

SIEMENS

SIMATIC




Industrial PC SIMATIC Panel PC 577B

Operating Instructions (Compact)

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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.

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Safety

1.1 Safety instructions

 CAUTION
In order to avoid substantial damage and for your own safety, note the safety instructions in this documentation and in the operating instructions.

 WARNING
Function test while installing the device in machines or execute systems Following the results of a risk analysis, additional protection equipment on the machine or the system is necessary to avoid endangering persons. With this, especially the programming, configuration and wiring of the inserted I/O modules have to be executed, in accordance with the safety performance (SIL, PL or Cat.) identified by the necessary risk analysis. The intended use of the device has to be ensured. The proper use of the device has to be verified with a function test on the system. This test can detect programming, configuration and wiring errors. The test results have to be documented and, if necessary, entered into the relevant documents that verify safety.

2.1 Unpacking and checking the delivery

1. Please check the packaging material for transport damage upon delivery.
2. If any transport damage is present at the time of delivery, lodge a complaint at the shipping company in charge. Have the shipper confirm the transport damage immediately.
3. Unpack the device.

CAUTION

Do not lie the device on its back. This will avoid any damage to an optical drive which may be present. Lie the front side on a soft surface to avoid damaging the front panel USB port.
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4. Keep the packaging material in case you have to transport the unit again.

NOTICE

The packaging protects the device during transport and storage. Therefore, never dispose of the original packaging material!
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5. Please keep the enclosed documentation in a safe place. You will need the documentation when you start up the device for the first time.
6. Check the contents of the package for completeness and transportation damage. Check for completeness using the enclosed scope of delivery list.
7. Should the contents of the package be incomplete or damaged, please inform the responsible supply service immediately and fax us the enclosed form "SIMATIC IPC/PG quality control report".

 WARNING
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Make sure that a damaged device is not installed nor put into operation.
--

8. Note the identification information (see chapter "Identification data of the device").

2.2 Device identification data

Enter the identification data of the device into the table.

SVP number (on the type plate)

Order number

Supplied with XP Professional:

"Microsoft Windows Product Key" from "Certificate of Authenticity" (COA)

The label is attached to the device.

Ethernet address:

BIOS Setup (F2 key) under

"Main > Hardware Options > Ethernet Address"

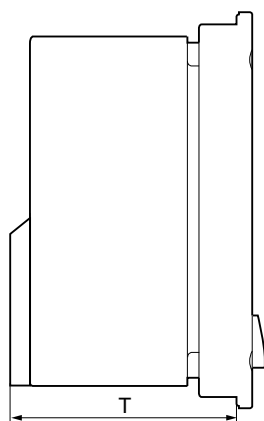
2.3 Product Documentation

The detailed operating instructions for Panel PC 577B can be downloaded as a PDF file on the Internet under the following address:

<http://www.siemens.com/automation/service&support>

Installation / panel-mounting

3.1 Mounting depth of the device



Panel PC	Depth D
Touch panel with 12" TFT	141 mm
Touch panel with 15" TFT	138 mm
Touch panel with 19" TFT	147 mm

3.2 Permitted mounting positions

Approval

Only certain mounting positions are approved for the device.

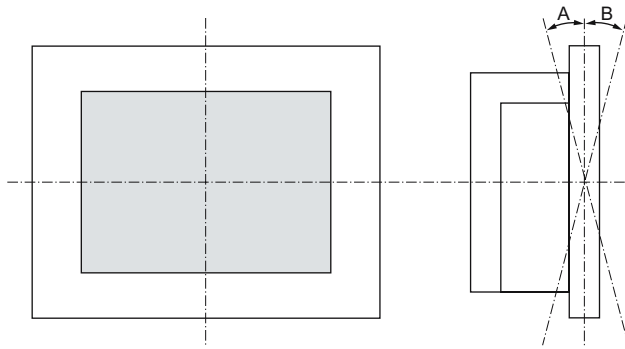


Figure 3-1 Mounting position

Table 3-1 Permissible deviations from the vertical mounting position

Temperature	Angle A	Angle B
to 45°C	20°	20°

Note

When mounting the device at an angle, note the following.

- Do not subject the device to mechanical stress.
- Operation of a DVD drive is not permitted.

3.3 Preparing the mounting cut-out

The following illustration shows the dimensions for the mounting cut-out.

