

SCENICVIEW P17-3P/P19-3/P19-3P



We make sure

FUJITSU COMPUTERS
SIEMENS

Are there ...

... any technical problems or other questions that you would like help with?

Please contact:

- our Hotline/Help Desk (refer to the enclosed Help Desk List or go to: ["www.fujitsu-siemens.com/support/"](http://www.fujitsu-siemens.com/support/))
- your sales partner
- your sales office

The latest information on our products, tips, updates etc. can be found on our website at: ["www.fujitsu-siemens.com"](http://www.fujitsu-siemens.com/)

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SCENICVIEW P17-3P/P19-3/P19-3P

Operating Manual

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Contents

Your LCD screen...

has a whole range of useful features and functions, e.g.:

- TFT display (Thin Film Transistor; active matrix)
- minimal space requirements thanks to slim casing
- optimum ergonomic characteristics (totally distortion-free, excellent picture definition and colour purity right into the corners)
- high degree of brightness and good contrast
- high resolution (1280 x 1024)
- presentation of up to 16.7 million colours (in conjunction with an appropriate display adapter)
- automatic scanning of horizontal frequencies from 30 to 82 kHz and refresh rates (vertical frequencies) from 56 to 76 Hz (absolutely flicker-free)
- digital screen controller with microprocessor for storing 34 different display modes
- freely adjustable colour alignment for matching the screen colours to the colours of various input and output devices
- convenient operation via integrated OSD (On-Screen-display) menu
- VESA-DDC compatibility
- Auto pivot function
- VESA-FPMPMI compatibility (Flat Panel Monitor Physical Mounting Interface) – Mounting device for swivel arm and wall bracket
- Plug&Play capability
- Digital video input (DVI)
- power management for reducing power consumption when the computer is not in use
- Compliance with the recommendations according to TCO '03
- the monitor fulfills all GS ("Geprüfte Sicherheit", Certified Security) requirements.

This operating manual contains important information you require to start up and run your LCD monitor.

A graphics card (display adapter) with VGA interface or a digital display adapter with DVI interface or video signal source with HDMI interface is required to control the LCD monitor. The monitor processes the data supplied to it by the display adapter. The display adapter or the associated driver software is responsible for setting the modes (resolution and refresh rate).

When putting the monitor into operation for the first time, the screen display should be optimally adapted to the display adapter used and adjusted in accordance with your needs (see chapter ["Changing the monitor settings", Page 21](#)).

Target group

You don't need to be an "expert" to perform the operations described here. However, please observe the safety information given in the operating instructions for the computer and in this manual.

In the event of any problems occurring, please contact your sales outlet or our Help Desk.







Further information

Details of how you set the resolution and refresh rate are provided in the documentation for your display adapter and the associated driver software.

For ergonomic reasons, a screen resolution of 1280 x 1024 pixels is recommended.

Because of the technology used (active matrix) an LCD monitor provides a totally flicker-free picture even with a refresh rate of 60 Hz.

Notational conventions

	Pay particular attention to text marked with this symbol. Failure to observe this warning will endanger your life, will damage the device or lead to loss of data. The warranty will be invalidated if you cause defects in the device through failure to take notice of this warning
	indicates important information that is required to use the device properly.
	indicates an activity that must be performed in the order shown
	indicates a result
This style	flags data entered using the keyboard in a program dialog or command line, e.g. your password (Name123) or a command to launch a program (start.exe)
This style	refers to information displayed by a program on the screen, e.g.: Installation is completed
<i>This style</i>	is for <ul style="list-style-type: none"> terms and texts in a software user interface, e.g.: Click <i>Save</i>. names of programs or files, e.g. <i>Windows</i> or <i>setup.exe</i>.
"This style"	is for <ul style="list-style-type: none"> cross-references to another section, e.g. "Safety information" cross-references to an external source, e.g. a web address: For more information, go to "www.fujitsu-siemens.com" indicates names of CDs and DVDs as well as names and titles of other materials, e.g.: "CD/DVD Drivers & Utilities" or "Safety" manual
	refers to a key on the keyboard, e.g.: 
This style	flags concepts and text that are emphasised or highlighted, e.g.: Do not switch off device

Important notes

In this chapter you will find information regarding safety which it is essential to take note of when working with your device.

Safety instructions

This device complies with the relevant safety regulations for data processing equipment, including electronic office machines for use in an office environment. If you have any questions, contact your sales outlet or our Help Desk.

- The display surface of the device is sensitive to pressure and scratches. You should therefore be careful with the display surface in order to avoid lasting damage (scratches).
- If the device is brought into the installation site from a cold environment, condensation can form. Before operating the device, wait until it is absolutely dry and has reached approximately the same temperature as the installation site.
- When installing and operating the device, please observe the notes on environmental conditions in Chapter ["Technical data", Page 31](#) as well as the instructions in Chapter ["Setting up an ergonomic video workstation", Page 10](#).
- To ensure sufficient ventilation, the air inlet and outlet openings of the device must be kept clear.
- The device automatically sets itself to the correct voltage within the range from 100 V to 240 V. Make sure that the local mains voltage is neither higher nor lower than this range.
- Ensure that the power socket on the device and the mains outlet are freely accessible.
- The ON/OFF switch does not fully disconnect the TV from the mains voltage. To disconnect fully from the mains supply, remove the power plug from the socket.
- The device is equipped with a power cable that complies with safety standards.
- Use the supplied power cable only.
- Lay the cables in such a way that they do not create a hazard (danger of tripping) and cannot be damaged. When connecting the device, observe the relevant notes in chapter ["Connecting the device", Page 16](#).
- No data transfer cables should be connected or disconnected during a thunderstorm.
- Make sure that no objects (e.g. jewellery chains, paper clips, etc.) or liquids get inside the device (danger of electric shock, short circuit).
- The device is not waterproof! Never immerse the device in water and protect it from spray water (rain, sea water).
- In emergencies (e.g. damaged casing, elements or cables, penetration of liquids or foreign matter), switch off the device, disconnect the power plug and contact your sales outlet or our Help Desk.
- Repairs to the device must only be performed by qualified technicians. Unauthorised opening and incorrect repair may greatly endanger the user (electric shock, fire risk).
- Only use the screen resolution settings and refresh rates specified in Chapter ["Technical data", Page 31](#). Otherwise you may damage the device. If you are in any doubt, contact your sales outlet or our Help Desk.

- Use a screen saver with moving images and activate the power management for your monitor to prevent still images from "burning in".
- If you operate the device with the swivel arm or wall bracket, it may not be turned by 180°.
- The device must only be operated in landscape mode (0°) and portrait mode (90°). The control buttons are located in the middle of the bottom of the monitor in landscape mode (0°) and at the left-hand side of the monitor in portrait mode (90°).
- Store this manual close to the device. If you pass the device on to third parties, you should pass this manual on with it.

Power cable

Use the supplied power cable only.

Use the following guidelines if it is necessary to replace the original cable set.

- The female/male receptacles of the cord set must meet IEC60320/CEE-22 requirements.
- The cable has to be HAR-certified or VDE-certified. The mark HAR or VDE will appear on the outer sheath.
- For devices which are mounted on a desk or table, type SVT or SJT cable sets may be used. For devices which sit on the floor, only SJT type cable sets may be used.
- The cable set must be selected according to the rated current for your device.
- If necessary, replace the original power cable with a regular grounded 3-core mains lead.

