



simatic

SIEMENS

Industrial PC
Rack PC 840 V2

SIEMENS

SIMATIC

Industrial PC Rack PC 840 V2 Pentium 4 Platform

Getting Started

| | |
|-----------------------------|----------|
| <u>Introduction</u> | 1 |
| <u>Description</u> | 2 |
| <u>Application planning</u> | 3 |
| <u>Installation</u> | 4 |
| <u>Connecting</u> | 5 |
| <u>Commissioning</u> | 6 |
| <u>Troubleshooting</u> | 7 |
| <u>Dimensional drawings</u> | 8 |
| <u>Appendix</u> | 9 |

Safety Guidelines

This manual contains notices which you should observe to ensure your own personal safety as well as to avoid property damage. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring to property damage only have no safety alert symbol.



Danger

indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



Warning

indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



Caution

used with the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

Caution

used without safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

Notice

used without the safety alert symbol indicates a potential situation which, if not avoided, may result in an undesirable result or state.

When several danger levels apply, the notices of the highest level (lower number) are always displayed. If a notice refers to personal damages with the safety alert symbol, then another notice may be added warning of property damage.

Qualified Personnel

The device/system may only be set up and operated in conjunction with this documentation. Only qualified personnel should be allowed to install and work on the equipment. Qualified persons are defined as persons who are authorized to commission, to earth, and to tag circuits, equipment and systems in accordance with established safety practices and standards.

Intended Use

Please note the following:



Warning

This device and its components may only be used for the applications described in the catalog or technical description, and only in connection with devices or components from other manufacturers approved or recommended by Siemens.

This product can only function correctly and safely if it is transported, stored, set up and installed correctly, and operated and maintained as recommended.

Trademarks

All designations marked with ® are registered trademarks of Siemens AG. Other designations in this documentation might be trademarks which, if used by third parties for their purposes, might infringe upon the rights of the proprietors.

Copyright Siemens AG, 2004. All rights reserved

Reproduction, transmission or use of this document or its contents is not permitted without express written authority. Offenders will be liable for damages. All rights, including rights created by patent grant or registration of a utility model or design, are reserved.

Disclaimer of Liability

We have checked the contents of this manual for agreement with the hardware and software described. Since deviations cannot be precluded entirely, we cannot guarantee full agreement. However, the data in the manual are reviewed regularly, and any necessary corrections will be included in subsequent editions. Suggestions for improvement are welcomed.

Siemens AG
Automation and Drives Group
P.O. Box 4848, D-90327 Nuremberg (Germany)

Siemens AG 2004
Technical data subject to change

Table of contents

| | | |
|----------|--|------------|
| 1 | Introduction | 1-1 |
| 2 | Description | 2-1 |
| 2.1 | Design | 2-1 |
| 2.1.1 | External structure | 2-1 |
| 2.1.2 | Operator controls | 2-2 |
| 2.1.3 | Connecting elements | 2-3 |
| 2.1.4 | Status displays | 2-5 |
| 3 | Application planning | 3-1 |
| 3.1 | Transport..... | 3-1 |
| 3.2 | Unpacking and checking the delivery unit | 3-1 |
| 3.3 | Ambient and environmental conditions | 3-3 |
| 4 | Installation | 4-1 |
| 4.1 | Installing the device | 4-1 |
| 4.2 | Technical data of the telescopic rails | 4-2 |
| 5 | Connecting | 5-1 |
| 5.1 | Connecting I/O modules | 5-1 |
| 5.2 | Connecting the device to power..... | 5-2 |
| 5.3 | Equipotential bonding | 5-5 |
| 6 | Commissioning | 6-1 |
| 6.1 | Commissioning requirements | 6-1 |
| 6.2 | Basic commissioning - Initial power up..... | 6-2 |
| 6.3 | Reinstalling the software | 6-3 |
| 6.3.1 | General installation procedure | 6-3 |
| 7 | Troubleshooting | 7-1 |
| 7.1 | General problems | 7-1 |
| 8 | Dimensional drawings | 8-1 |
| 8.1 | Dimensional drawing of the device | 8-1 |
| 8.2 | Dimensional drawing for the use of telescopic rails..... | 8-2 |
| 9 | Appendix | 9-1 |
| 9.1 | Guidelines and declarations..... | 9-1 |
| 9.2 | Certificates and approvals | 9-3 |
| 9.3 | Service and support..... | 9-5 |

Introduction

Purpose of this documentation

This Getting Started documentation contains all the information you need for commissioning and using the SIMATIC Rack PC 840 V2.

Where this documentation is valid

This documentation is valid for all supplied variations of the SIMATIC Rack PC 840 V2 and describes the state of delivery as of April 2004.

Operating instructions for the SIMATIC Rack PC 840 V2

The operating instructions are available on the included "Documentation and Drivers" CD. To view and print the operating instructions, run **Start** and follow the instructions on the screen.

The operating instructions provides useful information on many topics, e.g. hardware expansion options, modification of the system configuration and technical data.

