FUJITSU Display
B24-8 TE Pro / B24-8 TS Pro

FUJITSU

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You can find driver updates at: "http://support.ts.fujitsu.com/download"

Should you have any technical questions, please contact:

- our Hotline/Service Desk ("http://support.ts.fujitsu.com/contact/servicedesk")
- Your sales partner
- Your sales office

We hope you enjoy working with your new Fujitsu system!

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B24-8 TE Pro / B24-8 TS Pro

Operating Manual

Remarks

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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 (1920 x 1080)
*   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 46 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
*   VESA-FPMPMI compatibility (Flat Panel Monitor Physical Mounting Interface) – Mounting device for swivel arm or a similar accessory
*   Plug&Play capability
*   Digital video inputs (DVI, DP or HDMI) with HDCP
*   power management for reducing power consumption when the computer is not in use
*   Compliance with the recommendations according to TCO 7.0
*   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 graphics card with DVI interface and/or a video signal source with DP interface for a B24-8 TE Pro monitor or with an HDMI interface for a B24-8 TS Pro monitor is required to control the LCD monitor. The monitor processes the data supplied to it by the graphics card. The graphics card 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 19).

Target group

You don't need to be an "expert" to perform the operations described here. Nonetheless, it is important to always observe the safety notes given in the operating instructions for the computer and in this manual.

In the event of any problems, please contact your sales office or our Service 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, we recommend a screen resolution of 1920 x 1080 pixels.

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 these warnings could pose a risk to health, damage the device or lead to loss of data. The warranty will be invalidated if the device becomes defective through failure to observe these warnings.
i	Indicates important information for the proper use of the device.
►	Indicates an activity that must be performed
↳	Indicates a result
This font	indicates data entered using the keyboard in a program dialogue or at the command line, e.g. your password (**Name123**) or a command used to start a program (**start.exe**)
This font	indicates information that is displayed on the screen by a program, e.g.: Installation is complete.
This font	indicates • terms and texts used in a software interface, e.g.: Click on *Save* • names of programs or files, e.g. *Windows* or *setup.exe*.
"This font"	indicates • 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 "http://www.fujitsu.com/fts/" • Names of CDs, DVDs and titles or designations of other materials, e.g.: "CD/DVD Drivers & Utilities" or "Safety" Manual
Key	indicates a button on the monitor, e.g: MENU
This font	indicates terms and texts that are emphasised or highlighted, e.g.: **Do not switch off the 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 about whether the device can be used in the intended environment, please contact your sales office or our Service 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 specification", Page 37 as well as the instructions in Chapter "Setting up an ergonomic video workstation", Page 12.
- 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 disconnect the monitor from the mains voltage. To completely disconnect from the mains voltage, you must remove the mains plug from the mains 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 an emergency (e.g. damaged casing, operation controls or cables, penetration of liquids or foreign matter), switch off the device, disconnect the power plug and contact your sales outlet or our Service 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 specification", Page 37. Otherwise you may damage the device. If you are in any doubt, contact your sales outlet or our Service 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 a similar accessory, it must not be turned by 180°.

- The device may only be operated in wide format (0° landscape mode) and high format (90° portrait mode). The buttons of the control panel are located at the bottom in the middle of the monitor in wide format (0° landscape mode) and at the left-hand side of the monitor in high format (90° portrait mode).
- Store this manual close to the device. If you pass the device on to third parties, you should pass this manual on with it.
- We recommend that you place your device on a durable, non-slip surface. In view of the many different finishes and varnishes used on furniture, it is possible that the feet of the device may mark the surface they stand on.
- The device must be connected to protective earth.
- To prevent possible hearing damage, do not listen at high volume levels for long periods.
- Warning for excessive sound pressure from earphones and headphones:
  Excessive sound pressure from earphones and headphones can cause hearing loss. Adjustment of the equalizer to maximum increases the earphones and headphones output voltage and therefore the sound pressure level.

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.

If the device is brought from a cold environment into the room where it will be used, condensation may occur. Before operating the device, wait until it is absolutely dry and has reached approximately the same temperature as the installation site.

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.