Transporting the device



Transport all parts separately in their original packaging or in a packaging which protects them from knocks and jolts, to the new site.

Do not unpack them until all transportation manoeuvres are completed.

Cleaning the device



Switch off the device and unplug the power plug.

Do not clean any interior parts yourself, leave this job to a service technician.

Do not use any cleaning agents that contain abrasives or may corrode plastic.

Ensure that no liquid enters the device.

The display surface of the device is sensitive to pressure and scratches. Clean it only using a soft, slightly moistened cloth.

The surface of the casing can be cleaned with a dry cloth. If particularly dirty, use a cloth that has been moistened in mild domestic detergent and then carefully wrung out.

FCC Class B Compliance Statement

The following statement applies to the products covered in this manual, unless otherwise specified herein. The statement for other products will appear in the accompanying documentation.

NOTE:

This equipment has been tested and found to comply with the limits for a "Class B" digital device, pursuant to Part 15 of the FCC rules and meets all requirements of the Canadian Interference-Causing Equipment Standard ICES-003 for digital apparatus. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in strict accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Fujitsu Siemens Computers GmbH is not responsible for any radio or television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by Fujitsu Siemens Computers GmbH. The correction of interferences caused by such unauthorized modification, substitution or attachment will be the responsibility of the user.

The use of shielded I/O cables is required when connecting this equipment to any and all optional peripheral or host devices. Failure to do so may violate FCC and ICES rules.

Declaration of Conformity

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.

Product name:	Colour LCD Monitor
Trade name:	Fujitsu Siemens Computers Inc.
Model number(s):	SCENICVIEW P17-3P/P19-3/P19-3P
Name of responsible party:	Fujitsu Siemens Computers Inc. 1250E. Arques Avenue Sunnyvale, CA 94085 U.S.A.
Contact person:	Schroettle-Henning, Bernd
Phone No.:	(408) 834-0306
Fax No.:	(408) 746-8299

We, Fujitsu Siemens Computers Inc., hereby declare that the equipment bearing the trade name and model number specified above was tested confirming to the applicable FCC Rules under the most accurate measurement standards possible, and that all the necessary steps have been taken and are in force to assure that production units of the same equipment will continue to comply with the Commissions requirements.

CE marking



The shipped version of this device complies with the requirements of EEC directives 2004/108/EC "Electromagnetic compatibility" and 2006/95/EC "Low voltage directive".

Energy Star



The Fujitsu Siemens LCD colour monitor is equipped with a power management system which reduces the power draw in OFF mode to less than 1 W. With this new power management the LCD monitor satisfies the requirements for the U.S. Environmental Protection Agency's (EPA) Energy Star Computers award.

The EPA estimates that computer equipment uses 5 % percent of all business electricity and that this is growing rapidly. If all desktop PCs and peripherals enter a low-power mode when not in use, the overall savings in electricity could amount to \$2 billion annually. These savings could also prevent the emission of 20 million tons of carbon dioxide into the atmosphere - the equivalent of 5 million automobiles.

As an Energy Star Partner, Fujitsu Siemens Computers GmbH has determined that this product meets the Energy Star guidelines for energy efficiency.

Disposal and recycling

This device has been manufactured to the highest possible degree from materials which can be recycled or disposed of in a manner that is not environmentally damaging. The device may be taken back after use to be recycled, provided that it is returned in a condition that is the result of normal use. Any components which cannot be recycled will be disposed of in an environmentally acceptable manner.

The device must be disposed of in accordance with the local regulations for disposal of special waste. The screen background lighting contains mercury. You must observe the applicable handling and disposal safety regulations for fluorescent tubes.

If you have any questions on disposal, please contact your local office, our Help Desk, or:

Germany	Belgium	Switzerland
Fujitsu Siemens Computers GmbH Remarketing and Recycling D-33106 Paderborn Tel.: +49 5251 / 81 80 10 Fax: +49 5251 / 81 80 15 "http://www.fujitsu-siemens.de/wvm"	RECUPEL Boulevard Reyers, 80 B-1030 Brussels Tel.: +32 2 / 706 86 16 Fax: +32 2 / 706 86 13 E-mail: info@recupel.be "http://www.recupel.be"	SWICO Swiss Association for Information, Communications and Organization Technology For a list of SWICO collection points, see: "http://www.swico.ch" .
Asia	USA	
Taiwan: Environmental Protection Administration Executive Yuan R.O.C. "http://recycle.epa.gov.tw"	Fujitsu Siemens Computers Inc.1250E. Arques Avenue Sunnyvale, CA 94085 U.S.A. Contact: Schroettle-Henning, Bernd Phone No.: (408) 834-0306 Fax No.: (408) 746-8299	

For more information on this subject, please go to ["www.fujitsu-siemens.com/recycling"](http://www.fujitsu-siemens.com/recycling).

Getting started

Unpacking and checking the delivery



The display surface of the device is sensitive to pressure and scratches. Always hold the device by the casing!

The complete device package includes:

- one monitor
 - one data cable (D-SUB)
 - one data cable (DVI-D)
 - one audio cable
 - one power cable
 - one CD with software and documentation
 - one Warranty Booklet
 - one "Quick Start Guide"
 - one "Safety" manual
-
- ▶ Unpack all the individual parts.
 - ▶ Check the contents of the package for any visible damage caused during transport.
 - ▶ Check whether the delivery conforms to the details in the delivery note.
 - ▶ Should you discover that the delivery does not correspond to the delivery note, notify your local sales outlet immediately.



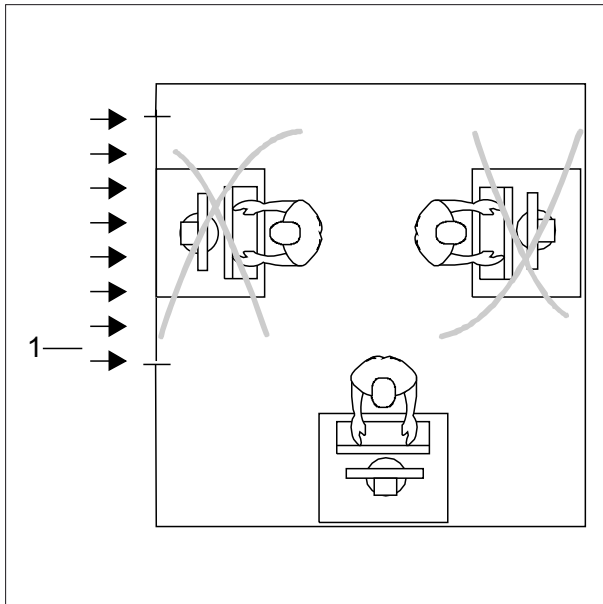
Do not discard the original packing material of the devices. You may need the packaging in the future if you need to transport your device.

Setting up the device

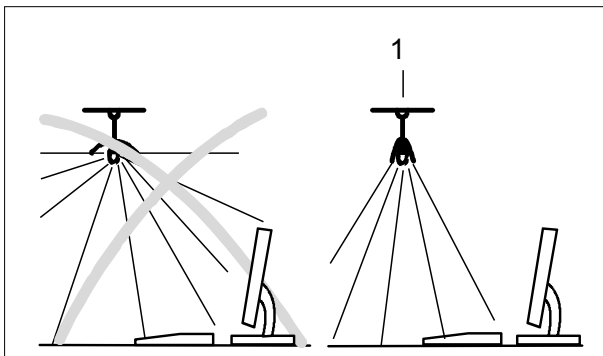


To ensure sufficient ventilation, the air inlet and outlet openings of the device must be kept clear.