Conventions

The abbreviation Rack PC or device is also used within this documentation for the product name SIMATIC Rack PC 840 V2.

Note

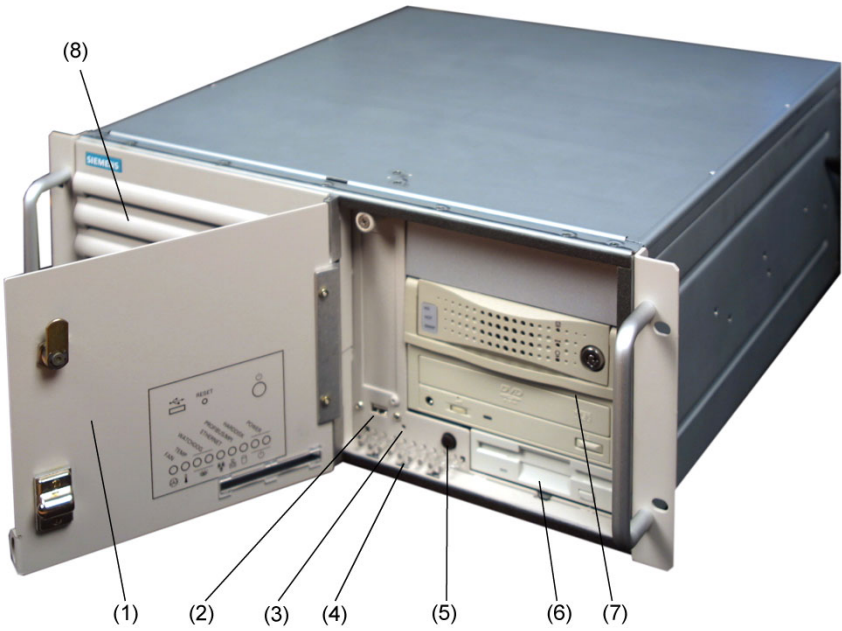
Safety Notices

To avoid damage to assets and for the sake of your own personal safety, please take note of the information on safety in this Getting Started and in the operating instructions. A warning triangle references this safety-related information and, depending on the potential hazard, is shown as follows:

Description

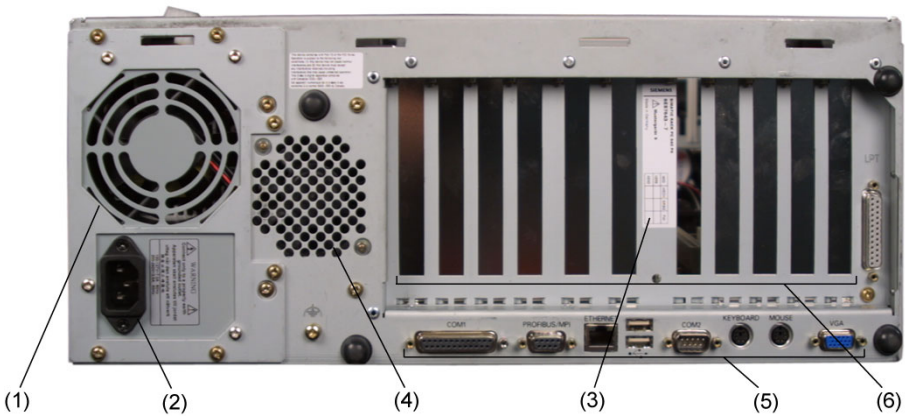
2.1 Design

2.1.1 External structure

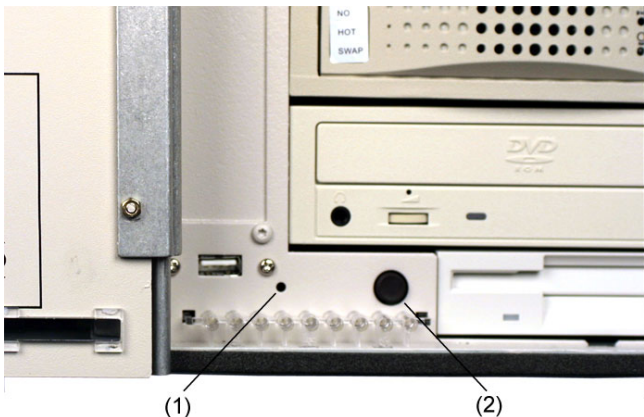
| Front view of the device | Pos | Description |
|--|-----|--|
|  <p>The image shows a front view of a SIMATIC Rack PC 840 V2. The front door is open, revealing internal components. Callout (1) points to a USB port on the left side of the door. Callout (2) points to a reset button on the door's control panel. Callout (3) points to a row of status LEDs. Callout (4) points to a power button. Callout (5) points to a floppy disk drive slot. Callout (6) points to a DVD-ROM/CD-RW drive slot. Callout (7) points to a hard disk drive slot. Callout (8) points to the top of the front door, which has a ventilation aperture.</p> | (1) | Front door with lock, provides protection against dirt and unauthorized access. Keep the door closed during normal operation. |
| | (2) | USB port |
| | (3) | Reset button |
| | (4) | Status displays |
| | (5) | On/Off button |
| | (6) | Option of installing a floppy disk drive |
| | (7) | Option for installing DVD-ROM, DVD-ROM/CD-RW drives, DVD burner and removable racks for hard disks |
| | (8) | Front panel with aperture for ventilation of the device (filter mat and fan are located behind this front panel). Check the filter mat regularly for dirt and replace it if necessary. |

