

Operating Instructions (Compact) Edition 06/2007



**Industrial PC**  
Panel PC 477

simatic

**SIEMENS**



## SIMATIC

### Industrial PC SIMATIC Panel PC 477

Operating Instructions (Compact)

## 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.

 <b>DANGER</b>
indicates that death or severe personal injury <b>will</b> result if proper precautions are not taken.
 <b>WARNING</b>
indicates that death or severe personal injury <b>may</b> result if proper precautions are not taken.
 <b>CAUTION</b>
with a safety alert symbol, indicates that minor personal injury can result if proper precautions are not taken.
<b>CAUTION</b>
without a safety alert symbol, indicates that property damage can result if proper precautions are not taken.
<b>NOTICE</b>
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:

 <b>WARNING</b>
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.

(A )

가

# Table of contents

<b>1</b>	<b>Operating instructions (compact)</b> .....	<b>7</b>
1.1	Components of the Product .....	7
1.2	Device identification data .....	7
1.3	Configuration .....	8
1.4	Safety instructions .....	8
1.5	Affixing Labeling Strips for Function Keys and Softkeys .....	9
1.6	Installation /Mounting .....	12
1.6.1	Permitted mounting positions .....	12
1.6.2	Preparing the mounting cut-out .....	13
1.6.3	Securing the Device with Clamps .....	14
1.6.4	Securing the Device with Screws .....	16
1.7	Connecting .....	18
1.7.1	Connection components .....	18
1.7.2	Connecting the 24 V DC power supply .....	20
1.7.3	Connecting the 100 - 240 V AC Power Supply .....	22
1.7.4	Connecting the equipotential bonding .....	24
1.8	Commissioning .....	26
1.8.1	Commissioning Information .....	26
1.8.2	Commissioning Windows XP Embedded .....	26
1.8.2.1	Basic commissioning - initial startup .....	26
1.8.2.2	Setting Up the Language Selection .....	28
1.8.3	Commissioning Windows XP Professional .....	29
1.8.3.1	Basic commissioning - initial startup .....	29
1.8.3.2	Setting Up the Language Selection .....	30
1.8.3.3	Checking the Language Selection .....	30
1.8.4	Setting the Panel Type .....	31
1.8.5	Device with key panel .....	33
1.8.5.1	Activating KeyTools .....	33
1.8.6	Device with touch screen .....	34
1.8.6.1	Recalibrating the Touch Screen .....	34
1.8.6.2	Activating the Screen Keyboard .....	36
1.9	Service and support .....	37
1.10	Product documentation .....	38
	<b>Index</b> .....	<b>39</b>



## Operating instructions (compact)

### 1.1 Components of the Product

Amount	Designation	Description
1	SIMATIC Panel PC 477	
1	Restore DVD	Contains a hard disk image file with the original software (operating system with installed hardware drivers). Only supply variant with Windows XP Professional.
1	Restore CD	Contains a hard disk image file with the original software (operating system with installed hardware drivers). Only supply variant with Windows XP Embedded.
1	Documentation and Drivers CD	Contains the documentation and the hardware drivers.
1	Operating Instructions (compact) SIMATIC Panel PC 477	Print copy of the Operating Instructions (compact) SIMATIC Panel PC 477
6	Clamp	Mounting clamp for the SIMATIC Panel PC 477.
1	AC power cord	Only supply variant with 110 - 240 V AC power supply.
1	DC power plug	Only supply variant with 24 V DC power supply.

#### Notes on display

A small number of faults in the display is unavoidable.

Bad pixels	Permissible number
Permanently bright and permanently dark pixels	≤ 12
Permanently bright, green pixels	≤ 5

### 1.2 Device identification data

Enter the identification data of the device into the table:	
<b>Serial number</b> (on the type plate)	
<b>Order number of the device</b>	
For the supply variants with Windows XP Embedded / XP Professional: <b>Microsoft Windows Product Key</b> from the "Certificate of Authenticity" (COA). The COA label is bonded to the device.	
<b>Ethernet addresses:</b> BIOS Setup (F2 Key) under Main > Hardware Options > Ethernet Address	

### 1.3 Configuration

Accessories	Order No.
Expansion kit PC/104	6 A G 4 0 7 0 - 0 B A 0 0 - 0 X A 0
256 Mbytes Compact Flash card	6 E S 7 6 4 8 - 2 B F 0 1 - 0 X C 0
512 Mbytes Compact Flash card	6 E S 7 6 4 8 - 2 B F 0 1 - 0 X D 0
1 GByte Compact Flash card	6 E S 7 6 4 8 - 2 B F 0 1 - 0 X E 0
2 GBytes Compact Flash card	6 E S 7 6 4 8 - 2 B F 0 1 - 0 X F 0
4 GBytes Compact Flash card (in process)	6 E S 7 6 4 8 - 2 B F 0 1 - 0 X G 0
SIMATIC USB-FlashDrive, USB 2.0, 1 Gbyte	6 E S 7 6 4 8 - 0 D C 3 0 - 0 A A 0
Power cable 100 - 240 V AC, 90° offset, GB	6 E S 7 9 0 0 - 1 B A 0 0 - 0 X A 0
Power cable 100 - 240 V AC, 90° offset, CH	6 E S 7 9 0 0 - 1 C A 0 0 - 0 X A 0
Power cable 100 - 240 V AC, 90° offset, USA	6 E S 7 9 0 0 - 1 D A 0 0 - 0 X A 0
Power cable 100 - 240 V AC, 90° offset, ITA	6 E S 7 9 0 0 - 1 E A 0 0 - 0 X A 0

### 1.4 Safety instructions

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

 <b>WARNING</b>
<p><b>Function test while installing the device in machines or execute systems</b></p> <p>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.</p> <p>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.</p>

## 1.5 Affixing Labeling Strips for Function Keys and Softkeys

---

### Note

The following table applies only to devices with a key panel.

---

The control unit has two horizontal and two vertical keypads for the function keys and the softkeys. Assign user specific functions to the keys as needed. You can mark these keys with labeling strips. A4 films for creating the labeling strips are available as accessories.

Proceed as follows to affix the labeling strips:

### Preparing the Labeling Strips

1. Label the DIN A4 film with a laser printer with the printing templates from the options, for example.
2. Cut the labeling strips along the pre-printed lines.

---

### Note

Do not insert handwritten labeling strips until the ink has dried.

---

### Separating the control unit from the computer unit

<b>CAUTION</b>
Work on the open device may only be carried out by authorized and qualified personnel. Within the warranty time, you are only allowed to install expansions for memory and expansion card modules.

<b>CAUTION</b>
The device contains electronic components that can be destroyed by electrostatic charges. You must therefore take preventive measures before opening the device. Refer to the (ESD) directives for handling components which are sensitive to electrostatic charge.