Setting up an ergonomic video workstation



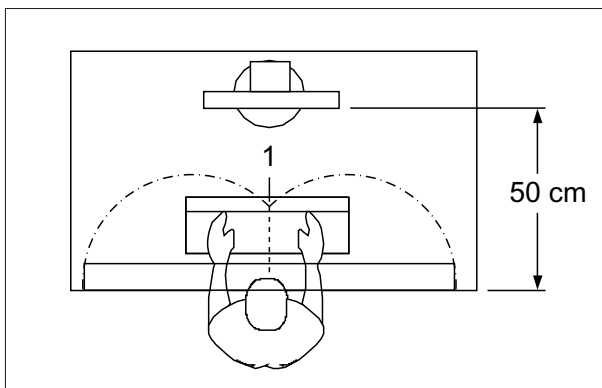
- ▶ Do not position the video workstation opposite a window (1).



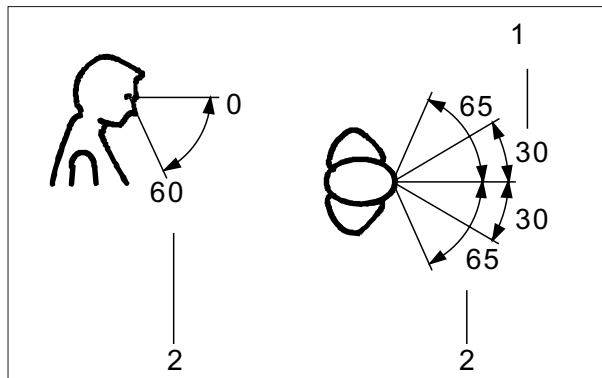
- ▶ Position the monitor outside the reach of a light source (1).



- Position the keyboard where it is easiest to reach (1).



- Position the monitor so that the eye distance to the screen (1) is around 50 cm.



- Position the monitor for optimum viewing (1). The monitor should under no circumstances fall outside the permissible viewing space (2).

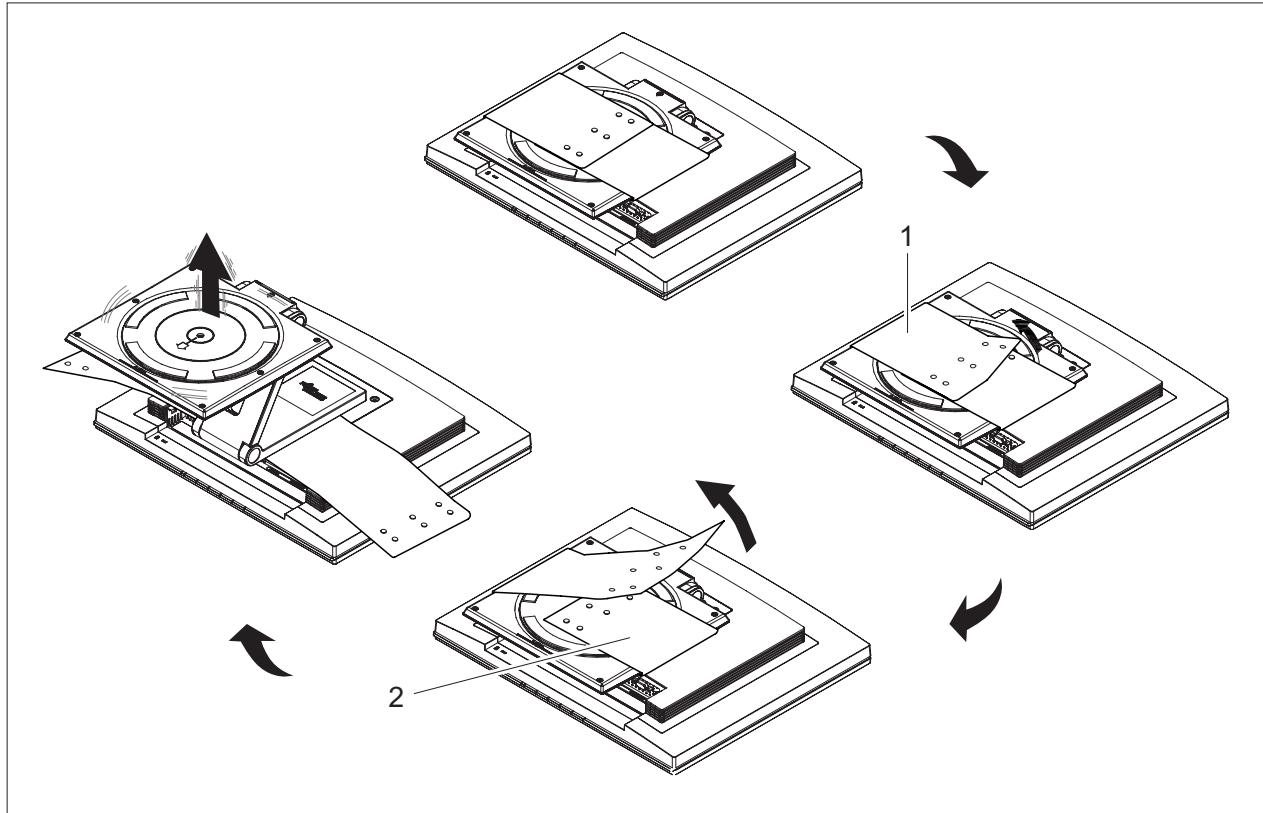


Depending on the situation, it may be advisable to use a swivel arm or wall bracket (VESA FPMPMI), which are available from specialist dealers. For this purpose the monitor base must be removed beforehand as described in Chapter ["Removing monitor base", Page 14](#).