Description

2.1 Design

| Rear view of the device | Pos | Description |
|--|-----|--|
|  | (1) | Fan / power supply unit |
| | (2) | Power supply connection |
| | (3) | Rating plate (may also be mounted on the inside of the front panel door) |
| | (4) | Drive cooling fan at the rear (optional) |
| | (5) | Connecting elements |
| | (6) | Expansion slots |

2.1.2 Operator controls

| Operator controls On / Off / Reset buttons | Pos | Description |
|---|-----|---|
|  | (1) | Reset button The reset button can be actuated with a pin or an opened up paper clip, for example. The button signal triggers a hardware reset. The PC performs a restart (cold start.) |
| | (2) | On/Off button For switching the device on or off |

Caution

Data may be lost when the PC performs a hardware reset.

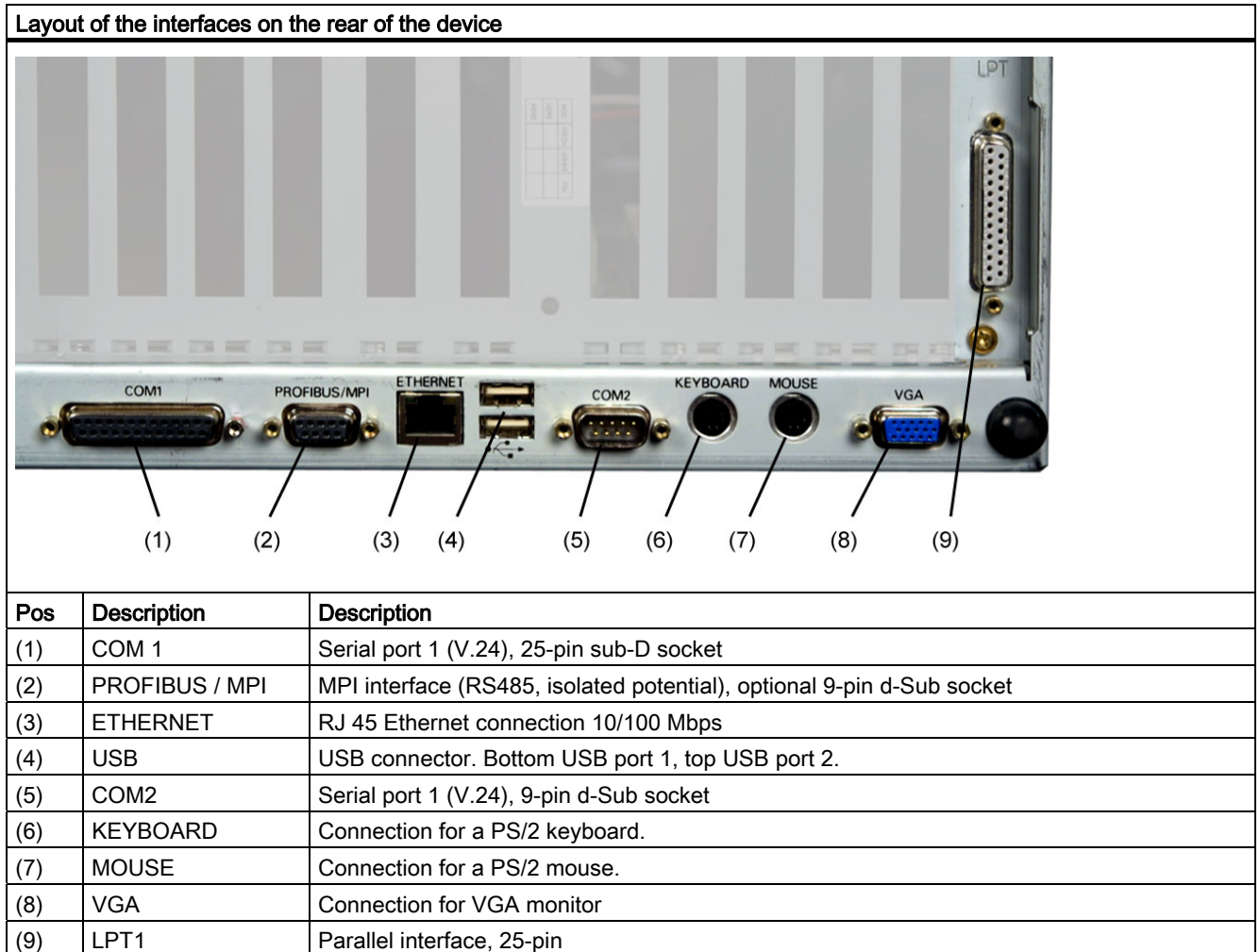


Warning

The On / Off button signal does not switch off power to the PC!