Tool required to separate the computer unit from the control unit: Torx T10 screwdriver

1. Disconnect the device from the power supply.

 <b>WARNING</b>
Unauthorized opening of the device may result in substantial damage to equipment or endanger the user. Always disconnect the device from the power supply before opening it.

2. Unplug all peripherals (mouse, keyboard, external monitor, etc.) from the SIMATIC Panel PC 477.
3. Loosen the 7 screws that secure the computer unit to the control unit.

---

**Note**

**Device variants**

The number of screws to be screwed out varies depending on the device variants.

---

4. Fold up the computer unit in the arrow direction along the joint (1).

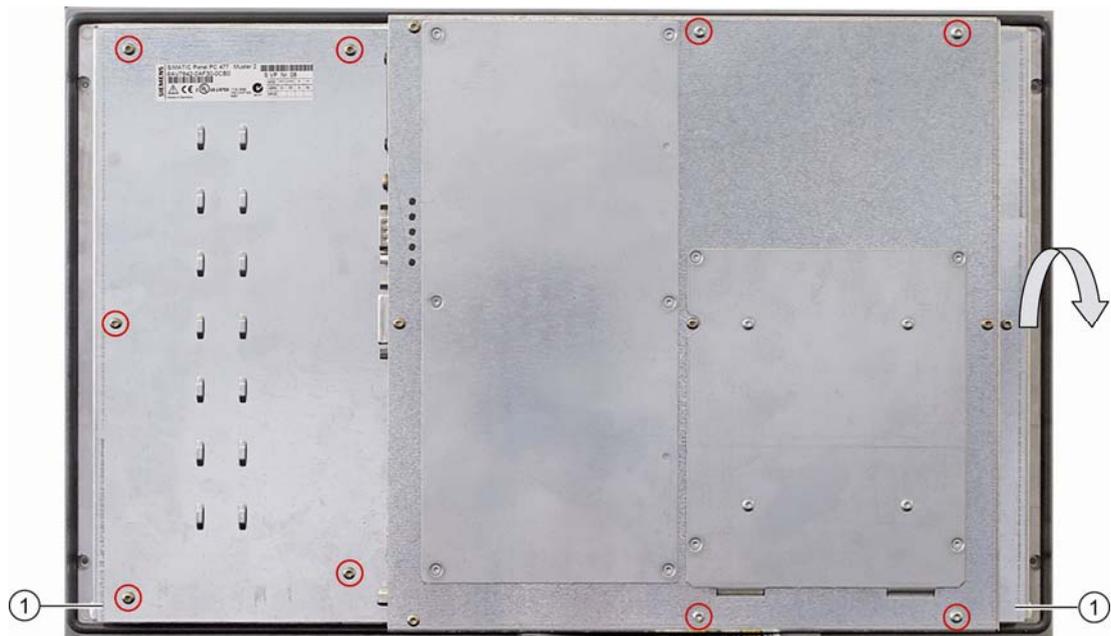


Figure 1-1 Example 12" touch screen device: Separating the computer unit from the control unit:

## Affixing the Labeling Strips

### NOTICE

#### Risk of damage

Do not under any circumstances touch exposed components of the control unit.

Insert the labeling strips into the slots provided on the rear of the control unit.

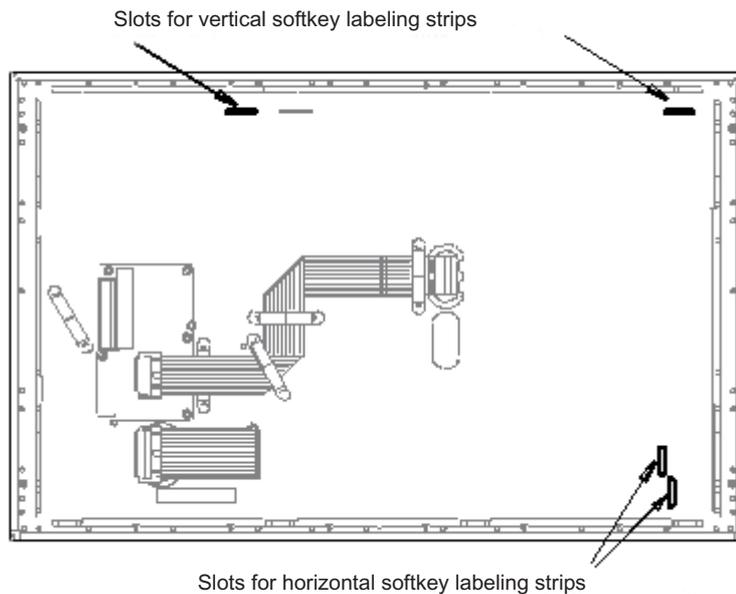


Figure 1-2 Device rear with connections and slots for the labeling strips

## Screwing the Computer Unit onto the Control Unit

Mount the computer unit back onto the control unit using the 7 screws that were removed beforehand.

## 1.6 Installation /Mounting

### 1.6.1 Permitted mounting positions

#### Mounting Positions

Only vertical installation with a deviation of up to  $+35^\circ$  and  $-35^\circ$  in the specified directions is permitted for the device.

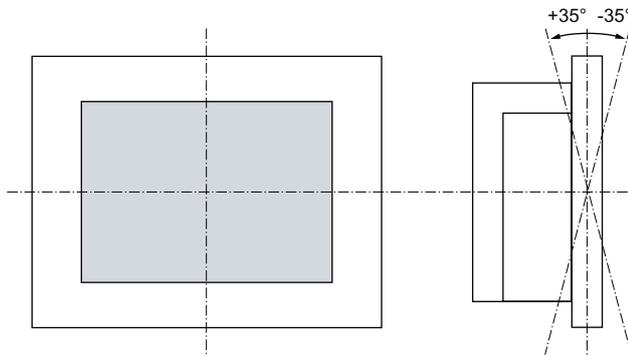


Figure 1-3 Permitted mounting positions

## 1.6.2 Preparing the mounting cut-out

If you want to install the device in a control cabinet, you first have to prepare a mounting cut-out.

### Dimensions for the Mounting Cut-out

The following figures show the dimensions for the mounting cut-out.