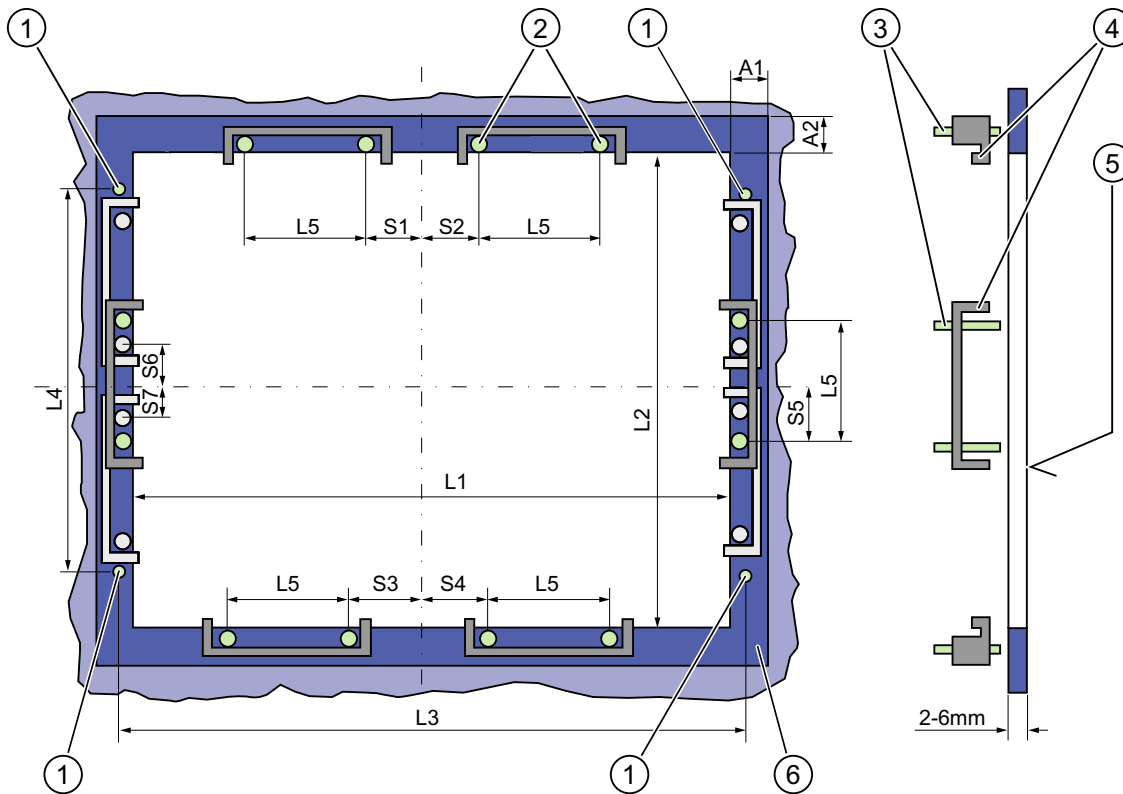


Figure 3-2 Installation cut-out

- | | |
|-------------------------------------|---|
| (1) Drill hole for screw attachment | (4) Clamp |
| (2) Pressure points for clamp | (5) R _z 120 in the seal area |
| (3) Setscrews | (6) Seal area |

Note

Mounting dimensions can be read from the dimension overview or they can be transferred to the cabinet from the mounting template supplied.

3.3 Preparing the mounting cut-out

Table 3-2 Dimensions for the mounting cut-out in mm

Control unit	L1	L2	L3 ¹⁾	L4 ¹⁾	L5	A1	A2	S1	S2 S3 S4	S5 ²⁾	S6 ²⁾ S7 ²⁾
Tolerance	±1	+1	±0,2	±0,2	±0,5	±1	±1	±1	±1	±1	±1
Touch panel											
12" TFT	368	290	—	—	112	16	10	19	35	56	—
15" TFT	450	290	465	235	112	16	10	81	81	56	—
19" TFT	450	380	465	235	112	16	10	46	46	—	33

1) M6 thread or drill holes with a diameter of 7 mm

2) Two clamps necessary for vertically securing clamps only for 19" touch panel fronts.

Preparing the mounting cut-out

Steps for preparing the mounting cut-out	
1	Select a location suitable for mounting, taking into account the mounting position.
2	On the basis of the dimensions, check whether the required screw and pressure points on the rear and the seal area are easily accessible after the completion of the mounting cut-out. Otherwise the mounting cut-out is useless.
3	Complete the mounting cut-out in accordance with the dimensions.

3.4 Securing the device with clamps

Requirement

Accessories	Display		
	12"	15"	19"
Clamp	6 x	6 x	8 x
	The clamps are provided with the control unit.		
Tool	2.5 mm hexagonal spanner		

Procedure



Figure 3-3 Clamp assembly

1. Disconnect the device from the power supply.
2. Working from the front, insert the device into the 19" rack on the swivel arm or in the mounting cut-out.
3. Fasten the control unit from the rear using the clamps.
4. Tighten the setscrews to a torque of 0.4 - 0.5 Nm.