2.1.3 Connecting elements


Interfaces



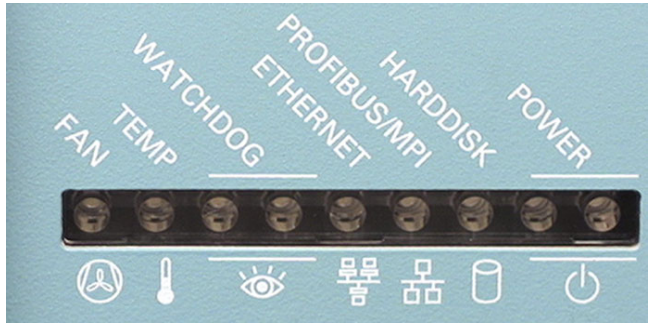
Description

2.1 Design

Power supply

| Position of the IEC power plug | Description |
|---|---|
|  | IEC power plug for the AC power supply to the device. The maximum permitted power range is 120 V AC to 240 V AC |

2.1.4 Status displays

| Status displays | | | |
|--|---|------------------------|---|
|  | | | |
| Display | Meaning | LED | Description |
| FAN | CPU fan status (available only with active SOM or DiagMonitor software) | OFF RED | -Fan speed OK -CPU not started (see error dialog) -Fan speed too low (see error dialog) |
| TEMP | Internal temperature monitoring | OFF RED | -Internal temperature OK -Internal temperature is critical (see error dialog) |
| WATCHDOG | WATCHDOG status display | OFF GREEN RED | -WATCHDOG disabled -WATCHDOG monitoring enabled -Time-out (see error dialog) |
| ETHERNET | ETHERNET status display | OFF GREEN | -not connected -no data transfer -data transfer |
| PROFIBUS/MPI | Display of the communication status to the S7 or PROFIBUS | OFF GREEN | -not connected -no data transfer -data transfer |
| HARDDISK | Display for hard disk access | OFF GREEN | -no access -access |
| POWER | PC status display | OFF YELLOW GREEN | -disconnected from mains -Standby (hibernate) -PC in operation |

Application planning

3.1 Transport

Despite the fact that the Rack PC is of rugged design, its internal components are sensitive to severe vibrations or shock. You must therefore protect the PC from severe mechanical stress when transporting it.

You should always use the **original packaging** for shipment of the device.

Caution

Risk of damage to the device!

When transporting the PC in cold weather it may be submitted to extreme variations in temperature. In this situation, should make sure that dewing does not develop on or inside the device.

If dewing has developed, wait at least about 12 hours before you switch on the device.

3.2 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.
- Verify that the shipment contains the complete unit and your separately ordered accessories. Please inform your local dealer of any disagreements or transport damages.

Identification data of the rating plate

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 found on the rating plate, which is located either on the rear of the device or on the inside of its front door.



Figure 3-1 Rating plate

- Order number of the device
- Ethernet address: You find the Ethernet address of the device in your BIOS Setup (**F2 function key**), under **Info > (F1 function key) > LAN Address**.
- Microsoft Windows "Product Key" from the "Certificate of Authenticity" (COA). The COA label is found on the inside of the front door. You may need the Product Key in case you reinstall the operating system.



Figure 3-2 COA label

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

3.3 Ambient and environmental conditions

When you plan your project, you should make allowances for:

- Note the climatic and mechanical environmental conditions specified in the technical data in your operating manual.
- Avoid extreme ambient conditions as much as possible. Protect your PC from dust, moisture, and heat.
- Keep the PC out of direct sunlight.
- Mount the PC as safely as possible to prevent danger (for example, of falling over).
- The device meets the the degree of protection IP 41 at the front panel. In an environment wit the risk of splash water, ensure that the mounting cut-out for the Rack PC 840 V2 is protected against the ingress of splash water.
- The clearance in the area of the ventilation slots must be at least 50 mm, so that the PC is sufficiently ventilated.
- The ventiducts of the enclosure may not be covered.
- The device enclosure satisfies fire protection requirements to EN 60950. It may therefore be installed without additional fire-proofing measures.



Warning

If these conditions are not satisfied when the system is being installed, the UL 60950, EN 60950 approvals will be no longer recognized and there will be danger of overheating and danger to personnel!

Installation

4.1 Installing the device

Possible areas of installation

The device may be installed in control desks, switching cabinets and 19`` rack systems.

Possible mounting methods

Options of mounting the device

- Mounting on angle brackets
- Mounting with telescopic rails
When telescopic rails are used, the devices can be completely removed from the cabinet or rack.
Refer to the sections "Technical data of the telescopic rails" and "Dimensional drawing for the use of telescopic rails" for more detailed information.