CE marking

The shipped version of this device complies with the requirements of EU directives 2014/30/EC "Electromagnetic compatibility", 2014/35/EC "Low voltage directive", 2009/125/EC "Ecodesign directive" and 2011/65/EC "RoHS directive".

Disposal and recycling

This device has been manufactured as far as possible from materials which can be recycled or disposed of in such a way that the environment is not damaged. The device may be taken back after use to be reused or recycled, provided that it is returned in a condition that befits its intended use. Any components not reclaimed 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.

If you have any questions on disposal, please contact your local sales office or our Service Desk, or contact one of the following directly:

Germany	Belgium	Switzerland
AfB gemeinnützige GmbH	RECUPEL	SWICO
Otto-Stadler-Strasse 6	Boulevard Reyers, 80	Schweizerischer Wirtschaftsverband der Informations-, Kommunikations- und Organisationstechnik
D-33100 Paderborn	B-1030 Brussels	
Tel.: +49 (0) 5251 / 414 90 10	Tel.: +32 2 / 706 86 16	
Fax: +49 (0) 5251 / 414 90 29	Fax: +32 2 / 706 86 13	
"https://www.fujitsu.com/de/about/local/social-responsibility/environment-care/recycling/"	E-mail: "info@recupel.be"	A list of the SWICO acceptance locations can be found at: "http://www.swico.ch"
	"http://www.recupel.be"	
Asia	USA	
Taiwan:	Fujitsu America, Inc.	
Environmental Protection Administration Executive Yuan R.O.C.	1250E. Arques Avenue	
	Sunnyvale, CA 94085 U.S.A.	
"http://recycle.epa.gov.tw"	Phone No.: (408) 746-6000	

You can also find information about this on the Internet at "https://www.fujitsu.com/emeia/about/local/csr/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
- a data line (DP) for the B24-8 TS Pro
- one data cable (DVI)
- one USB cable
- one audio cable
- one power cable
- a flyer "Quick Start Guide"
- a flyer "safety instructions"

► 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.

ℹ 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
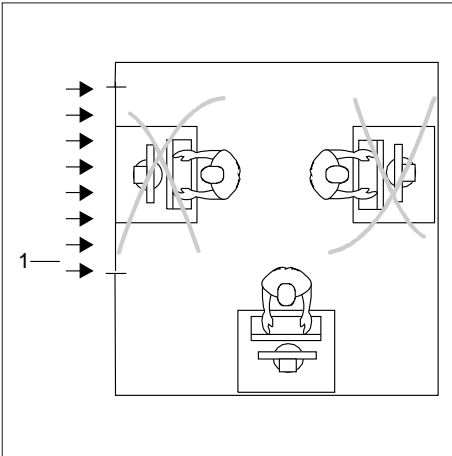
► Do not position the video workstation opposite a window (1).
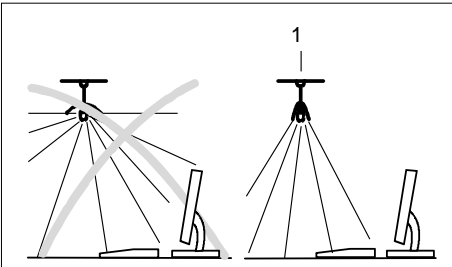
► Position the monitor outside the reach of a light source (1).

► Position the keyboard where it is easiest to reach (1).
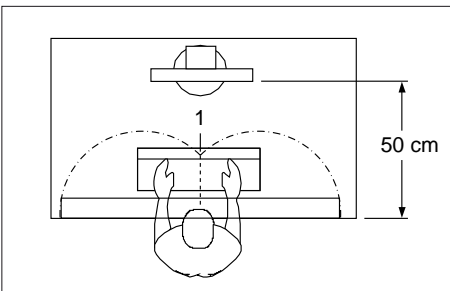
► Position the monitor so that the eye distance to the screen (1) is around 50 cm.

1

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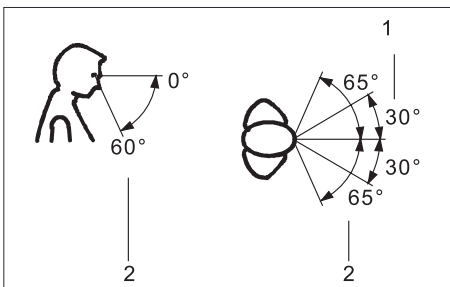
► Position the monitor for optimum viewing (1). The monitor should under no circumstances fall outside the permissible viewing space (2).