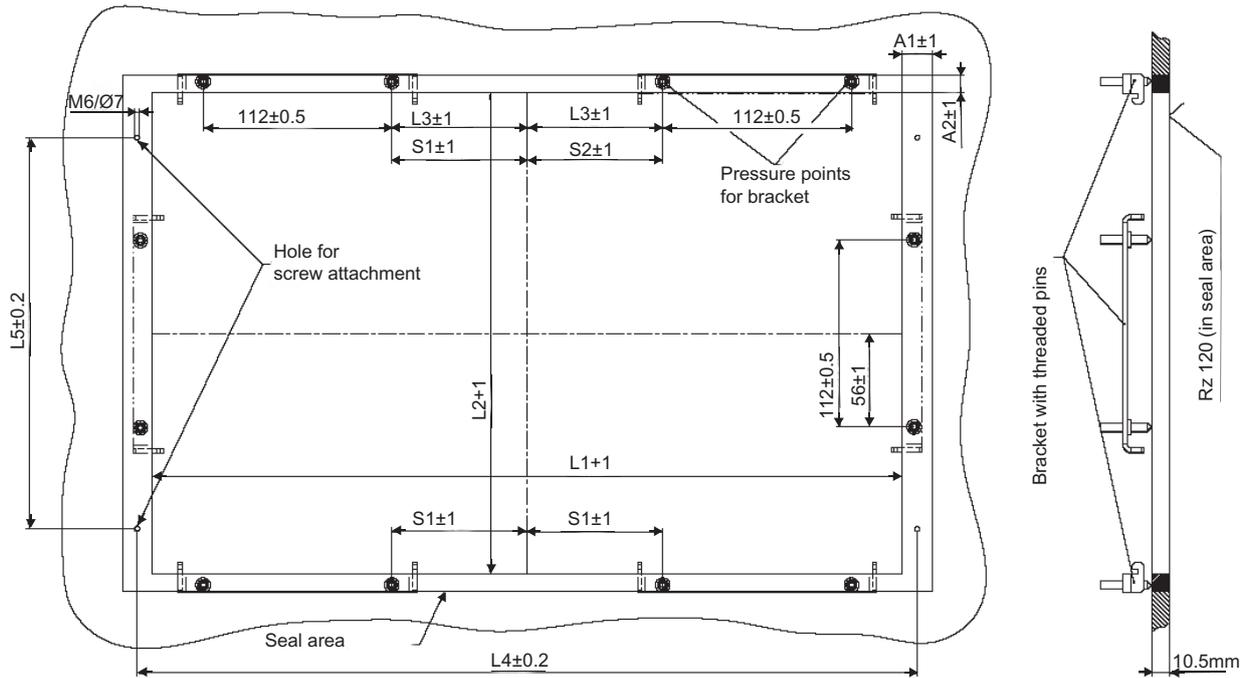


Figure 1-4 Dimensioned drawing mounting cut-out

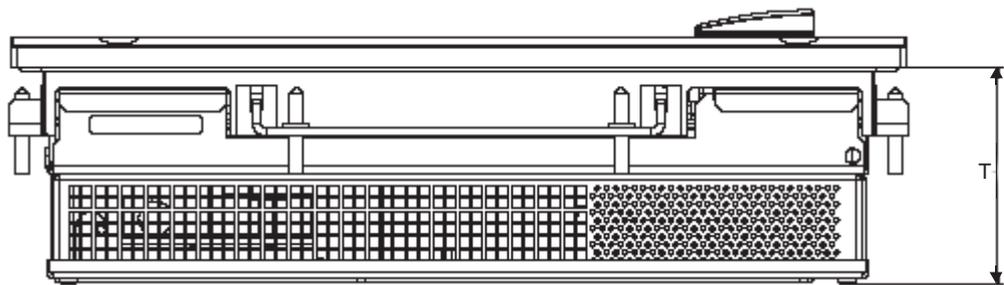


Figure 1-5 Screw holes and screw pressure points of the clamps

Dimensions for the mounting cut-out in mm										
Control unit	L1	L2	T	L3	L4 <sup>1)</sup>	L5	A1	A2	S1	S2
With key panel, 12" display	450	290	78	78	465	235	16	10	-	
With key panel, 15" display	450	321	78	51	465	279	16	17	-	-
With touch screen, 12" display	368	290	78	-	-	-	16	10	35	19
With touch screen, 15" display	450	290	78	81	465	235	16	10	-	-

<sup>1)</sup> Drill holes with 6 mm diameter each

### Preparing the Mounting Cut-out

Steps for preparing the mounting cut-out	
1	Select a location suitable for mounting, taking into account the installation guidelines and the chosen mounting position.
2	On the basis of the dimension diagrams, check whether the required screw and pressure points on the rear and the hatched 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 to the dimensions.

### 1.6.3 Securing the Device with Clamps

You require 6 clamps in order to mount the device. These are supplied with the device.

Required tool for fastening the clamps: Hexagon insert wrench 2.5 mm



Figure 1-6 Clamp assembly

## Rack Mounting

Steps for fastening the device with clamps	
1	Follow the installation guidelines.
2	Disconnect the device from the power supply.
3	Working from the front, insert the device into the 19" rack.
4	Fasten the control unit in the rack from the rear using the clamps. Tighten the grub screws to a torque of 0.4-0.5 Nm.

## Swivel Arm Mounting

Steps for fastening the device with clamps	
1	Follow the installation guidelines.
2	Disconnect the device from the power supply.
3	Working from the front, place the device onto the swivel arm.
4	Fasten the control unit on the swivel arm from the rear using the clamps. Tighten the grub screws to a torque of 0.4-0.5 Nm.

## Control Cabinet Installation

Steps for fastening the device with clamps	
1	Follow the installation guidelines.
2	Disconnect the device from the power supply.
3	Working from the front, insert the device into the mounting cut-out.
4	Secure the control unit in the mounting cut-out from behind with the clamps, as shown in the mounting cut-out in the dimensions. Tighten the grub screws to a torque of 0.4-0.5 Nm.

## Degree of Protection IP65

The IP65 degree of protection is only provided for a clamp mounting together with a ring seal.

NOTICE
<p><b>Control Cabinet Installation; Material Strength at the Mounting Cut-out</b></p> <p>Please ensure that the material strength at the mounting cut-out is a maximum of 6 mm. Please follow the specifications for the dimensions in the "Preparing the Mounting Cut-out" section.</p> <p>The degree of protection is only ensured if the following requirements are fulfilled:</p> <ol style="list-style-type: none"> <li>1. The material strength at the mounting cut-out amounts to at least 2 mm.</li> <li>2. The surface plane deviation of the mounting cut-out in relation to the external dimensions of the control unit amounts to <math>\leq 0.5</math> mm when the control unit is mounted.</li> </ol>

### 1.6.4 Securing the Device with Screws

**Note**

Securing with screws is not possible with the 12" touch screen variant.

Required tool for fastening with screws: 7 mm drill

<b>NOTICE</b>
<b>Risk of damage</b> 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.