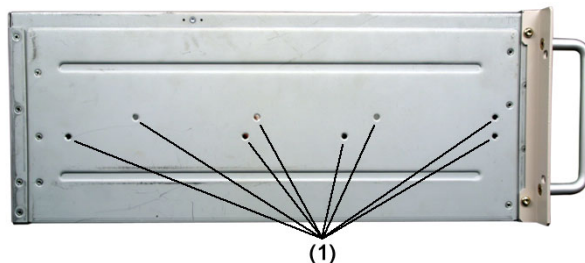


Figure 4-1 Position of the mounting holes for angle brackets or telescopic rails

Caution

The mounting screws of the telescopic rails may not protrude into the enclosure by more than 5 mm.



Caution
Danger of bodily harm!

It is not permitted to mount the device only on the 19" brackets of the front panel.

Caution

Remove the bonded stands when mounting the device on telescopic rails. Restricted technical specifications for drives in the front drive bay apply for this type of installation. For details, refer to the technical data or retrofitting instructions.

4.2 Technical data of the telescopic rails

| | |
|------------------------|----------------|
| Ultimate load per pair | Minimum 30 kg |
| Full extraction length | Minimum 470 mm |
| Rail thickness | maximum 9.7 mm |
| Fixing screws | M5 x 6 mm |

Connecting

5.1 Connecting I/O modules

Notice

Connect only I/O modules approved for industrial applications to EN 61000-6-2:2001.

Note

Hot-plug I/O modules (USB) may be connected while the PC is in operation.

Caution

I/O devices not capable of hot-plugging may only be connected after the PC is disconnected from the power supply.

Caution

Strictly adhere to the specifications for I/O modules.

5.2 Connecting the device to power

Before you connect the device please note

Note

The long-range power supply module is designed for operation on 120/230/240 V AC networks. It is not necessary to adjust the voltage range.



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 permitted rated voltage of the device must conform with local mains voltage.



Caution

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.

Localized information

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

This device is equipped with a safety-tested power cord which may only be connected to grounded shockproof power outlet. If you choose not to use this cable, you must use a flexible cable of the following type: minimum conductor cross-section 18 AWG 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.

120 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 3-conductor, minimum conductor cross-section 18 AWG, maximum length 4.5 m, parallel 15 A shockproof 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 3-conductor, minimum conductor cross-section 18 AWG, maximum length 4.5 m, parallel 15 A shockproof connector, minimum rating 250 V.

Connecting

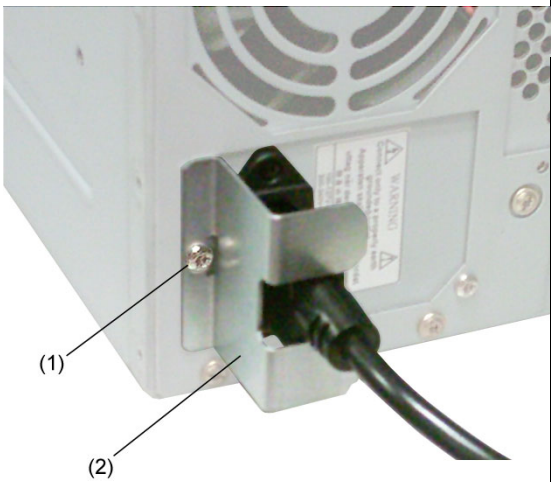
| Steps in connecting the device to mains | |
|---|--|
| 1 | Connect the IEC connector |
| 2 | Connect the power cord to the mains outlet, then switch on the mains isolation switch (if this exists) The yellow power LED (standby) on the front panel of the PC lights up. |



Secure the power plug

You can secure the power plug in order to avoid unintentional disconnection of the power cord.

| Steps in securing the power plug | |
|----------------------------------|---|
| 1 | Remove the lower left fastening screw (1) on the power supply module. |
| 2 | Power plug clamp (2) screw it to the power supply module |

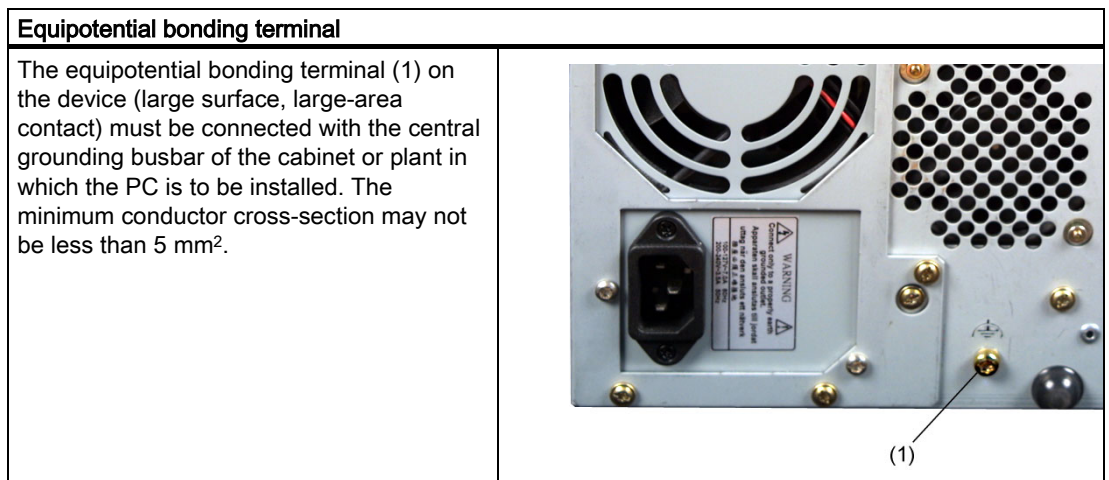



Warning

If the power plug is secured with a clamp, the power outlet must be freely accessible to allow the device to be easily removed from the mains.