Assembly and disassembly of the monitor base

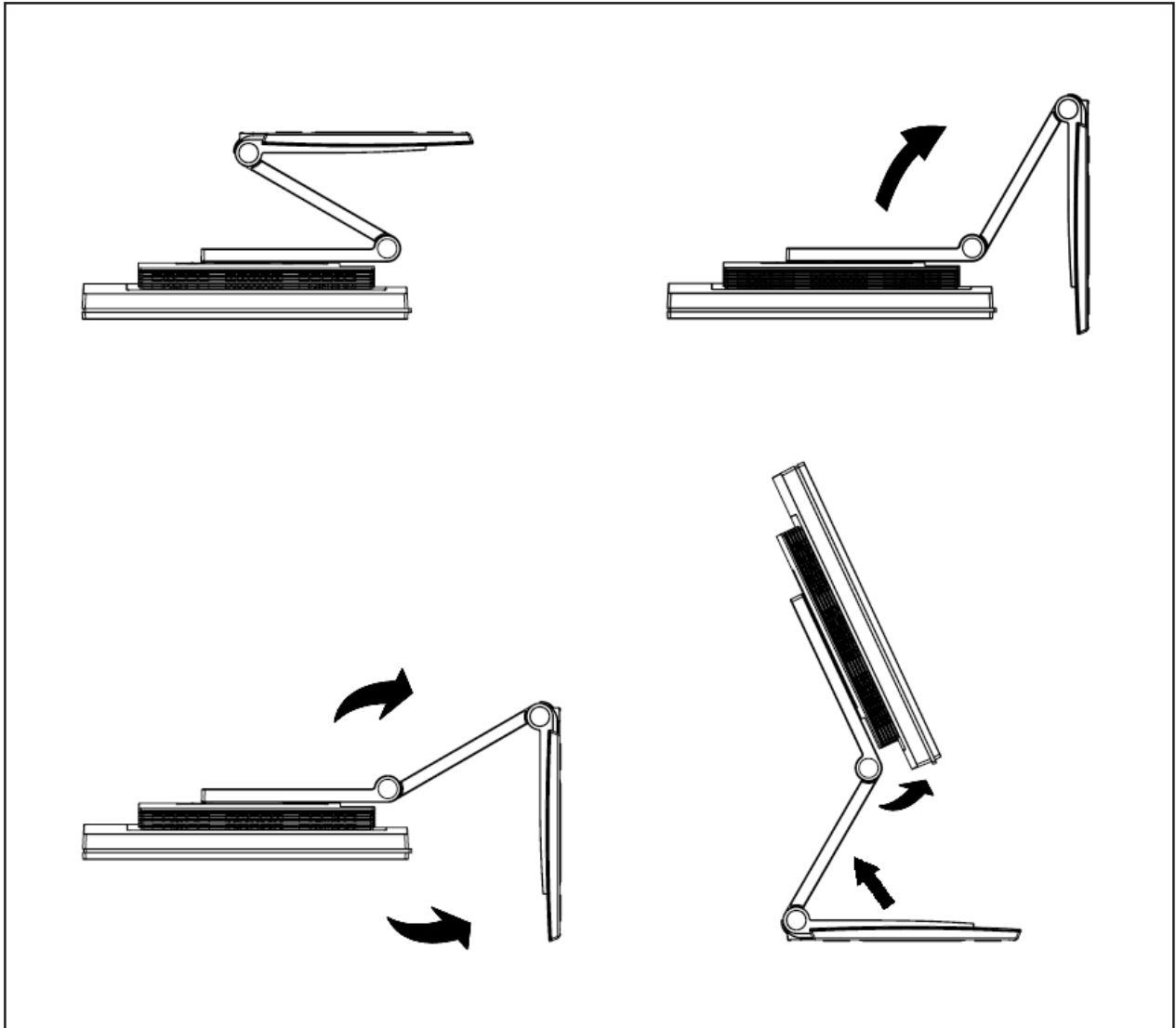
Folding out the monitor base

On delivery, the lower part of the monitor base is folded up and secured to the monitor by a collar.



The monitor base springs up about 5 cm when the collar is released.

- ▶ Lay the monitor on its face on a soft surface.
- ▶ First release one of the collar fasteners (1).
- ▶ Carefully release the second collar fastener (2).
- ↳ The monitor base can now be folded out.



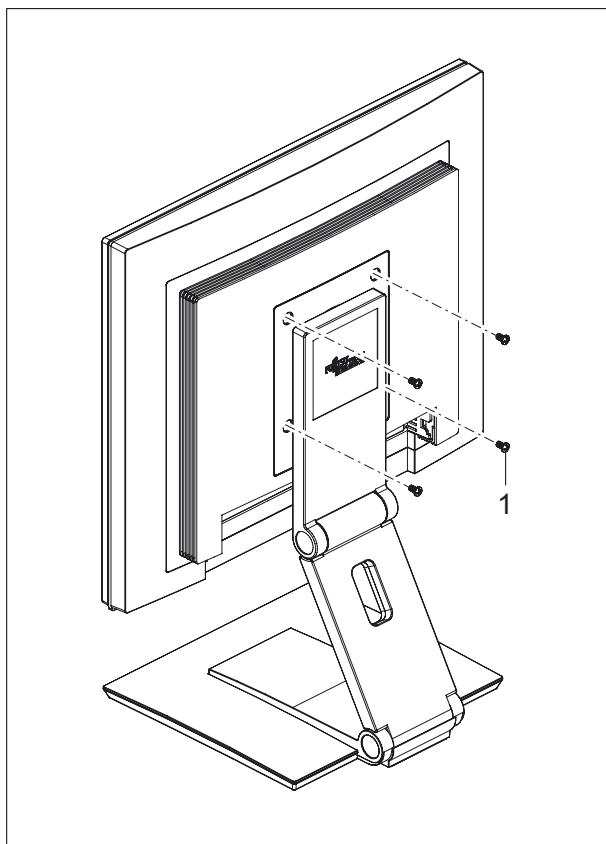
- Proceed according to the four steps (1-4) shown in the illustrations to fold out the monitor base.

Removing monitor base

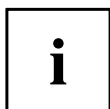
Before you can use a swivel arm or a wall bracket, you must remove the monitor base.



The display surface is susceptible to scratching!



- ▶ Switch off the monitor and pull the power plug out of the power socket.
- ▶ Lay the monitor on its face on a soft surface.
- ▶ Remove the cover and disconnect all cables.
- ▶ Remove the screws (1) on the rear of the monitor.
- ↳ You can now mount a swivel arm or a wall bracket as per VESA FPMPMI with 100 mm hole spacing.



For instructions on how to mount the swivel arm or wall bracket, please see the documentation for the swivel arm or wall bracket.

Adjusting the height

The height of the monitor can be adjusted by approximately 120 mm.

- ▶ Grasp the monitor with both hands on the right and left edge of the casing and move it upward or downward.

Adjusting the inclination

The inclination of the monitor can be adjusted by -2° (forward) and $+35^{\circ}$ (to the back) from its vertical position.

- ▶ Hold the monitor with both hands on the left and right sides of the casing and move it to the desired angle.

Adjusting the rotation

The monitor can be rotated by $\pm 90^{\circ}$ from its centre position.

- ▶ Grasp the monitor with both hands on the right and left edge of the casing and turn it to the desired position.

Adjusting portrait format

The monitor can be rotated from horizontal format (landscape mode) into vertical format (portrait mode).

- ▶ Grasp the monitor with both hands on the right and left edge of the casing, move it into the highest position and turn it clockwise until it is in the portrait position.
- ▶ To set the screen back into landscape mode, rotate it back anti-clockwise.



The screen supports the "Auto pivot" function with the associated software (DisplayView Click, Pivot), which is used to adapt the screen display to the orientation of the screen. This software is included in the delivery (CD-ROM) and must be installed on your computer.

Connecting the device



Please observe the safety information in ["Important notes", Page 3](#).
CE conformance and optimum picture quality are guaranteed only if you use the data cables supplied.