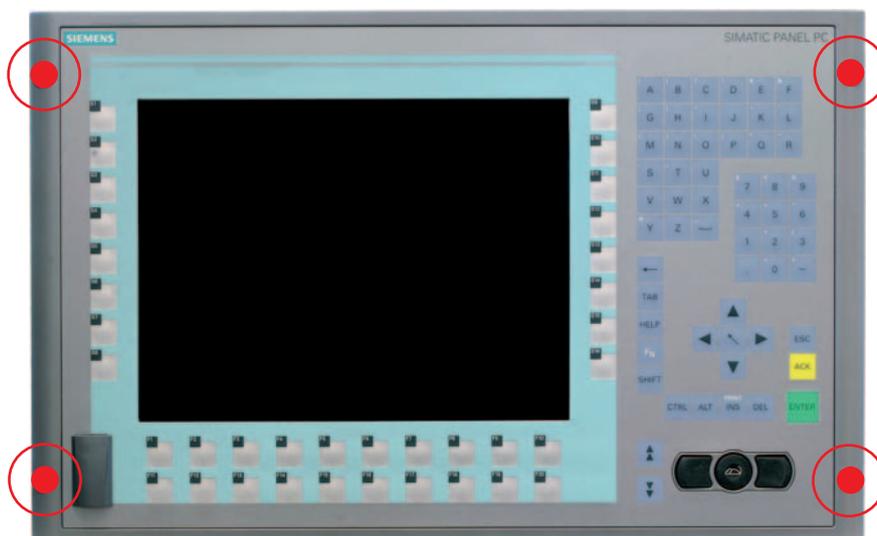


Figure 1-7 Designated location for holes on the control unit

### Rack Mounting

Steps for fastening the device with screws	
1	Follow the installation guidelines.
2	Carefully drill the respective holes in the control unit at the designed location from the rear.
3	Working from the front, insert the device into the 19" rack.
4	Secure the control unit by inserting suitable screws through the holes and attaching nuts.

## Swivel Arm Mounting

Steps for fastening the device with screws	
1	Follow the installation guidelines.
2	Carefully drill the respective holes in the control unit at the designed location from the rear.
3	Working from the front, place the device onto the swivel arm.
4	Secure the control unit by inserting suitable screws through the holes and attaching nuts.

## Control Cabinet Installation

Steps for fastening the device with screws	
1	Follow the installation guidelines.
2	Drill suitable holes at the prepared installation cut-out in accordance with the specifications for L4 and L5, as shown at the dimensions in the mounting cut-out
3	Carefully drill the respective holes in the control unit at the designed location from the rear.
4	Working from the front, insert the device into the mounting cut-out.
5	Secure the control unit by inserting suitable screws through the holes and attaching nuts.

## IP54 Degree of Protection

This degree of protection is ensured for screw mounting.

NOTICE
<p><b>Control Cabinet Installation; Material Strength at the Mounting Cut-out</b></p> <p>Please ensure that the material strength at the mounting cut-out is a maximum of 6 mm. Please follow the specifications for the dimensions in the "Preparing the Mounting Cut-out" section.</p> <p>The degree of protection can only be guaranteed when the following requirements are met:</p> <ol style="list-style-type: none"> <li>1. The material strength at the mounting cut-out must be at least 2 mm.</li> <li>2. The deviation from the plane in relation to the external dimensions for an installed HMI device is <math>\leq 0.5</math> mm.</li> </ol>

## 1.7 Connecting

### 1.7.1 Connection components

#### Connection components of control unit

Connector locations		
Pos	Designation	Description
(1)	USB	1 connection USB 2.0 high speed / 500 mA under sealed cover

#### NOTICE

##### Ensuring of protective class

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

Connection components of computer unit

Connector locations		
Pos	Designation	Description
(1)	Equipotential bonding (device with AC power supply)	Connection for low-resistance grounding connection
	Protective conductor (device with DC power supply)	
(2)	24 V DC / 100 - 240 V AC	Connection for power supply 24 V DC or 100 - 240 V AC
(3)	COM 1	Serial port 1 (RS232) 9-pin Cannon socket
(4)	DVI	DVI-I socket <sup>1</sup>
(5)	Metal eyes	Eyes for connection strain relief via cable ties
(6)	USB	2 USB 2.0 connections high speed / 500 mA
(7)	Ethernet	2 RJ45 Ethernet connections for 10/100 Mbps
(8)	PROFIBUS DP/MPI	PROFIBUS-DP/MPI interface (RS 485, electrically isolated), 9-pin Cannon socket

<sup>1</sup> Due to the chipset architecture only the analog VGA signals are available at the DVI interface.

**Note**

**Use of USB devices**

- Wait at least 10 seconds between the unplugging and replugging of USB devices. This also applies in particular to touch control in control units with touch screen panels.
- 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.

### 1.7.2 Connecting the 24 V DC power supply

#### Note before connecting

Note the following in order to operate the device safely and according to regulation:

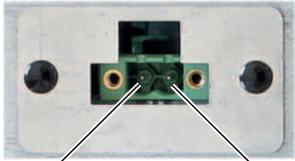
 <b>WARNING</b>
<p>The device is only allowed to be connected to a power supply VDC 24 according to NEC class 2 or LPS (Limited Power Source).</p> <p>Use the special plug supplied to connect the supply voltage.</p>

<b>NOTICE</b>
<p>The 24V DC power source must be adapted to the input data of the device (see technical specifications).</p>

<b>NOTICE</b>
<p>The permitted cable cross-section for the 24 V DC connection is 0.75 mm<sup>2</sup> to 2.5 mm<sup>2</sup>.</p>

<b>NOTICE</b>
<p>If a Compact Flash card is used in the device, be sure that the card is properly installed before you connect it.</p>

#### Connecting

Steps for connecting the device to the 24 V DC power supply		
1.	Switch off the 24 V DC power source.	 <p>(P14 in)                      (M in)</p>
2.	Connect the power supply using the plug (included in the package).	

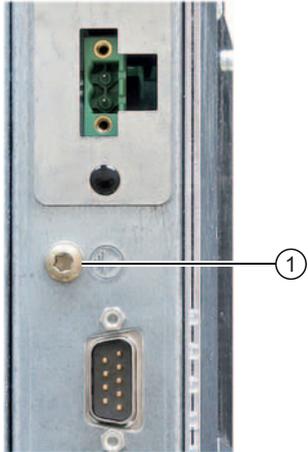
#### Power consumption

The power consumption at 24 V amounts to 81 W.