5.3 Equipotential bonding

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



Commissioning

6.1 Commissioning requirements

- Before you switch on the device, you should verify that the peripherals are connected, i.e. the keyboard, mouse, monitor and the power supply.
- The operating system Your device is preinstalled on the hard disk drive.

Caution**Risk of damage to the device!**

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

6.2 Basic commissioning - Initial power up

The Rack PC operating system is automatically set up the **first** time you switch on the device. Procedure:

1. Press the On / Off button. The green power LED lights up. The PC performs a POST. During this self-test, this message appears:

Press <F2> to enter SETUP

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 PC may not be switched off when you run setup.

Do not change the default BIOS settings, because otherwise the operating system setup may be disrupted.

4. Automatic restart

After you have entered all necessary information, and after the operating system setup is completed, the PC 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.

Switch off the device

Note

On a Windows platform, always shut down the PC by clicking **Start > Close**.

Press the On/Off button behind the front panel door. The green power LED is switched off. Disconnect the mains connector to isolate the device from mains.

6.3 Reinstalling the software

6.3.1 General installation procedure

In case of software errors you can reinstall your software by means of the Recovery CD, the Documentation and Drivers CD or the Restore CD.

- **Recovery CD:** Contains the tools for setting up the hard disk drives and the operating system.
- **Documentation and Drivers CD:** Contains the documentation and the hardware drivers.
- **Restore CD:** Contains a hard disk image file with the original software (operating system with installed hardware drivers).

Restoring the factory condition

- Insert the Restore CD in your drive and reboot the device. When the BIOS message "Press <F2> to enter Setup" appears, press the ESC key. After initialization, a "Boot Menu" is displayed.
- Select "CD-ROM Drive" with the cursor keys.
- Now follow the instructions on the screen.

Caution

All existing data, programs, user settings and authorizations on the drives will be deleted and are therefore lost. For information on the functions, refer to the README.TXT file on the Restore CD.

Troubleshooting

7.1 General problems

This chapter provides you with tips on how to localize and troubleshoot frequently occurring problems.

| Problem | Possible cause | To correct or avoid error |
|--|---|--|
| The device is not operational | Missing power supply to the device | Check the power supply, the power cord or the power plug |
| The external monitor remains dark | The monitor is switched off. | Switch on the monitor. |
| | The monitor is in "powersave" mode. | Press any key on the keyboard. |
| | The brightness button has been set to dark. | Set the screen brightness button to obtain more light. For detailed information, refer to the monitor operating instructions. |
| | The power cord, or the monitor cable, is not connected. | <ul style="list-style-type: none"> • Check whether the power cord has been properly connected to the monitor and to the system unit or to the grounded shockproof outlet. • Check whether the monitor cable has been properly connected to the system unit and to the monitor. |
| | | If the monitor screen still remains dark after you have performed these checks, please contact your technical support team. |
| The mouse pointer does not appear on the screen | The mouse driver is not loaded | Check whether the mouse driver is properly installed and present when you start the application program. For more detailed information, refer to the manuals for the mouse or application programs. |
| | The mouse is not connected | Check whether the mouse cord is properly connected to the system unit. If you use an adapter or extension on the mouse cable, also check the connectors. |
| | | If the mouse pointer still does not appear on the screen after you have performed these checks and measures, please contact your technical support team. |
| Wrong time and/or date on the PC | | <ol style="list-style-type: none"> 1. Press <F2> within the boot sequence to open the BIOS Setup. 2. Set the time and date in the setup menu. |
| Although the BIOS setting is OK, the time and data are still wrong | The backup battery is dead. | In this case, please contact your technical support team. |

| | | |
|--|--|---|
| USB device not responding | The USB ports are disabled in your BIOS. | Use a different USB port, or enable the port. |
| | USB 2.0 device connected, but USB 2.0 is disabled. | Switch on USB 2.0. |
| | Operating system does not support the USB port. | No remedy. |
| DVD/CD: The front loader does not open | The device is switched off, or the open/close button is disabled by a software application | Emergency removal of the data medium: <ol style="list-style-type: none">1. Switch off the device2. Insert a pin, for example, or an opened paper clip into the emergency extraction opening of the drive. Apply slight pressure to the contact until the front loader opens.3. Pull the loader further out |

