

The touchpad function (mouse pointer and mouse buttons) can be switched on and off with hotkeys, Fn + F4.

The extended functions of the touchpad can be configured with the "Mouse" setting in the Windows Control Panel.

2.3 Connecting elements

Interfaces

Layout of the interfaces on the rear of the device

Pos	Designation	Description
(1)	DC IN 18.5 V	Connector for supplied power unit
(2)	USB 2.0	2 ports for USB devices
(3)	VGA	Connector for compatible external monitor
(4)	LPT	Connector for devices with parallel ports such as printers or scanners
(5)	PROFIBUS / MPI	MPI interface (RS485, electrically isolated), 9-pin Cannon socket
(6)	COM1 V.24	COM1(TTY) for connecting S5 automation devices or standard V.24 via supplied "Serial Port Adaptors D9/D25" adapter for connecting serial devices such as modems or mice.
(7)	ETHERNET	RJ 45 Ethernet connection 10/100 Mbps

Application Planning

<div style="text-align: right; font-size: 3em;">3</div>

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.

Notice

The dummy card that was located in the bay upon delivery of the PG should always be inserted during transportation.

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.

Enter the following data in the table below:

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

Rating plate

Figure 3-1   Rating plate

- Order number of the device

- Ethernet address: The Ethernet address of the device can be viewed in the BIOS Setup (F2) under Main > Hardware Options > Onboard Ethernet Address.

- Microsoft Windows "Product Key" from the "Certificate of Authenticity" (COA). The COA label is stuck to the bottom on the device. The Product Key is always required to reinstall the operating system.

COA label

Figure 3-2   COA label

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

Positioning and connecting

4

4.1   Positioning the device

- 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 lock in direction of the arrow.
- Flip the display open and adjust it to a convenient viewing angle. The display can be adjusted within any inclination angle from 0 to 180°.

Caution

Always set the programming device bottom down. If you set it down on the port side, there is a risk that it will fall over and damage sensitive components of the unit.

Warning

The outer housing is made of Magnesium. Contact with an external open fire source bears the risk of fire / spreading fire.

4.2 Connecting peripheral equipment

To be noted before you connect the device

Caution

Peripheral devices that are incapable of hot-plugging may only be connected after the device has been disconnected from the power supply.

Caution

Strictly adhere to the specifications for peripheral equipment.

Warning

When connecting long signal lines (particularly with connections spanning buildings), ensure the signal lines are always integrated in the local potential equalization (connecting the screen with the grounding wire).

4.3 Connecting the device to power

To be noted before you connect the device

Note

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

The battery is charged in line operation, that´s why you need to install the supplied battery before you connect the device to the power supply.

Warning

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

⚠ **Warning**

The device is designed for operation on grounded power supply networks (TN systems to VDE 0100, part 300, or IEC 60364-3).

Operation on ungrounded or impedance-grounded power networks (IT networks) is prohibited.

⚠ **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.

Connecting

Steps for connecting the device to mains	
1 Turn the PG so that the closed display unit is lying on the table.	
2 Unlock and fold up the battery cover on the underside of the device.	
3 Insert battery.	
4 Close the cover and turn the device round again.	
5 Plug the supplied power supply cable into the external power supply.	
6 Plug the low plug into the connection on the device.	
7 Connect the external power supply to a power point with grounded grounding wire.	

Commissioning

<div align="right" style="font-size:3em">5</div>

5.1 Requirements for commissioning

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

Caution

Risk of damage to the device!

Make sufficient allowances for the device to acquire room temperature before you put it into use. If condensation has developed, wait at least 12 hours before you switch on the device.

5.2 Basic commissioning - initial startup

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 and hold it down for at least 1 second. The PG conducts a self-test. During the self-test, this message appears:

Press <F2> to enter SETUP or <ESC> to display the boot menu

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.

Notice

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.

---

4. Automatic restart

After you have entered all necessary information, and after the operating system setup is completed, the PG is automatically restarted and displays the user interface of the relevant 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, dialog and keyboard layout appear in English under Windows XP MUI and Windows 2000 MUI. You can set another language and another keyboard layout by selecting **Start > Control Panel > Date, Time, Language, and Regional Options > Add other languages**.

Installation of the Windows 2000 version English and the backup image of the delivery state

The backup image of the delivery state of your device is located on the D drive: in the D:\Restore\ directory

In the 2000 version of the Field PG, you can set your system language to English by saving the backup image to the D:\Restore\English directory.

To restore the delivery state or another language from the D:\Restore\ drive, proceed as follows:

1. Insert the supplied "Norton Ghost" in your DVD drive and reboot it by means of the On/Off button of the Field PG.

2. To boot from the "Norton Ghost" CD press the <ESC> button for the BIOS message
   Press <F2> to enter Setup or <ESC> to show Boot menu
   appears. After initialization, a "Boot Menu" is displayed.