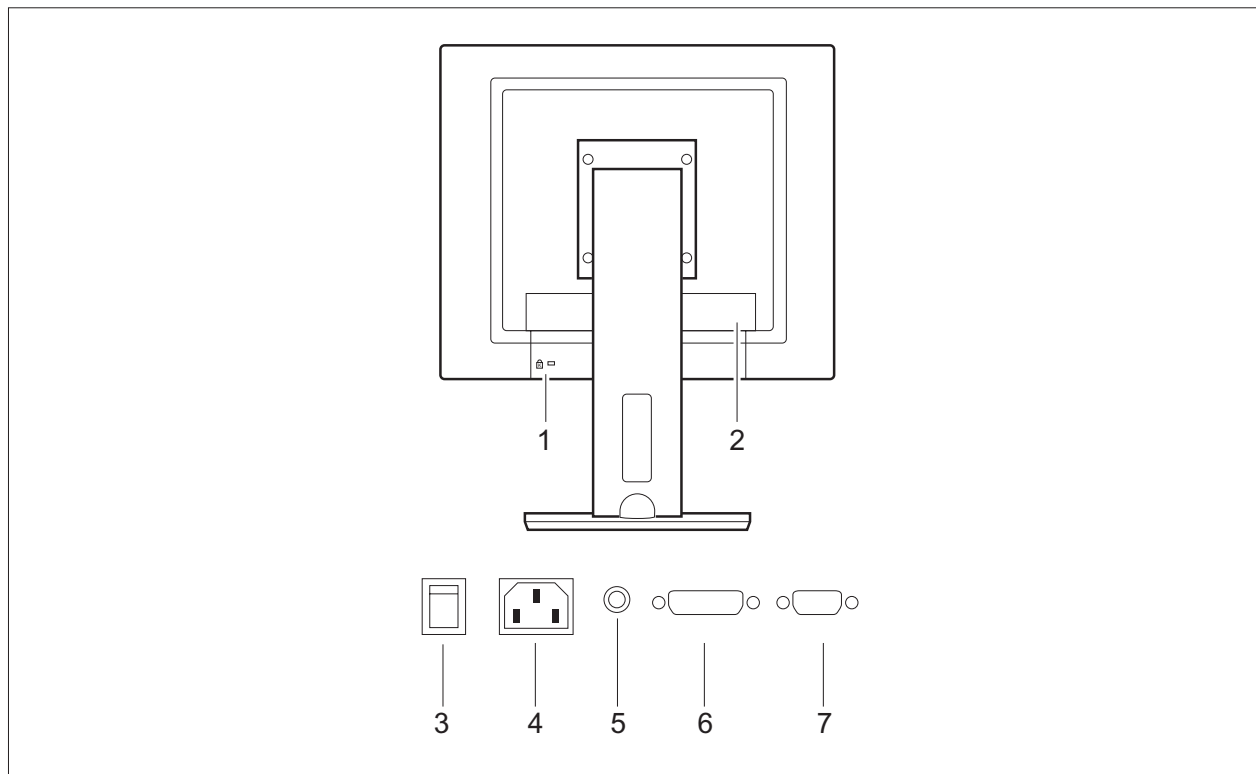
- ▶ Switch off the monitor and the computer.
- ▶ Disconnect the power plug from the computer.

Connecting cables to the monitor

The monitor ports are protected by a cover.

The data cables supplied have two 15-pin D-SUB connectors or two 24-pin DVI connectors for connection to the monitor and to the computer.

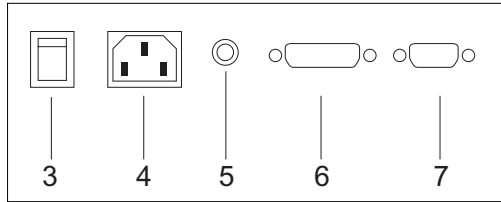
Information on the computer connections and interfaces is contained in the operating manual for the computer.



1 = Security slot for "Kensington Lock"

2 = Cover position

- ▶ Remove the cover (2).
- ▶ Select the appropriate data cable for your computer.



3 = Main switch

4 = Power socket

5 = AUDIO-IN socket

6 = DVI-D socket (DVI)

7 = D-SUB socket (VGA)

- ▶ Connect one of the connectors of the data cable to the D-SUB connector (9) or the DVI-D connector (8) on the monitor and secure the plug-in connection by tightening the safety screws.



The monitor automatically detects the input when only one signal source is connected.

- ▶ Insert one connector of the audio cable in the AUDIO IN (6) socket on the monitor and make sure it is properly engaged.
- ▶ Plug the power cable supplied into the power socket (5) of the monitor.
- ▶ Mount the cover (2) over the connections.



A Kensington lock can be mounted in the security slot (1) to prevent the monitor from being stolen. A Kensington lock is not supplied with the monitor.

Connecting cables to the computer

Information on the computer connections and interfaces is contained in the operating manual for your computer.

- ▶ Connect the data cable to the (active) monitor port on the computer and secure the plug-in connection by tightening the safety screws.
- ▶ Insert the other plug of the audio cable in the audio output of the computer.
- ▶ Plug the power connector of the monitor into a properly grounded mains outlet.
- ▶ Plug the power connector of the computer into a properly grounded mains outlet.



If your computer has two monitor ports ("onboard" screen controller and separate display adapter), the monitor port for the separate display adapter is active as standard.

Operation

Switching the device on and off

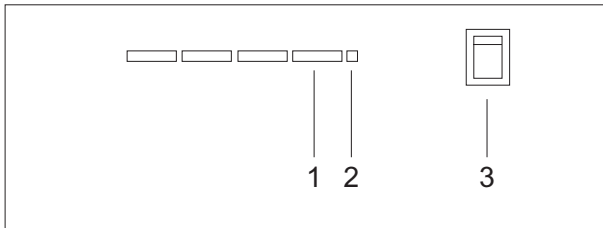
The main switch (3) at the rear and the ON/OFF switch (1) at the front are used for switching the monitor on and off.



Press the buttons from the bottom up.

The colour of the LED indicator changes as follows:

LED indicator	Status
blue	Monitor and computer are switched on.
orange	Monitor is not receiving a video signal or is in power saving mode.
does not light up	Monitor is switched off.

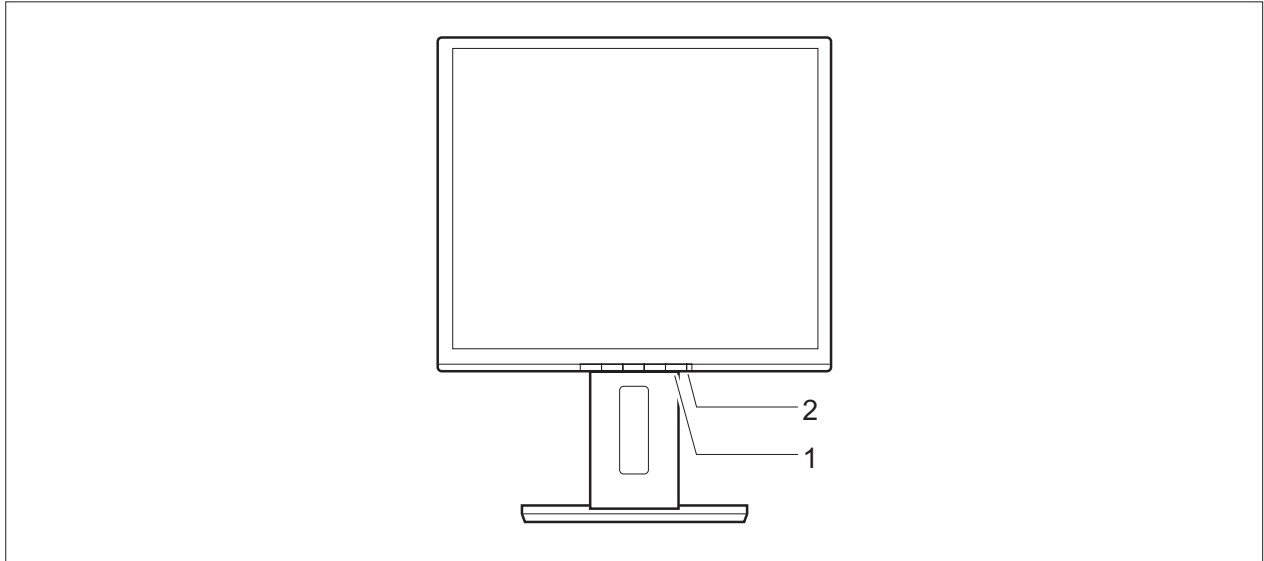


1 = ON/OFF switch

3 = Main switch

2 = Power indicator

- ▶ First switch the device off at the main switch (3).