## Implementing the Protective Earth Terminal

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

Required tool for protective earth terminal: TORX T20 screwdriver

Steps for connecting the PE conductor	
<p><b>1</b> Connect the protective earth terminal (M4 threads) (1) on the device (large surface, large-area contact) with the protective earth conductor of the cabinet or plant in which the PC is to be installed. The minimum conductor cross-section may not amount to less than 5 mm<sup>2</sup>.</p>	

### 1.7.3 Connecting the 100 - 240 V AC Power Supply

#### General Connection Information

Note the following in order to operate the device safely and according to regulation:

---

**Note****Voltage range**

The varying voltage power supply module is designed for operation on 100 to 240 V AC networks. It is not necessary to adjust the voltage range.

---

**NOTICE****Risk of damage**

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

**NOTICE****Power supply network**

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

It is not designed for operation on ungrounded or impedance-grounded power networks (IT networks).

**NOTICE****Permitted mains voltage**

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

**NOTICE****Power disconnection**

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

**NOTICE**

If a Compact Flash card is used in the device, be sure that the card is properly installed before you connect it.

**Note****Power Factor Correction**

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.

USP 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-....".

**Country-specific Connection Information****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.

Country-specific mains leads are available as accessories.

- **100 V supply voltage**

Use a flexible power cord with UL approval and with CSA label, and with the following features: Type SJT with three leads, min. 18 AWG conductor cross-section, max. 4.5 m long and parallel 15 A ground contact connector, minimum rating 125 V.

- **240 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 long and tandem 15 A ground contact connector, minimum rating 250 V.

**For countries other than the USA and Canada**

- **240 V power supply**

This device is equipped with a safety-tested power cord which may only be connected to ground contact power 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.

**Connecting**

Steps for connecting the device to the 100 - 240 V AC power supply	
1	Switch off the AC power source.
2	Connect the power supply using the plug.

**Power consumption**

The power consumption at 240 V amounts to 85 W.

### 1.7.4 Connecting the equipotential bonding

**Note**

The following content applies only to devices with an AC power supply.

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

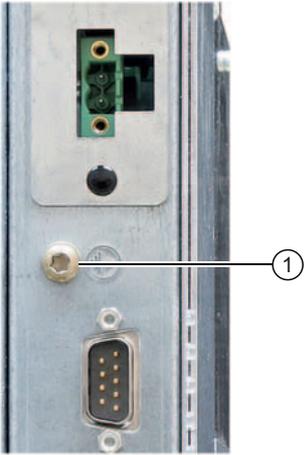
The equipotential bonding connection of the device is located at the connecting elements of the computer unit and is identified by the following symbol:



Figure 1-8 Equipotential bonding

#### Connecting the equipotential bonding

Required tool for equipotential bonding terminal: TORX T20 screwdriver

Steps for connecting the equipotential bonding	
<p><b>1</b> Connect the equipotential bonding connection (M4 thread) on the device (large surface, large-area contact) with the central grounding point of the control cabinet. The minimum conductor cross-section may not amount to less than 5 mm<sup>2</sup>.</p>	

## Avoiding Differences in Potential

Differences in potential arise between separated system parts, which in some cases leads to high equalization currents. This situation may arise if the cable shielding is terminated at both ends and grounded at different system parts. Potential differences can be caused, for example, by different power inputs.

Reduce the differences in potential by laying the equipotential bonding cables in such a way that the affected electronic components function properly. Observe the following guidelines when setting up equipotential bonding:

- The lower the impedance of an equipotential bonding conductor, the more effective is equipotential bonding.
- When two system parts are connected by means of a shielded signal cable, and their shields are both connected to the ground or protective conductor, the following must be observed: The impedance of the additional equipotential bonding cable amounts to 10% of the shield impedance, at the most.
- Ensure that the equipotential bonding cable cross section is selected to accommodate the maximum equalization current. The equipotential bonding conductor cross-section that has proven best in practice is 16 mm<sup>2</sup>.
- Always use equipotential bonding conductors made of copper or galvanized steel. Connect the cables to the ground or protective conductor over a wide area. Protect the ground or protective conductor from corrosion.
- Lay the equipotential bonding cable in such a way that the area between the equipotential bonding cable and signal cables is as small as possible.

## 1.8 Commissioning

### 1.8.1 Commissioning Information

---

**Note**

**Starting up Windows XP Embedded for the first time**

System startup can take longer than usual for the basic commissioning. Only a blue screen is displayed for several minutes.

---

<b>NOTICE</b>
<b>Windows XP Embedded: Observe EWF Information</b>
Under Windows XP Embedded a configurable write filter (Enhanced Write Filter) is available. As from Windows XP Embedded SP2 the EWF is deactivated by default. Please observe the EWF rules during activation and use, since a data loss may otherwise occur.

### 1.8.2 Commissioning Windows XP Embedded

#### 1.8.2.1 Basic commissioning - initial startup

##### Setting up the operating system

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

1. Connect the device to the 24 V DC / 100 - 240 V AC power supply. The PC performs a self-test (POST). During the self-test, this message appears:

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

2. Wait until the message is cleared, then follow the instructions on the screen.

<b>NOTICE</b>
The device may not be switched off at any time during the installation process.
<b>Do not</b> change the default BIOS settings, otherwise the operating system setup may become corrupted.

### 3. Restart

After you have entered all the necessary information and the operating system is configured, you are prompted to restart the system. Acknowledge this prompt with **Yes**.

---

#### Note

System startup can take longer than usual for the basic commissioning. A blue screen is displayed for several minutes.

---

#### Note

Errors and warnings can be displayed in the status bar, with the first and second switch on of the first basic commissioning or after a restore procedure Mode changes have no effect on FRAMES.

---

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

---

#### Note

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

---

## Switching Off the Device

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

---

#### Note

If the Enhanced Write Filter is active and no data has been written to the Compact Flash card, then the device can be switched off by disconnecting it from the power supply.

---

### 1.8.2.2 Setting Up the Language Selection

The hard disk version of Windows XP Embedded offers the option of setting the menus and dialog boxes to a different language.

---

#### Note

#### Changing the Language Selection

Changing of the language selection under Windows XP Embedded is not possible in the Compact Flash version.

---

### Setting Up the Language Selection

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

<p><b>Start &gt; Control Panel &gt; Regional and Language Options</b> <b>Languages</b>, tab <b>Language used in menus and dialogs</b> field.</p> <p>For the <b>Regional and Language Options</b> set the default to <b>non-Unicode programs</b> under <b>Advanced</b> in addition to the language for menus and dialog boxes</p>
--

## 1.8.3 Commissioning Windows XP Professional

### 1.8.3.1 Basic commissioning - initial startup

#### Configuring the Operating System

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 24 V DC / 100 - 240 V AC power supply. The PC performs a self-test (POST). During the self-test, this message appears:

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

2. Wait until the message is cleared, then follow the instructions on the screen.

<b>NOTICE</b>
---------------

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

<b>Do not</b> change the default BIOS settings, otherwise the operating system setup may become corrupted.
--

3. Automatic Restart

After you have entered all necessary information and the operating system is configured, the PC automatically restarts and displays the user interface of the operating system.