Dimensional drawings

8.1 Dimensional drawing of the device

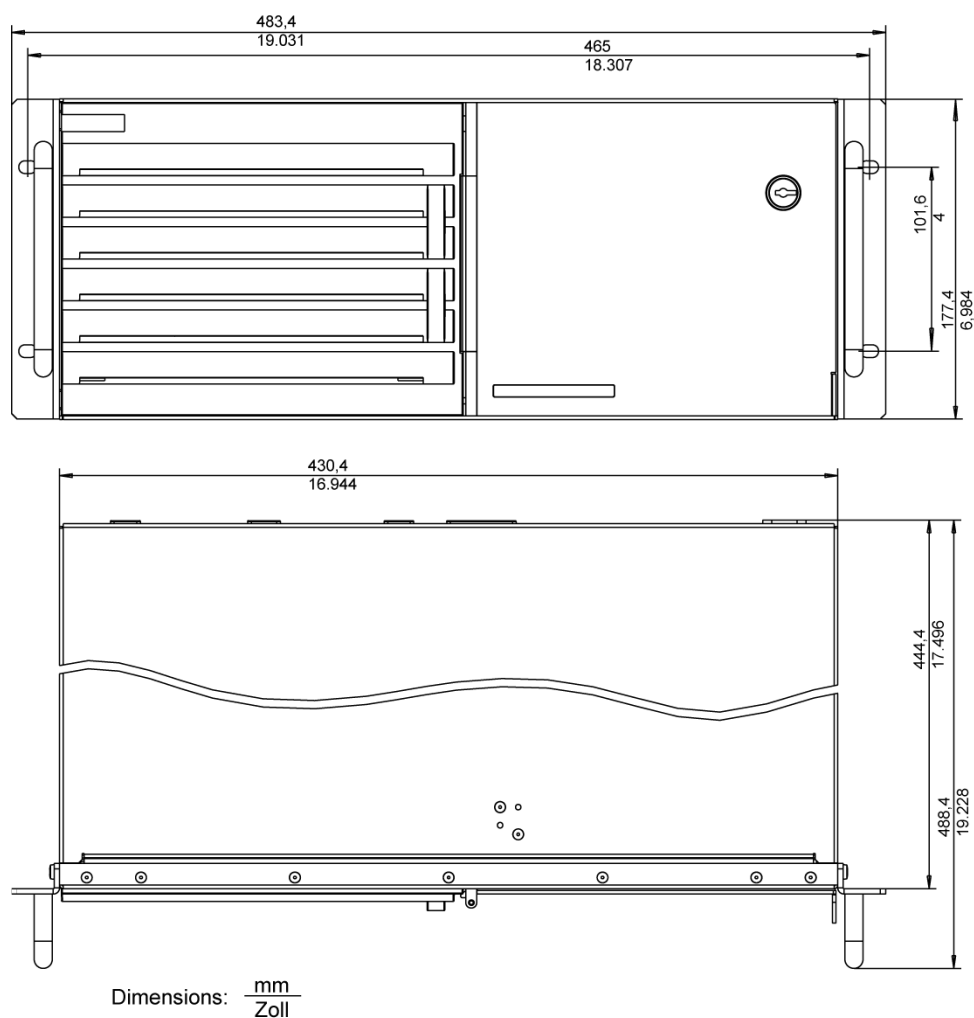
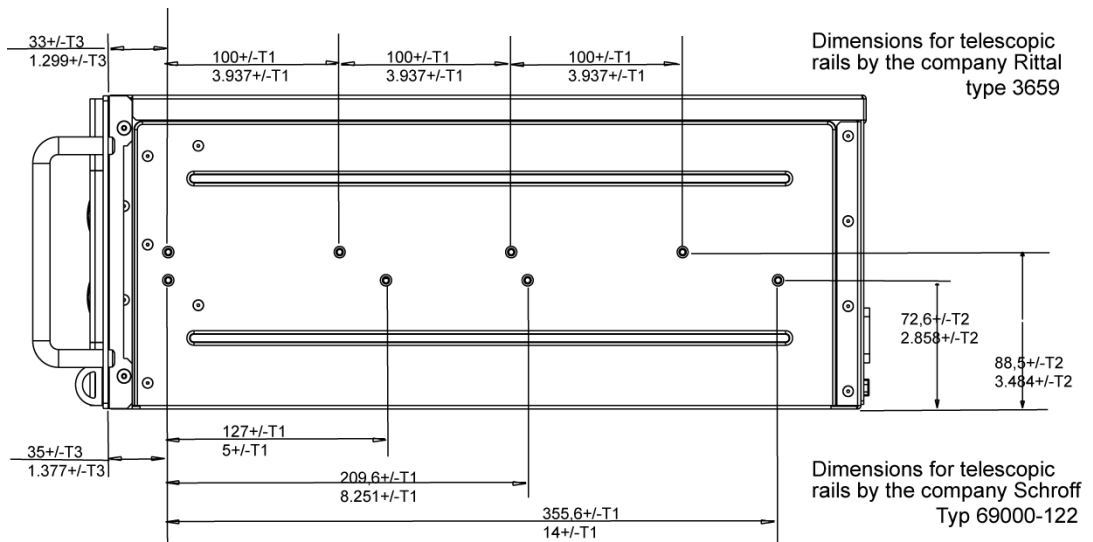