IP65 degree of protection

The plant builder is responsible for the correct installation of the device. The degree of protection IP65 is only guaranteed for the front of the device if the ring seal is properly applied with the correct size of cutout, the unit has been clamped in place, and the instructions below are observed.


NOTICE
<p>Control cabinet installation: Material strength at the mounting cut-out</p> <p>Ensure that the material strength at the mounting cut-out is a minimum of 2 mm and a maximum of 6 mm. Please follow the specifications for the dimensions in the "Preparing the mounting cut-out" section.</p> <p>The degrees of protection are only guaranteed when the following is observed:</p> <ul style="list-style-type: none"> • The surface plane deviation of the mounting cut-out in relation to the external dimensions of the control unit amounts to ≤ 0.5 mm when the control unit is mounted.

3.5 Securing with screws

Note

Securing with screws is not possible with the 12" touch panel variant. To secure the 19" touch panel with screws, backing plates with order number 6AV7672-8KE00-0AA0 are required on the front.

Drill holes in the control unit

Steps for drilling holes	
1	Drill holes (Ø approx. 2.5 mm) from the rear in the four recesses of the control unit 
2	Drill these holes with a diameter of Ø 5.5 mm for M5 and a Ø 6.5 mm for M6.
3	Deburr the holes from the front of the control unit

NOTICE

Risk of damage


Ensure that no metal cuttings enter the device when the holes are drilled. Cover the device with film or when drilling, use removal by suction.

Drill holes in the mounting unit

1. Drill the holes at the prepared mounting cut-out according to the information for L3 and L4. (see Chapter "Mounting cut-out")
2. Working from the front, insert the device into the 19" rack on the swivel arm or in the mounting cut-out of the control cabinet.
3. Secure the control unit by inserting suitable screws and nuts

IP54 degree of protection

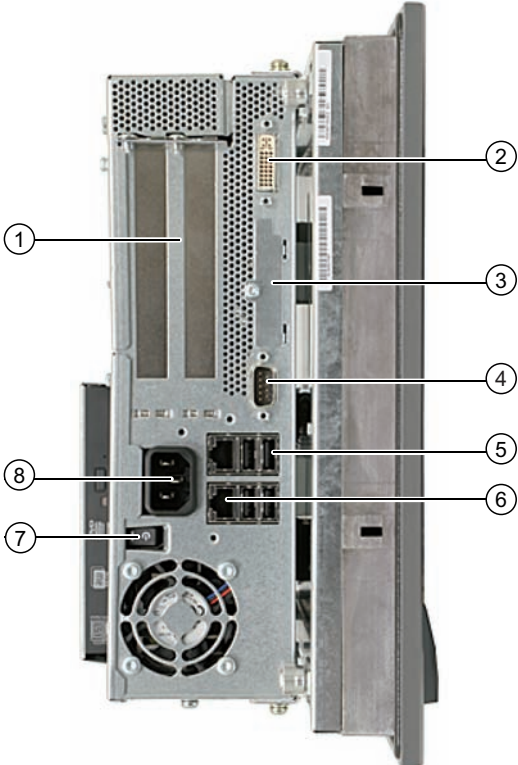
The IP54 degree of protection is guaranteed for mounting together with the ring seal.

 CAUTION
Observe the panel seal when mounting Ensure you do not damage the panel seal when mounting the device.
NOTICE
Control cabinet installation: Material strength at the mounting cut-out Ensure that the material strength at the mounting cut-out is a minimum of 2 mm and a maximum of 6 mm. Please follow the specifications for the dimensions in the "Preparing the mounting cut-out" section. The degrees of protection are only guaranteed when the following is observed: <ul style="list-style-type: none">• The surface plane deviation of the mounting cut-out in relation to the external dimensions of the control unit amounts to ≤ 0.5 mm when the control unit is mounted.

Connecting

4.1 Connection elements and operator controls

Connection and Operator Control Components of the Computer Unit


Locations of connection and operator control components			
	Item	Name	Description
	(1)	PCI	2 slots for PCI expansion module
	(2)	DVI/VGA	DVI/VGA socket for CRT or LCD monitor with DVI interface or VGA monitor via DVI/VGA adapter
	(3)	CompactFlash	Slot for Compact Flash card
	(4)	COM 1	Serial port (RS232) 9-pin D-sub connector
	(5)	USB	4 USB 2.0 ports (2 ports can be simultaneously used as high current (500 mA) outputs)
	(6)	Ethernet	2 RJ45 connections for 10/100/1000 Mbps
	(7)	On / Off switch	-
	(8)	100 to 240 V AC	Connection for AC power supply An appropriate angle bracket is included with the device for interlocking the connecting plug.