---

**Note**

System startup can take longer than usual for the basic 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**

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

---

#### Switching Off the Device

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

### 1.8.3.2 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.

#### Setting Up the Language Selection

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 > Control Panel > Regional and Language Options**  
**Languages**, tab **Language used in menus and dialogs** field.  
For the **Regional and Language Options** set the default to **non-Unicode programs** under **Advanced** in addition to the language for menus and dialog boxes

### 1.8.3.3 Checking the Language Selection

You can have the languages currently set and their ID numbers displayed by using the "CheckLanguageID" tool. These include:

- SystemDefaultLangID: System language
- UserDefaultLangID: Standard language
- UserDefaultUILangID: User interface language

---

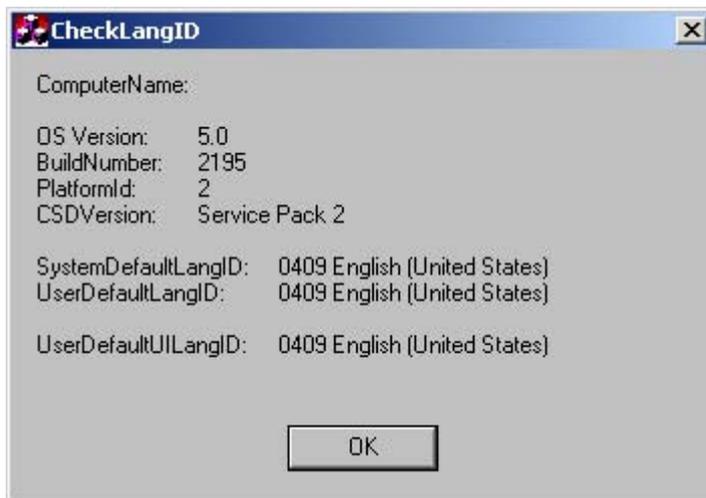
#### Note

This tool is only installed in the hard disk drive variant of the device.

---

#### Checking the Language Selection

Call up the "CheckLanguageID" tool by using `c:\drivers\checklang\checklangid.exe`.



---

#### NOTICE

All three languages displayed should have the same ID assigned. If this is not the case, change the language selection as described in the section "Setting Up the Language Selection".

## 1.8.4 Setting the Panel Type

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

### Setting the Panel Type

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

---

#### Note

The devices with Touch Panel require a USB mouse or USB keyboard for commissioning.

---



Figure 1-9 Panel Wizard, selection of the panel type

2. In the "Panel Wizard Touch" dialog, click on the screen size that corresponds to your device. The screen resolution is set correspondingly for the device.



Figure 1-10 Panel Wizard Touch, selection of the screen size

The next step only applies to control units with touch screen panels.

Once the screen size is selected, the wizard will search for new hardware, the touch controller. The Panel Wizard closes and the Touch-Base calibration appears. Carry out the following steps carefully.

3. Briefly touch the touch screen at every cross hair.

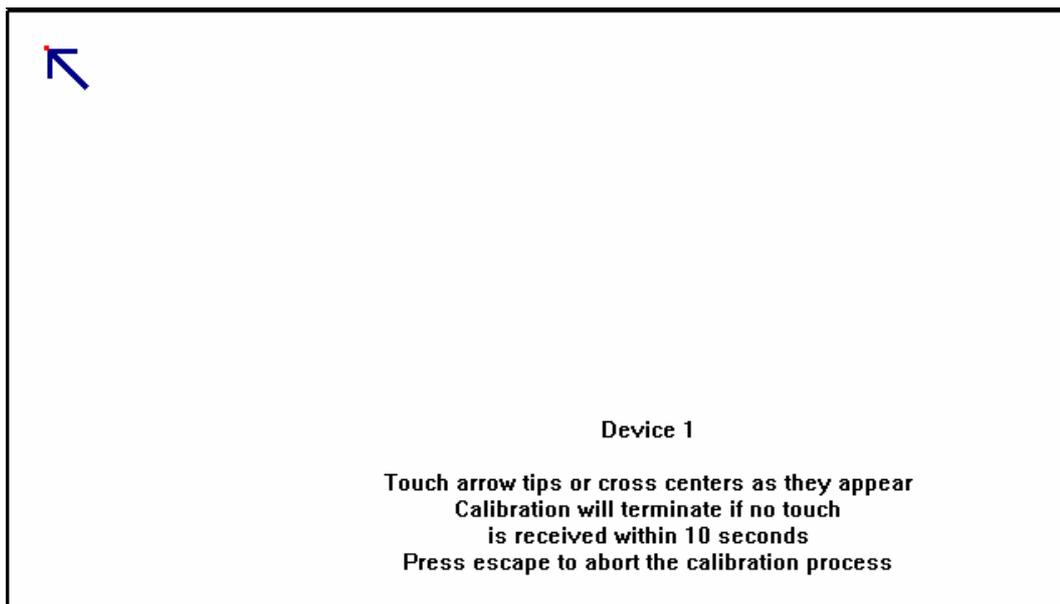


Figure 1-11 Touch screen calibration

## 1.8.5 Device with key panel

### 1.8.5.1 Activating KeyTools

SIMATIC Key Tools is a selection of applications for the SIMATIC Panel PC 477. These applications allow you to adapt key codes that are sent by the key panel of the control unit. SIMATIC KeyTools consists of the following tools:

- Keycode table: Loading and editing of key code tables.
- WinCC hotkey function: WinCC hotkey function activation und deactivation.
- Security features: Lock function that prevents two function keys from being activated simultaneously. This prevents incorrect operations and undefined states of the application program.

---

#### Note

For a detailed description of the SIMATIC KeyTools please refer to the help menu and the application description on the Documentation & Drivers CD.

---

### Calling Up Keytools

1. Call up the Keytools by using **Start > Settings > Control Panel > SIMATIC KeyTools**.
2. Select the desired application and follow the instructions on the screen.

<b>NOTICE</b>
<b>Malfunctions of the user software</b>
For security reasons always use the "Security features". If you deactivate it nevertheless, serious malfunctions of the user software may occur when the additional function keys and softkeys F13 to S16 are used or if own key code tables are used.

### 1.8.6 Device with touch screen

#### 1.8.6.1 Recalibrating the Touch Screen

If the touch screen does not react as expected when touched, repeat the calibration. To do this, first activate the point calibration and then calibrate the touch screen.

#### Carrying out Calibration

1. Activate the calibration tool by using **Start > Programs > UPDD > Settings**. Your touch screen type is displayed on the **Devices** tab.