1 = ON/OFF switch

2 = Power indicator

► Switch the device on again with the ON/OFF switch (1).



Only switch the computer on once you have switched the monitor on.

Notes on power management

If your computer is equipped with power management, the monitor can support this function fully. The monitor does not distinguish between the individual power management modes of the computer (standby mode, suspend mode and OFF mode), as it is capable of immediately switching into the mode with the highest energy-saving effect.

Stage	ON	Power management mode
Power indicator	lights up blue	lights up orange
Function	the monitor is working normally	the screen is dark
Power consumption (typical)	P17-3P Max. brightness 34 W acc. to EPA 29 W P19-3 Max. brightness 38 W acc. to EPA 26 W P19-3P Max. brightness 38 W acc. to EPA 31 W	reduced to < 1 W

If your computer detects inactivity (no input) it sends an appropriate signal to the monitor to reduce the power consumption (power management mode). The power indicator of the monitor changes colour to indicate the status change.

Once an input is made at the computer the screen contents are redrawn.



For detailed information on how power management mode operates refer to the operating manual or technical manual of the computer.

When the monitor is switched to the power management mode by the power management system a power consumption of up to 1 W is maintained to feed the circuit for redrawing the screen contents.

To completely switch off the power consumption, switch off the monitor with the main switch at the rear.

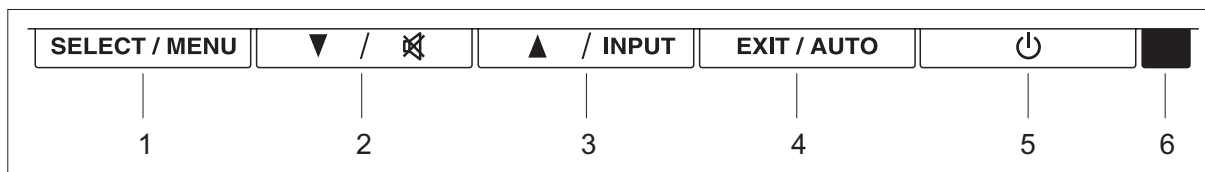
Changing the monitor settings

When putting the monitor into operation for the first time, the screen display should be optimally adapted to the display adapter used.

Changing the monitor settings with the buttons of the control panel



The buttons of the control panel have two functions. With the OSD menu not activated, you can make the following settings directly:



- | | |
|---------------------------|------------------------|
| 1 = SELECT / MENU button | 4 = EXIT / AUTO button |
| 2 = Forward / Mute button | 5 = ON/OFF switch |
| 3 = Back / INPUT button | 6 = Power indicator |

Performing auto-adjustment of the monitor

- ▶ Press the button for about 1 second.
- ↳ The *Auto Processing* message appears
Picture quality and position are set to optimum values for your system.

Selecting the input signal (D-SUB/DVI_D)

- ▶ Press the Back / button to open the *Input select* setting window.
- ▶ Press the Forward / Mute button or the Back / button to select the desired monitor connection (analog D-SUB or digital DVI-D).



This setting window can also be called when the OSD menu is locked.

Activating/deactivating muting

- ▶ Press the Mute button to switch the sound off and on again.
- ↳ The *Action was executed* message appears.

Locking the OSD menu

The OSD menu can be locked to prevent accidental or unauthorised changes to the monitor settings.

- ▶ Press and hold the **SELECT/MENU** button for a few seconds while you switch on the monitor with the ON/OFF switch.

↳ The *Action was executed* message appears.



Please proceed in the same manner to release the locked OSD menu again.

Locking the ON/OFF button

The ON/OFF switch can be locked to prevent accidental or unauthorised changes to the monitor settings.

- ▶ Press and hold the Forwards / Mute button and the Back / **INPUT** button at the same time for a few seconds.

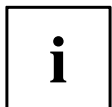
↳ The *Action was executed* message appears.



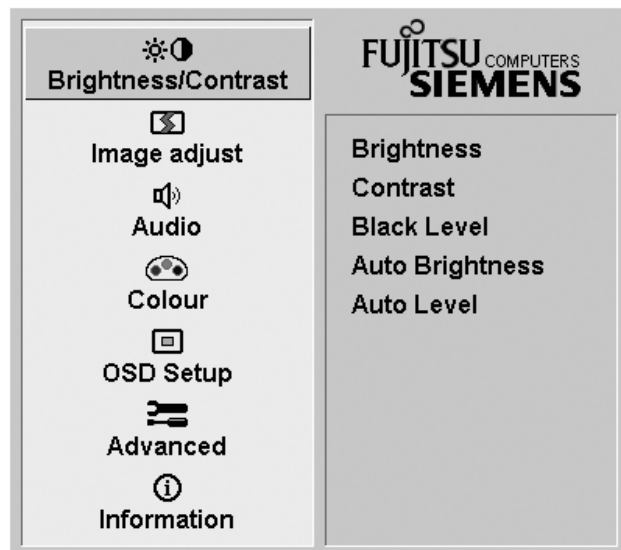
Please proceed in the same manner to release the locked ON/OFF switch again.

Changing the monitor settings using the OSD menu

With the buttons on the control panel, call up and use the integrated OSD (On-Screen display) menu.



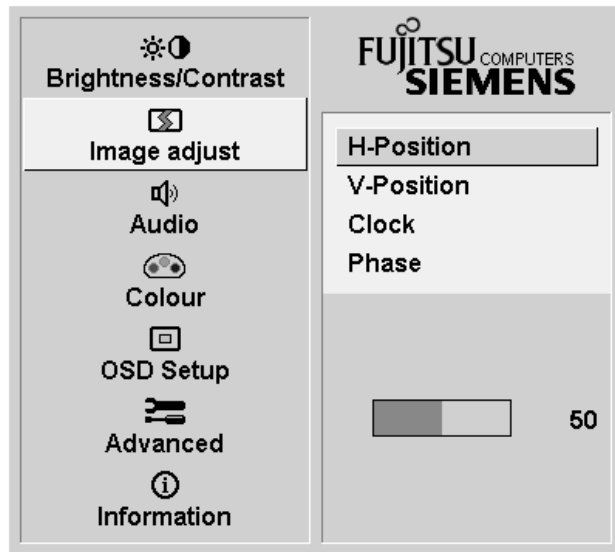
The OSD menu is available in different languages. The English menu names are used in the following description (default setting). You can select a different language using the *Language* OSD function in the *OSD Setup*.



- ▶ Press the **SELECT / MENU** button to activate the OSD menu.

↳ The main menu appears with icons for the setting functions.

The first icon (*Brightness/Contrast*) is highlighted and the associated functions are displayed in the right-hand menu field.