Figure 8-1 Dimension drawing

8.2 Dimensional drawing for the use of telescopic rails



Dimensions: $\frac{\text{mm}}{\text{Zoll}}$

T1=tolerance of + $\frac{0,1 \text{ mm}}{0.004 \text{ Zoll}}$

T2=tolerance of + $\frac{0,3 \text{ mm}}{0.01 \text{ Zoll}}$

T3=tolerance of + $\frac{0,5 \text{ mm}}{0.02 \text{ Zoll}}$

Figure 8-2 Dimensional drawing for the use of telescopic rails

Appendix

9.1 Guidelines and declarations

Notes on the CE Label

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

Guidelines for Handling Electrostatic Sensitive Devices (EMC)

This product fulfills the requirements for the EC directive TM89/336/EEC "Electromagnetic Compatibility", and the following fields of application apply according to this CE label:

| Field of Application | Requirement for | |
|----------------------|----------------------|--------------------|
| | Emitted interference | Noise Immunity |
| 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.)



Warning

This is Class A equipment. The equipment may cause radio interference in residential areas; in such cases, the operator can be requested to take reasonable countermeasures.

Low-voltage directive

The devices complies with the requirements of the EC Directive 73/23/EEC "Low-Voltage Directive." Conformance with this standard has been verified according to EN 60950.

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 must be observed 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.

9.2 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.

Certification for the USA, Canada and Australia

Safety

| One of the following markings on a device is indicative of the corresponding approval: | |
|--|---|
|  | Underwriters Laboratories (UL) to UL 60950 Standard (I.T.E), or to UL508 (IND.CONT.EQ) |
|  | Underwriters Laboratories (UL) to Canadian Standard C22.2 No. 60950 (I.T.E), or to C22.2 No. 142 (IND.CONT.EQ) |
|  | Underwriters Laboratories (UL) to Standard UL 60950, Report E11 5352 and Canadian Standard C22.2 No. 60950 (I.T.E), or to UL508 and C22.2 No. 142 (IND.CONT.EQ) |
|  | UL recognition mark |
|  | Canadian Standard Association (CSA) to Standard C22.2 No. 60950 (LR 81690) or to C22.2 No. 142 (LR 63533) |
|  | Canadian Standard Association (CSA) to the American Standard UL 60950 (LR 81690), or to the UL 508 (LR 63533) |

EMC

| USA | |
|---|---|
| Federal Communications Commission Radio Frequency Interference Statement | This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. |
| Shielded Cables | Shielded cables must be used with this equipment to maintain compliance with FCC regulations. |
| Modifications | Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment. |
| Conditions of Operations | This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. |

| CANADA | |
|-----------------|--|
| Canadian Notice | This Class A digital apparatus complies with Canadian ICES-003. |
| Avis Canadian | Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada. |

9.3 Service and support

Further Support

If you have questions related to the use of the products which are not answered in this documentation, please get in touch with your Siemens representative or agent responsible.

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

Training Centers

Siemens offers a number of training courses to familiarize you with the SIMATIC S7 automation system. Please contact your regional training center or our central training center in D 90327 Nuremberg, Germany for details:

D 90327 Nuremberg. Telephone: +49 (911) 895-3200.

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

A&D Technical Support

Worldwide, available 24 hours a day:

| | | |
|--|---|---|
| Worldwide (Nuremberg) Technical Support Local time: 0:00 to 24:00 / 365 days Phone: +49 (180)5050-222 Fax: +49 (180) 5050-223 E-mail: adsupport@siemens.com GMT: +1:00 | | |
| Europe / Africa (Nuremberg) Authorization Local time: Mo. Mon. – Fri. 8:00 to 17:00 Phone: +49 (180) 5050-222 Fax: +49 (180) 5050-223 email: adsupport@siemens.com GMT: +1:00 | United States (Johnson City) Technical Support and Authorization Local time: Mo. Mon. – Fri. 8:00 to 17:00 Phone: +1 (423) 262 2522 Fax: +1 (423) 262 2289 email: simatic.hotline@sea.siemens.com GMT: –5:00 | Asia / Australia (Beijing) Technical Support and Authorization Local time: Mo. Mon. – Fri. 8:00 to 17:00 Phone: +86 10 64 75 75 75 Fax: +86 10 64 74 74 74 email: adsupport.asia@siemens.com GMT: +8:00 |
| German and English are generally spoken at the Technical Support and Authorization centers. | | |

Service & Support on the Internet

In addition to our documentation, we offer our Know-how online on the Internet at:

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

where you will find the following:

- The newsletter, which constantly provides you with up-to-date information on your products.
- The right documents via our search engine in Service & Support.
- The current BIOS version .
- A bulletin board, where users and experts from all over the world exchange their experiences.
- Your local representative for Automation & Drives via our representatives database.
- Information about on-site services, repairs and spare parts. Lots more is available on the "Services" page.



Siemens Aktiengesellschaft

Automation and Drives
Postfach 4848, D-90327 Nuernberg
Federal Republic of Germany

www.siemens.com/automation

ID: A5E00248069