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SIMATIC

Industrial PC SIMATIC Microbox PC 420

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.



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.

Operating Instructions (Compact)

1.1 Components of the Product

Amount	Name
1	SIMATIC Microbox PC 420
1	Accessory kit: 2 mounting brackets, 9 oval-head screws (M4x6), 1 USB strain relief

Additionally supplied with Windows XP Professional:

Amount	Name	Description
1	Recovery CD	Contains the tools for setting up the hard disk and the Windows XP Professional operating system.
1	Restore DVD	Contains a hard disk image file with the original software (operating system with installed hardware drivers).
1	Documentation and Drivers CD	Contains the documentation and the hardware drivers.
1	SP2 CD	Contains the update with Windows XP Professional SP2

1.2 Device identification data

Enter the identification data of the device into the table:	
Serial number (on the type plate)	
Oder number of the device	
For the Windows XP Embedded / XP Professional variant: Microsoft Windows Product Key from the "Certificate of Authenticity" (COA). The COA label is pasted to the device.	
Ethernet Adressen: BIOS Setup (F2 Key) under Main > Hardware Options > Ethernet Address	

1.3 Configuration

Device Configuration	Order No.
SIMATIC Microbox PC 420	6 O G 4 0 4 0 - 0 O x x 0 - 0 x x 0
Celeron 400 MHz, 100 MHz FSB	O
Celeron 400 MHz, 100 MHz FSB, PROFIBUS DP12	B
Celeron 400 MHz, 100 MHz FSB, CAN interface	C
Celeron 650 MHz, 100 MHz FSB	D
Celeron 650 MHz, 100 MHz FSB, PROFIBUS DP12	E
Pentium III, 933 MHz, 133 MHz FSB	G
Pentium III, 933 MHz, 133 MHz FSB, PROFIBUS DP12	H
128 MB SDRAM-133	1
256 MB SDRAM-133	2
512 MB SDRAM-133	3
40 GB EIDE hard disk	O
256 MB Compact Flash card	M
512 MB Compact Flash card	N
1 GB Compact Flash card	P
2 GB Compact Flash card	Q
Without mass storage	X
Windows XP Embedded preinstalled ¹	O
Windows XP Professional MUI preinstalled ²	B
Without operating system	X
¹ Together with 512 MB, 1 GB, 2 GB Compact Flash card or 40 GB EIDE hard disk	
² Together with 40 GB EIDE hard disk	

Accessories	Order No.
Expansion kit PC/104	6 O G 4 0 7 0 - 0 B O 0 0 - 0 X O 0
256 MB Compact Flash card	6 E S 7 6 4 8 - 2 B F 0 1 - 0 X C 0
512 MB Compact Flash card	6 E S 7 6 4 8 - 2 B F 0 1 - 0 X D 0
1 GB Compact Flash card	6 E S 7 6 4 8 - 2 B F 0 1 - 0 X E 0
2 GB Compact Flash card	6 E S 7 6 4 8 - 2 B F 0 1 - 0 X F 0
SIMATIC USB Flash Drive, USB 2.0, 512 MB	6 E S 7 6 4 8 - 0 D C 2 0 - 0 O O 0

1.4 Safety Instructions



Caution



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

1.5 Permitted mounting positions

Notice

The device is approved for operation in closed rooms only.

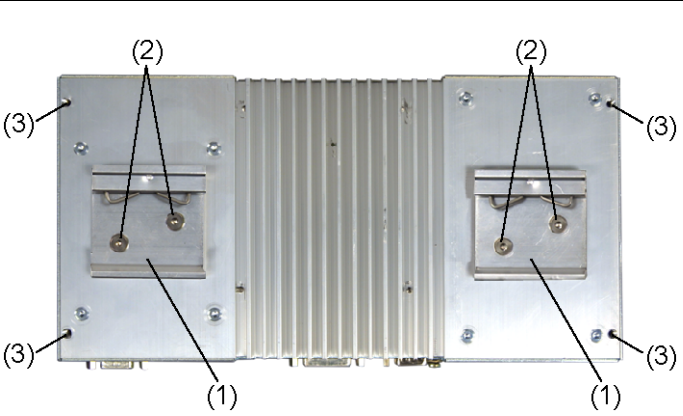
Ensure at least 100 mm of space above and below the device and between other components or the sides of cabinets.