- ▶ Press the Forwards / Mute button or the Back / **INPUT** button to highlight a different icon (e.g. *Image adjust*).
- ▶ Press the **SELECT / MENU** button to select the highlighted icon.
- ↳ The *Image adjust* setting window is displayed. The first function *H-position* is selected.
- ▶ Press the Forwards / Mute button or the Back / **INPUT** button to highlight a different function.
- ▶ Press the **SELECT / MENU** button to select the highlighted function.
- ▶ Press the Forwards / Mute button or the Back / **INPUT** button to highlight a different function.
- ▶ Press the **EXIT / AUTO** button to exit the function.
- ▶ Press the Forwards / Mute button or the Back / **INPUT** button to highlight a different function or press the **EXIT / AUTO** button to return to the main menu.
- ↳ All changes are stored automatically.



If you want to change other settings, select the corresponding function from the OSD main menu. All possible adjustments of the main menu are described in the following.

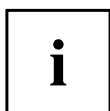
OSD menu functions



The OSD menu for analog monitor operation is described below. During digital operation some functions are not available, as they are not required due to the digital transmission technology used.

Adjusting the brightness and contrast

	Call up the <i>Brightness/Contrast</i> setting window
<i>Brightness</i>	Set the brightness of the display With this function you change the brightness of the background lighting.
<i>Contrast</i>	Set the contrast of the display With this function you modify the contrast of bright colour tones.
<i>Black level</i>	Set the brightness of the display With this function you modify the contrast of dark colour tones.
<i>Auto brightness</i>	Automatic brightness control This function is used to automatically control the brightness of the background lighting using the light sensor. <i>On</i> = The brightness is adjusted according to the ambient brightness <i>Off</i> = The brightness is adjusted manually by the user.
<i>Auto level</i>	Adjust the signal level With this function you can automatically set the contrast. The function is executed with the <input type="button" value="SELECT / MENU"/> button.




If the contrast is set too high, bright surfaces can no longer be distinguished from very bright surfaces. If the contrast is set too low, the maximum brightness will not be achieved.


Adjusting the picture size and position

	Open the <i>Image adjust</i> window
<i>H-position</i>	Adjusting the horizontal position With this function you can move the picture to the left or to the right.
<i>V-position</i>	Adjusting the vertical position With this function you can move the picture up or down.
<i>Clock</i>	Adjusting the synchronisation With this function you can adjust the picture width in order to eliminate vertical picture faults.
<i>Phase</i>	Eliminating picture faults With this function you fine-tune your monitor to eliminate picture faults.


Adjusting the volume

	Call the <i>Audio</i> setting window
<i>Volume</i>	Set the volume for playback with the integrated loudspeakers
<i>Mute</i>	Switch the loudspeakers off or on


Setting colour temperature and colours

	Call the <i>Colour</i> setting window
	<p>Select the colour temperature</p> <p>The "warmth" of the screen colours is set using the colour temperature. The colour temperature is measured in K (= Kelvin). You can choose between <i>sRGB</i>, <i>6500 K</i>, <i>9300 K</i>, <i>Native</i> and <i>Custom Colour</i>.</p> <p>The options <i>sRGB</i>, <i>Native</i> and <i>Custom colour</i> are only available in the <i>Office</i> setting mode.</p> <p>In the user-defined setting you can change the colour ratios of the basic colours (red, green, blue) as required.</p>


Adjusting the display of the OSD menu

	Calling the <i>OSD Setup</i> adjustment window
<i>Language</i>	<p>Selecting the language for the OSD menu</p> <p>With this function you choose between English (default setting), French, German, Italian and Spanish as the language for the OSD menu.</p>
<i>OSDH position</i>	<p>Setting the horizontal position of the OSD menu</p> <p>With this function you can move the OSD menu to the left or to the right.</p>
<i>OSDV position</i>	<p>Setting the vertical position of the OSD menu</p> <p>With this function you can move the OSD menu up or down.</p>
<i>OSDTimeout</i>	<p>Setting the display duration of the OSD menu</p> <p>With this function you can select a value from 10 to 120 seconds.</p> <p>If the set time expires without a setting being made, the OSD menu is automatically hidden.</p>

Adjusting the functions in the Advanced menu

	Calling up the <i>Advanced</i> window
<i>Input select</i>	Selecting the input signal This function allows you to switch the monitor from analog to digital mode and vice versa when two signal sources are connected, provided the graphics card supports this function.
<i>DDC-CI</i>	Activate/deactivate the DDC-CI function <i>On</i> = DDC-CI function is activated (default setting) <i>Off</i> = DDC-CI function is deactivated
<i>ResolutionNotifier</i>	Displaying screen information The optimum resolution for this monitor is 1280 x 1024 pixels. With the function activated (<i>On</i>), a message appears on the screen after approx. 30 seconds if a different resolution is set. Change the resolution to 1280 x 1024 to achieve optimum picture quality. With the function deactivated (<i>Off</i>), no message appears.
<i>Factory Recall</i>	Activates the factory settings This function is used to reset all settings to the factory settings. The user is not prompted to confirm the changes. Press the <input type="button" value="SELECT/MENU"/> button to execute this function. The message <i>Auto Processing</i> is displayed.

Displaying information

	Call the <i>Information</i> setting window With this function the model designation, serial number, resolution, H/V frequency, input signal and polarity of the synchronisation signal are displayed.
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Notes on ergonomic colour adjustment



If you select colours for the monitor in your application programmes, take note of the information below.

The primary colours blue and red on a dark background do not produce the minimum required contrast of 3:1 and are therefore not suitable for continuous text and data entry.

When using several colours for characters and background and giving the primary colours full modulation, you can obtain very suitable colour combinations (see the following table):

Background	Characters							
	black	white	purple	blue	cyan	green	yellow	red
black		+	+	-	+	+	+	-
white	+		+	+	-	-	-	+
purple	+	+		-	-	-	-	-
blue	-	+	-		+	-	+	-
cyan	+	-	-	+		-	-	-
green	+	-	-	+	-		-	-
yellow	+	-	+	+	-	-		+
red	-	+	-	-	-	-	+	

+ Colour combination very suitable

- Colour combination not suitable because colour hues are too close together, thin characters are not identifiable or rigorous focusing is demanded of the human eye.

Troubleshooting

Should an error occur, first check the following points. If the distortion is still not eliminated, the monitor should, if possible, be checked on another computer.

If you are unable to solve the problem, please inform our help desk.

Having this problem?	Check the following points:
No screen display Power indicator does not light up	<ul style="list-style-type: none"> ▶ Check whether the main switch at the rear of the monitor is switched on. ▶ Check whether the power cable on the monitor is connected correctly. ▶ Check whether the computer is switched on.
No screen display Power indicator is lit	<ul style="list-style-type: none"> ▶ Check whether the computer is switched on. ▶ Check whether the data cable for the monitor is correctly attached to the monitor port on the computer. ▶ Press any key on the computer keyboard. The computer may be in power saving mode. ▶ Alter the brightness and/or contrast until you get a picture.
Message: No Signal	<ul style="list-style-type: none"> ▶ Check whether the data cable for the monitor is correctly attached to the monitor port on the computer. ▶ Check whether the computer is switched on.
Message: Frequency out of range:## kHz / ## Hz Please change the display mode to 1280 x 1024 with 60 Hz	<p>The input signal (horizontal frequency and refresh rate) at the displayed input does not correspond to the technical data for the monitor.</p> <ul style="list-style-type: none"> ▶ Adjust the video frequency range using the computer software (see documentation for the computer or display adapter). ▶ Set a different screen resolution using the computer software (see documentation for the computer or display adapter).
Picture position not correct	<p>The monitor recognises an undefined mode (see chapter "Technical data", Page 31).</p> <ul style="list-style-type: none"> ▶ Press the EXIT / AUTO button to perform auto-adjustment of the screen.
Picture is shaking	<ul style="list-style-type: none"> ▶ Check whether the data cable for the monitor is correctly attached to the monitor port on the computer. ▶ Press the EXIT / AUTO button to perform auto-adjustment of the screen.
Picture is wrongly adjusted	<ul style="list-style-type: none"> ▶ Press the SELECT / MENU button to activate the <i>Factory Recall</i> function. <p>The <i>Auto Processing</i> message appears.</p>