3. Use the cursor key to select the CD/DVD drive and acknowledge the "Press any key to boot from CD" message.
   The Symantec Recovery Disk program loads.

4. Select the English or German language in the "Choose your language" menu.

5. Now select the "advanced restore tasks..." in the "Symantec Recovery Disk" menu and then "System Restore"

6. In the System Restore assistant, select "Restore Drive" and "Single Drive".
   You can use the "Browse" function to select the required backup image. For Windows 2000 in German, for example the image data (D:) > Restore > German > *.V2I

7. Select the storage location Disk 1, SYSTEM, Type Primary.

Caution

This function deletes all data on the system partition of your C drive:
All data, user settings and any authorizations on the C drive will be lost in the process.

---

8. Confirm the confirmation prompt. The System Restore assistant program transfers the selected image to the target partition.

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 requisite release. Authorizations and license keys for the SIMATIC software are included on the supplied License Key diskette.

To unlock the software:

- Insert the License Key disk into your floppy drive.

- Click on the Start button in Windows and

- Open the Automation License Manager with the menu command **Simatic > License Management > Automation License Manager**. Use this program to install the authorization or license key to your hard disk.

Notice

The License Key diskette supplied with the Field PG only contains authorizations or license keys for the SIMATIC software you have ordered. The SIMATIC software you receive will correspond to your order form.

The License Key diskette of the supplied "Upgrade Installation" version only contains the software for upgrading authorizations or license keys that are already installed.

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.

Keep the License Key diskette with its authorization or license key in a safe place.

Appendix

A

A.1 Guidelines and declarations

Notes on the CE Label

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

EMC Guidelines

This product fulfills the requirements for the EC directive ™89/336/EEC Electromagnetic Compatibility", and the following fields of application apply according to this CE label:

Area of Application	Requirement for	
	Emitted Interference	Noise immunity
Domestic housing area, business and trade areas and small businesses.	EN 61000-6-3: 2001	EN 61000-6-1: 2001
Industry	EN 61000-6-4: 2001	EN 61000-6-2: 2001

The device complies with the standards EN 61000-3-2:2000 (harmonic currents) and EN 61000-3-3:1995 (voltage fluctuation and flicker.)

Low-Voltage Directive

This product meets the requirements of EG guidelines 73/23/EEC "Low-Voltage Directive". Conformance with this standard has been verified according to EN 60950.

RTTE Directive

This product meets the requirements of the EC directive "Radio plant and telecommunication terminal equipment".
Radio spectrum Matters: EN 300 328-2 V1.2.1 / EN 301 893 V1.2.3
Safety: see Low-voltage Directive
EMC: see EMC Directive
Modem interface network capability:TBR21

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.

Observing the installation guidelines

The installation guidelines and safety instructions given in this documentation have to be noted during commissioning and operation.

Connecting peripherals

The requirements regarding noise immunity to EN 61000-6-2:2001 are met when you connect a peripheral suitable for an industrial environment. Peripheral devices are only be connected via shielded cables.

A.2   Certificates and approvals

DIN ISO 9001 certificate

The quality assurance system for the entire product process (development, production, and marketing) at Siemens fulfills the requirements of ISO 9001 (corresponds to EN29001: 1987).

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

EQ-Net certificate no.: 1323-01

Software License Agreement

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

Certifications for the United States, Canada, and Australia

Security

One of the following markings on a device is indicative of the corresponding approval:
Underwriters Laboratories (UL) acc. to Standard UL 60950-1 and Canadian Standard C22.2 No. 60950-1-3

WLAN

Caution
The integrated Wireless LAN (2.4 GHz frequency) and modem is approved for use in Europe.
In the 5 GHz frequency band the Wireless LAN is approved for use in Germany, France, Italy, Spain, UK and Austria.
Please make sure to observe the relevant country-specific directives when operating the system outside these countries.

A.3 Service and support

Other support

If you have any further questions relating to the products described in this documentation, contact your local representative at the SIEMENS office nearest you.

Find your contact partner at:

http://www.siemens.com/automation/partner

A signpost to the documentation of the various SIMATIC products and systems is available at:

http://www.siemens.de/simatic-tech-doku-portal

The online catalog and the online ordering system is available at:

http://mall.automation.siemens.com/

Training Center

Siemens offers a number of training courses to familiarize you with the SIMATIC automation system. Please contact your regional training center or the main training center in D 90327 Nuremberg.

Telephone: +49 (911) 895-3200.

Internet: http://www.sitrain.com

Technical Support

You can reach Technical Support for all A&D products using the Web form for Support Request available under
http://www.siemens.de/automation/support-request

Further information about our technical support is available in the Internet at
www.siemens.com/automation/service

When you contact the Customer Support, please have the following information on hand for the technician:

- BIOS version

- Order No. (MLFB) of the device

- Installed additional software

- Installed additional hardware

Service & Support on the Internet

In addition to our documentation offer you can find more detailed information and service information on programming devices and industrial PCs on the Internet at:

http://www.siemens.com/asis