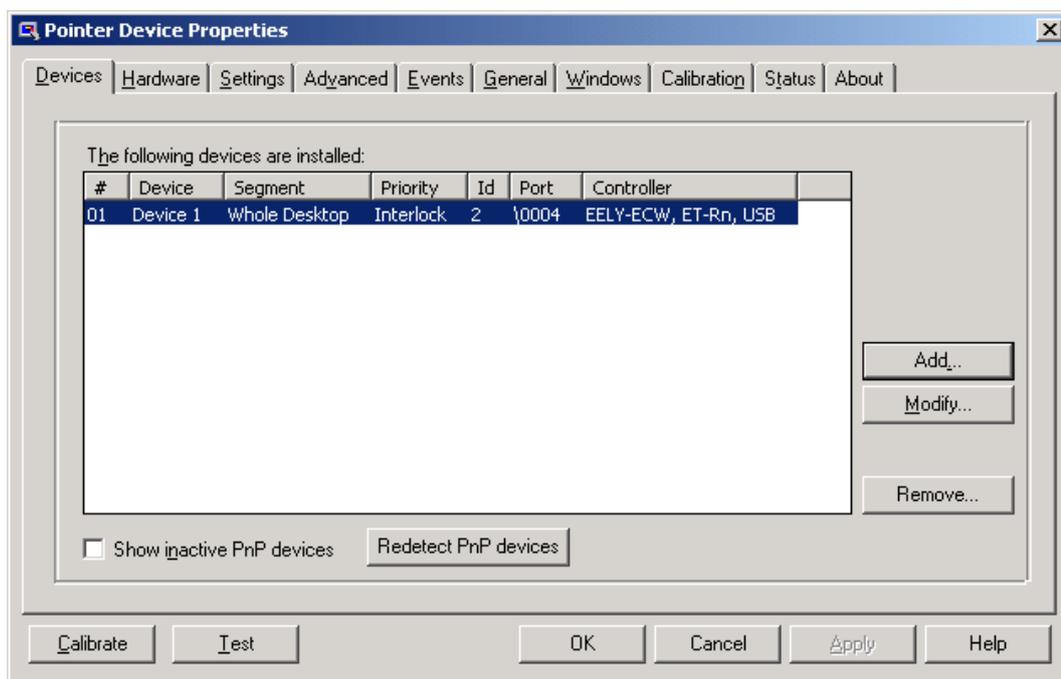


Figure 1-12 Touch defaults, "Devices" tab

2. You can recalibrate the touch screen under the **Calibration** tab. First set the desired number of calibration points under **Calibration Points**. Then consecutively touch the crosses of the calibration pattern field.

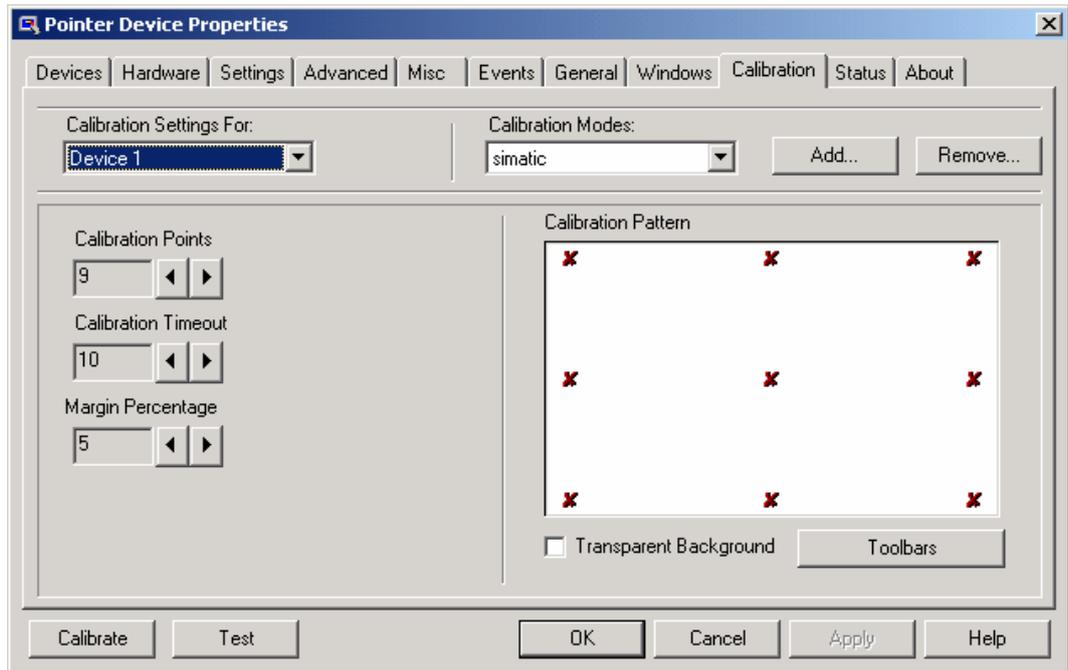


Figure 1-13 Touch defaults, "Calibration" tab

3. Click the "OK" button to confirm the recalibration.

#### Note

For further information press the "Help" command button.

#### WARNING

##### Faulty operation

If you touch the touch screen while configuring it or if the screen saver is active, the SIMATIC process visualization software, e.g. ProTool/Pro, will carry out the functions which happen to be behind it.

#### CAUTION

Only touch one point on the touch screen and not several points at one time. You may otherwise trigger unintended reactions.

Do not touch the screen in the following situations:

- During the booting process
- When plugging or unplugging USB components
- While Scandisk is running

### 1.8.6.2 Activating the 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 screen or with the mouse.

#### Calling Up TouchInput

1. Call up the **TouchInput** application on the desktop The screen keyboard is displayed.

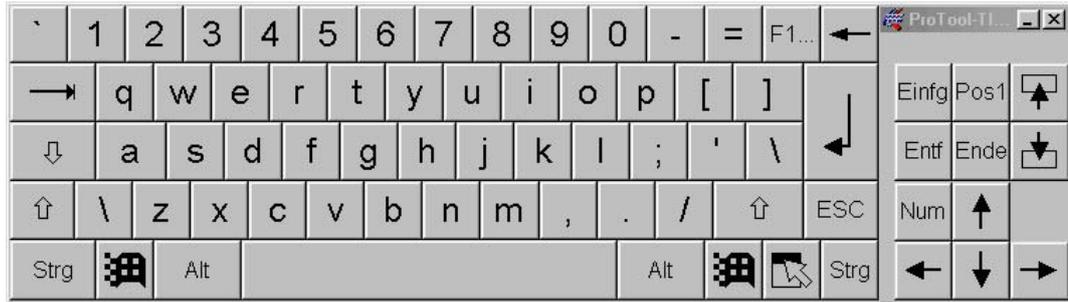


Figure 1-14 TouchInput

## 1.9 Service and support

### Further 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 central training center in Nuremberg, D 90327 Germany.

Telephone: +49 (911) 895-3200.