NOTICE

On / Off switch

The On / Off switch does not disconnect the device from the mains. When the switch is in the 0 position, the device is still connected to the auxiliary voltage.

Connection components of control unit

USB connection control unit			
	Item	Name	Description
	(1)	USB	1 connection USB 2.0 high current / 500 mA under sealed cover (not available with every product variant).

NOTICE
Ensuring degree of protection P65
When the sealed cover over the USB port is removed in order to connect a USB component, the IP65 degree of protection for the device is no longer guaranteed.

Note

Use of USB devices

- Wait at least ten seconds between removal and reconnection of USB devices. This also applies to control units with touch screen panels, especially for touch operation.
- When using standard USB peripherals, bear in mind that their EMC immunity level is frequently designed for office applications only. These devices may be used for commissioning and servicing. However, only industry-standard devices are allowed for industrial operation.
- Peripherals are developed and marketed by individual vendors. The respective manufacturers offer support for the peripherals. Moreover, the terms of liability of the individual vendors or suppliers apply here.

4.2 Connecting the (100 to 240 V AC) power supply

Note before connecting the device

Note

The varying-voltage power supply module is designed for operation on 100 - 240 V AC 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 for operation on grounded power supply networks (TN networks to VDE 0100, Part 300, or IEC 60364-3).

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

 **WARNING**

The permitted nominal voltage of the device must conform with local mains voltage.

CAUTION

The mains connector must be disconnected to fully isolate the device from the mains. Ensure easy access to this area.

A master mains disconnect switch must be installed if the device is mounted in a switch cabinet.

Always ensure free and easy access to the power inlet on the device or that the safety power outlet of the building installation is freely accessible and located close to the device.

Note

The power supply contains an active PFC (Power Factor Correction) circuit to conform to the EMC guidelines.

Uninterruptible AC power systems (UPS) must supply a sinusoidal output voltage in the normal and buffered mode when used with SIMATIC PCs with an active PFC.

UPS characteristics are described and classified in the standards EN 50091-3 and IEC 62040-3. Devices with sinusoidal output voltage in the normal and buffered mode are identified with the classification "VFI-SS-...." or "VI-SS-....".

Localized information

For countries other than the USA and Canada:

240 V supply voltage

This device is equipped with a safety-tested power cable which may only be connected to a grounding outlet. If you choose not to use this cable, you must use a flexible cable of the following type: Min 18 AWG conductor cross-section and 15-A / 250-V shockproof connector. The cable set must be compliant with the safety regulations and stipulated IDs of the country where the system is to be installed.

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 5-15.

100 V AC power supply

To be used is a flexible power cord approved to UL and with CSA label, and which has the following features: Type SJT with three leads, min. 18 AWG conductor cross-section, max. 4.5 m in length and parallel ground contact connector 15 A, min. 125 V.

240 VAC power supply

Use a flexible power cord which is approved to UL and CSA, and which has the following features: Type SJT with three conductors, min. 18 AWG conductor cross-section, max. length 4.5 m, and tandem grounded connector 15 A, min. 250 V.

Connecting

How to connect the device to the 100 to 240 V AC power supply	
1	Ensure that the On/Off switch is in '0' position (Off) when you plug in the power cord in order to avoid unintentional startup of the device.
2	Connect the equipotential bonding.
3	Insert the power cable in the electrical socket.
4	Fasten the cable with the supplied power plug latch, if necessary.



4.3 Connecting the Equipotential Bonding Circuit

A low-resistance ground connection ensures that interference signals generated by external power supply cables, signal cables or cables to the I/O modules are safely discharged to ground.


The equipotential bonding connection of the device is located underneath the device and is identified by the following symbol:



Figure 4-1 Equipotential Bonding

Connecting the Equipotential Bonding Circuit

You require a TORX T20 screwdriver to connect the equipotential bonding conductor.

Steps for connecting the equipotential bonding		
(1)	<p>Connect the equipotential bonding connection (M4 thread) (1) on the device (large surface, large-area contact) with the central grounding point of the control cabinet. The minimum permissible cross-section is 5 mm².</p>	

Startup

5.1 Initial Startup

Configuring the operating system

Note**Requirements for initial start-up**

Before switching on the computer for the first time, check that the equipotential bonding is connected and that all connecting cables are plugged in correctly. Also ensure that a USB keyboard and a USB mouse are connected to the PC.