Having this problem?	Check the following points:
Picture disturbances (vertical lines)	▶ Press the EXIT / AUTO button to perform auto-adjustment of the screen.
Picture disturbances (horizontal lines, picture noise)	▶ Press the EXIT / AUTO button to perform auto-adjustment of the screen.
The screen becomes darker	<p>The background lighting has a limited lifetime. If your monitor display should become too dark, the background lighting will have to be replaced.</p> <p>▶ Please contact our help desk.</p>

Notes regarding the DIN EN ISO 13406-2 standard

Permanently unlit or lit pixels

The standard of production techniques today cannot guarantee an absolutely fault-free screen display. A few isolated constant lit or unlit pixels (picture elements) may be present. The maximum permitted number of pixels faults is stipulated in the international standard ISO 13406-2 (Class II).

Examples:

A 17" or 19" flat-screen monitor with a resolution of 1280 x 1024 has 1280 x 1024 = 1310720 pixels. Each pixel consists of three subpixels (red, green and blue), so there are almost 6.9 million subpixels in total. In accordance with ISO 13406-2 (Class II), a maximum of 6 pixels and 7 subpixels may be faulty.

Pixel	A pixel consists of 3 subpixels, normally red, green and blue. A pixel is the smallest element that can be generated by complete functionality of the display.
Subpixel	A subpixel is a separately addressable internal structure within a pixel that enhances the pixel function.
Cluster	A cluster contains two or more defective pixels or subpixels in a 5 x 5 pixel block.

Technical data



Condensation is not permissible either in the rated range of operation or in the limit range of operation.

		P17-3P	P19-3/P19-3P
Dimensions and weight			
Visible diagonals		43 cm	48 cm
Dot pitch		0.264 mm	0.294 mm
Image size	Width	337.9 mm	376.3 mm
	Height	270.3 mm	301 mm
Maximum resolution		1280 x 1024	1280 x 1024
Dimensions incl. monitor base	Width	375 mm	412 mm
	Height	469 mm	497 mm
	Depth	249 mm	249 mm
Dimensions of box	Width	438 mm	484 mm
	Height	418 mm	452 mm
	Depth	176 mm	176 mm
Weight (without packaging)		approx. 6.8 kg	approx. 7.5 kg
Storable display modes		25	25
Pixel error classes according to ISO 13406-2	Class	II	II
Electrical data			
Video	Analog	Positive, 0.7 V _{ss} , 75 Ω	
	Digital	DVI-D	
Synchronisation		Separate Sync. TTL, positive or negative	
Horizontal frequency		30 kHz 82 kHz (multi-scanning)	
Refresh rate		56 Hz 76 Hz	
Maximum pixel rate		135 MHz	
Power supply		switches automatically, 100 V – 240 V, 50 Hz – 60 Hz	
Overall power draw	Normal operation	Max. brightness 34 W acc. to EPA 29 W	P19-3 max. brightness 38 W acc. to EPA 26 W P19-3P max. brightness 38 W acc. to EPA 31 W
	Power saving mode	< 1 W in power saving mode (Standby mode, Suspend mode and OFF mode)	
Sound output		2.0 W left; 2.0 W right	

Ambient conditions	
Environment class 3K2, IEC 721	
Rated range of operation	15 °C 35 °C
Humidity	20 % 85 %
Limit range of operation	5 °C 35 °C
Humidity	20 % 85 %

VESA-DDC-compatible VGA interface

Your monitor is equipped with a VESA-DDC-compatible VGA interface. VESA-DDC (Video Electronics Standard Association, Display Data Channel) is used as the communications interface between the monitor and the computer. If the computer is equipped with a VESA-DDC-compatible VGA interface, it can automatically read the data for ensuring optimum operation from the monitor and select the appropriate settings.

Preset operating modes



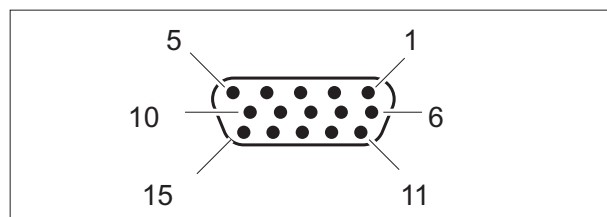
The picture position and size have been optimised at the factory for the operating modes listed above. Depending on the graphics card used, it may be necessary to adjust the display position or size. In this case you can change and save the settings (see chapter ["Changing the monitor settings", Page 21](#)).

For ergonomic reasons, a screen resolution of 1280 x 1024 pixels is recommended. Due to the technology used (active matrix) an LCD monitor provides a totally flicker-free picture even with a refresh rate of 60 Hz.

Most frequent operating modes

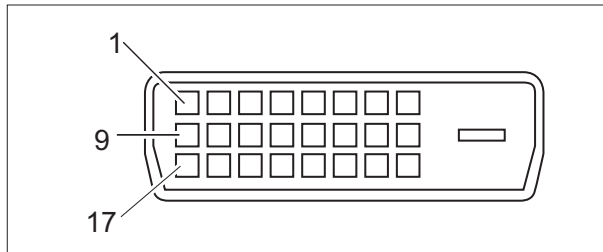
Horizontal frequency	Refresh rate	Screen resolution
31.5 kHz	70 Hz	720 x 400
31.5 kHz	60 Hz	640 x 480
37.5 kHz	75 Hz	640 x 480
37.9 kHz	60 Hz	800 x 600
46.9 kHz	75 Hz	800 x 600
48.4 kHz	60 Hz	1024 x 768
60.0 kHz	75 Hz	1024 x 768
64.0 kHz	60 Hz	1280 x 1024
80.0 kHz	75 Hz	1280 x 1024

SUB D port



Pin	Meaning
1	Video input red
2	Video input green
3	Video input blue
4	Ground
5	Ground
6	Video ground red
7	Video ground green
8	Video ground blue
9	+5 V (DDC)
10	Sync. ground
11	Ground
12	DDC Data
13	H. sync
14	V. sync
15	DDC Clock

DVI-D port



Pin	Meaning
1	TMDS Data2-
2	TMDS Data2+
3	TMDS Data 2/4 Shield
4	not connected
5	not connected
6	DDC Clock
7	DDC Data
8	Analog Vertical Sync
9	TMDS Data1-
10	TMDS Data1+
11	TMDS Data 1/3 Shield
12	not connected
13	not connected
14	+5V Power
15	Ground
16	Hot Plug Detect
17	TMDS Data0-
18	TMDS Data0+
19	TMDS Data 0/5 Shield
20	not connected
21	not connected
22	TMDS Clock Shield
23	TMDS Clock+
24	TMDS Clock-