Internet: <http://www.sitrain.com>

### Technical Support

You can reach technical support for all A&D products at:

- Support Request form on the web:  
<http://www.siemens.de/automation/support-request>
- Telephone: +49 180 5050 222
- Fax: +49 180 5050 223

Further information about our technical support is available in the Internet at [www.siemens.com/automation/service](http://www.siemens.com/automation/service)

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

## **Service & Support on the Internet**

In addition to our documentation, we offer a comprehensive knowledge base online on the Internet at:

<http://www.siemens.com/asis>

There you will find:

- The Newsletter contains the latest information on your products
- Numerous documents are available by searching through Service & Support
- The current BIOS version
- A forum is available for users and specialists to exchange experiences
- Your local Siemens partner for Automation & Drives in our Partner database
- Information about local service, repairs, and spare parts. Lots more is available on the "Services" page

**You can find the latest information about your device at the following address:**

<http://support.automation.siemens.com>

## **1.10 Product documentation**

### **Product documentation**

The detailed operating instructions for Micropanel PC 477 can be downloaded as a PDF file on the internet under the following address: <http://support.automation.siemens.com>

# Index

## 2

24 V DC power supply  
Connecting, 20

## C

Calibrating, 34  
Touch Screen, 34  
COM port  
Interfaces, 19  
Commissioning  
Windows XP Embedded, 26  
Windows XP Professional, 29  
Connecting  
24 V DC power supply, 20

## E

Equipotential bonding, 24  
Ethernet  
Interfaces, 19

## I

Initial commissioning  
Windows XP Embedded, 26  
Windows XP Professional, 29  
Interfaces  
Ethernet, 19  
PROFIBUS, 19

## L

Labeling strips, 9  
Handwritten strips, 9

## M

Mounting position, 12  
Permitted mounting position, 12

## R

Restart, 29

## S

Serial ports, 19  
Service, 37  
setting, 34  
Touch software, 34  
Support, 37

## T

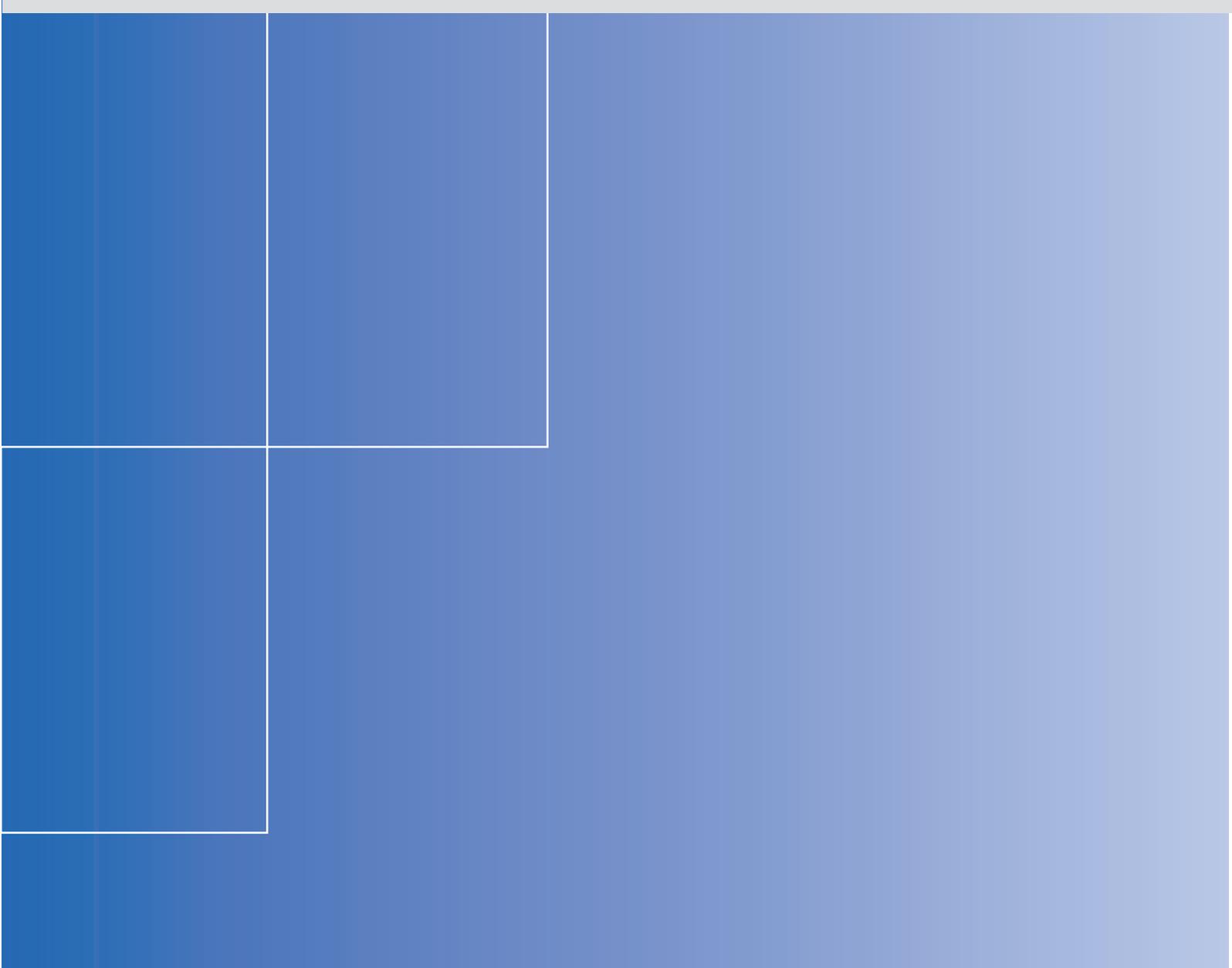
Touch Screen  
Special Features, 35  
Touch Screen, 34  
Calibrating, 34  
Faulty operation, 35  
Touch Screen, 35  
Touch software, 34, 35  
Faulty operation, 35  
setting, 34  
Special Features, 35  
Training center, 37

## W

Windows XP Embedded  
Initial commissioning, 26  
Windows XP Professional  
Initial commissioning, 29







**Siemens AG**

Automation and Drives  
Industrial Automation Systems  
Postfach 4848  
90437 NUERNBERG  
Federal Republic of Germany

[www.siemens.com/simatic](http://www.siemens.com/simatic)

ID: A5E00497112-03