When the computer starts up for the first time, the Windows XP Professional operating system on the hard disk is configured automatically. Proceed as follows:

1. Connect the device to the power supply.
 - The module carries out a self-test. The following message appears:
Press <F2> to enter Setup or <ESC> to show Boot menu
2. Wait for the message to disappear.
3. Follow the instructions on the screen.

NOTICE
The 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. When you have entered all necessary information and the operating system setup is completed, the PC is reboots automatically and the user interface of the respective operating system is displayed.

Note

System startup can take longer than usual for the initial commissioning.

When you switch on the PC now, the user interface of the Windows XP Professional operating system is automatically opened when the startup routine is completed.

Note

Windows logon

If you have assigned an administrator password, you must log in before you can access the operating system. With touch devices, you can log on using a virtual on-screen keyboard.

Note

To prevent data loss, it is advisable to create an image of your system partition after initial commissioning.

Switching off the device

When you work with Windows XP Professional, always shut down the PC with the command "Start > Turn Off Computer".

5.2 Setting up the language selection

The Multilanguage User Interface (MUI) allows you to set up the Windows XP Professional menus and dialogs for additional languages.

The default setting on your device is Windows XP MUI with English menus and dialog boxes and a US keyboard layout. You can change the language in the Control Panel. Select:

"Start > Settings > Control Panel > Regional and Language Options", "Languages" tab, "Language used in menus and dialogs" field.

For the "Regional and Language Options" set the default as "non-Unicode programs" under "Advanced" in addition to the language for menus and dialogs.

5.3 Setting the panel type

After the device is restarted, different dialogs appear on the screen. Drivers and applications can be installed from these dialogs.

1. In the "Panel Wizard" dialog, click the type of panel that corresponds to your device.

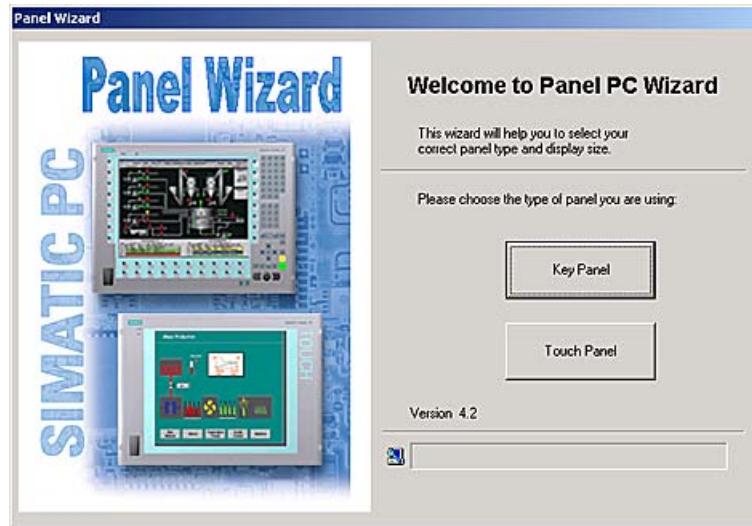


Figure 5-1 Panel type

2. Follow the instructions on the screen.

5.4 Screen keyboard

You can operate the device by means of a virtual screen keyboard. You can use it to enter the characters directly on the touch panel or with an externally connected mouse.

Call "Touch input"

Start the "Touch input" application on the desktop. The screen keyboard is displayed.



- (1) Button for language selection: German, English, Italian, Spanish, French

Service and support

Local information

If you have questions about the products described in this document, you can find help at:
<http://www.siemens.com/automation/partner>

Technical documentation for SIMATIC products

Further documentation for SIMATIC products and systems can be found at:
<http://www.siemens.com/simatic-tech-doku-portal>

Easy shopping with the A&D Mall

Catalog & online ordering system <http://www.siemens.com/automation/mall>

Training

All the training options are listed at: <http://www.siemens.com/sitrain>

Find a contact at: Phone: +49(911) 895-3200

Technical support

Tel +49 180 5050 222

Fax +49 180 5050 223

<http://www.siemens.com/automation/csi/service>

You will find support request web form at:

<http://www.siemens.com/automation/support-request>

When you contact the customer support, please have the following information for the technician on hand:

- BIOS version
- Order No. (MLFB) of the device
- Installed additional software
- Installed additional hardware

Online support

Information about the product, Support and Service, right through to the Technical Forum, can be found at: <http://www.siemens.com/automation/service&support>

After-sales information system for SIMATIC PC / PG

Information about contacts, drivers, and BIOS updates, FAQs and Customer Support can be found at: <http://www.siemens.com/asis>