Horizontal (preferred position)	Vertical
	
<p>Permissible ambient temperature: Operating with Compact flash card: 0 to +50°C Operating with the hard disk: +5 to +40°C</p>	<p>Permissible ambient temperature: Operating with Compact flash card: 0 to +45°C Operating with the hard disk: +5 to +40°C</p>

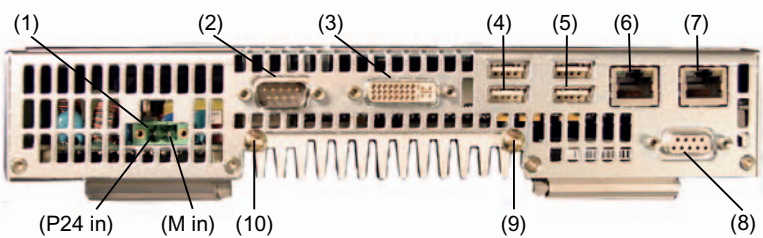
1.6 Installation / panel-mounting



Mounting on DIN rails	
1	Place the device aslant on the upper top hat rail
2	Swing the device fully onto the rails until both clamps (1) completely latch.
Wall mounting	
1	Loosen the screws (2) and remove the two clamps (1) from the rear of the device.
2	Install two cubicle angles with screws (3) onto the device. Examples for mounting and materials can be found in the operation instructions.



1.7 Connection components

Connector locations		
		
Pos	Name	Description
(1)	24 VDC	Connection for a 24 V DC power supply
(2)	COM 1	Serial port 1 (RS232), 9-pin Cannon socket
(3)	DVI/VGA	DVI/VGA connection for CRT or LCD monitor with DVI interface
(4)	USB	2 USB 2.0 connectors high speed / low current
(5)	USB	2 USB 2.0 connectors high speed / high current
(6)	Ethernet	RJ45 Ethernet connection 1 (exclusive PCI interrupt) for 10/100 Mbps
(7)	Ethernet	RJ45 Ethernet connection 2 (shared PCI interrupt) for 10/100 Mbps
(8)	PROFIBUS DP/MPI Other field bus	PROFIBUS DP/MPI interface (RS 485 isolated), 9-pin Cannon socket or other field busses (on request)
(9)	USB strain relief fastener	The USB strain relief must be fastened to the device housing with an oval-head screw (M4 thread). The USB cable is fastened to the strain-relief with a cable binder.
(10)	Protective earth terminal	The protective earth terminal (M4 thread) which is integrated into the device needs to be connected to the protective earth conductor. The minimum conductor cross-section may not be less than 2.5 mm ² .

1.8 Connecting the 24 V DC power supply

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To be noted before you connect the device

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



Warning

The device should only be connected to a 24V DC power supply which satisfies the requirements of safe extra low voltage (SELV).

When the device is operated on a wall, in an open rack or other similar locations, an NEC Class 2 current source is required for the compliance of the UL requirements (in accordance with UL 60950-1). In all other cases (in accordance with IEC / EN / DIN EN 60950-1) either a power source of limited performance (LPS = Low Power Source), or a line-side fuse or a line-side power switch is necessary. The power needs to be limited to a value lower than 8 A. Recommended fuse rating: 4 A.

Use the special plug supplied to connect the supply voltage.

Operation in closed cabinets or fireproofing cabinets (including the operation of a cabinet in accordance with UL508) there are no requirements for current limiting of the supply voltage.

Notice

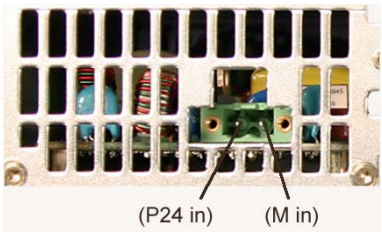
The permitted cable cross-section for the 24 V DC connection is 0.75 mm² to 2.5 mm².

Notice

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

Connecting

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

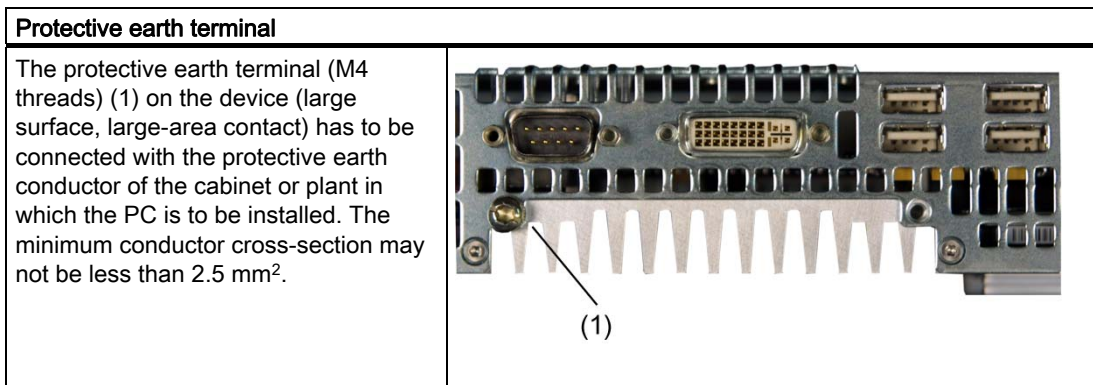


(P24 in) (M in)

1.9 Protective ground connection

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



1.10 Commissioning Information

Notice

Windows XP Embedded: Observe EWF Information

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.

1.11 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

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>

Product documentation

The detailed operating instructions for Microbox PC420 can be downloaded as a PDF file on the internet under the following address: <http://www4.ad.siemens.de>