1

0°

65°

30°

60°

30°

65°

2

2

i Depending on the situation, it may be advisable to use a swivel arm or similar accessory (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 15.

Mounting the monitor base

⚠ Do not remove the locking pin until you have secured the base plate on the monitor and moved it into the operating position.
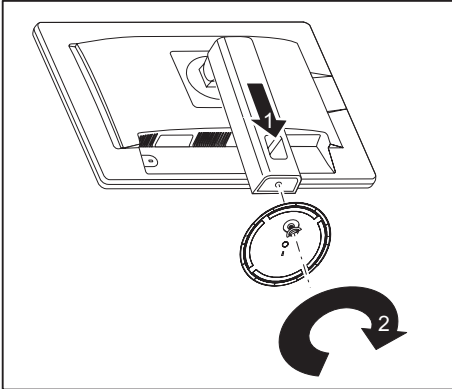
► Insert the base plate on the foot (1).
► Secure the base plate with the screw (2).
► Place the monitor in the operating position.

Adjusting height

The height of the monitor can be adjusted by approximately 150 mm.

⚠ The height adjustment is fixed in the transport position.
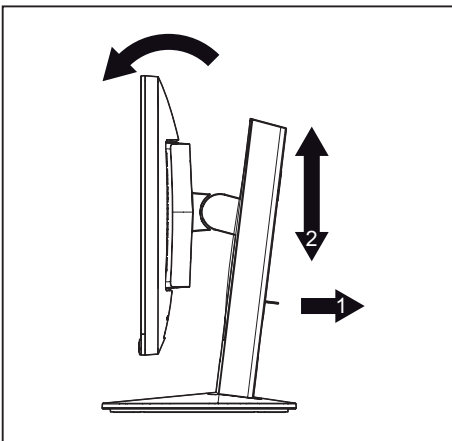
► To free the fixing, remove the locking pin on the flange (1).
► Grasp the monitor with both hands on the right and left edge of the casing and move it up or down (2).

Adjusting the inclination

The inclination of the monitor can be adjusted by -3° (forwards) and +35° (backwards) 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 ±170°.

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

Removing monitor base

Before you can use a swivel arm or a similar accessory, you must remove the monitor base.

⚠ The display surface is susceptible to scratching!

Place the device on a stable, flat and clean surface. If necessary, place a slip-resistant cloth on this surface to prevent the device from being scratched.
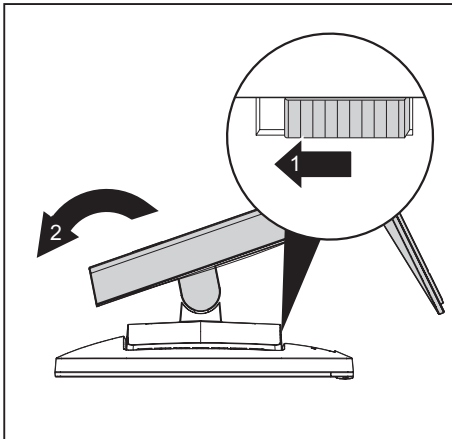
► Switch off the monitor and pull the power plug out of the power socket.

► Lay the monitor on its face on a soft surface.

► Disconnect all cables.

► To release the stand, remove the four screws that hold the stand in the VESA mount. Then lift the stand away upwards.

↳ You can now mount a swivel arm or a similar accessory in accordance with VESA FPMPMI using a hole spacing of 100 mm.

ℹ The assured ergonomics and safety of the monitor can be restricted under certain circumstances, unless the screen base unit is being used.

ℹ For instructions on how to mount the swivel arm or a similar accessory, please see the documentation for the swivel arm or similar accessory.

Connecting the device

⚠️ Please observe the safety information in "Important notes", Page 7.

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 data cables supplied have two 20 pole DP connectors (B24-8 TE Pro) or two 24 pole 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.
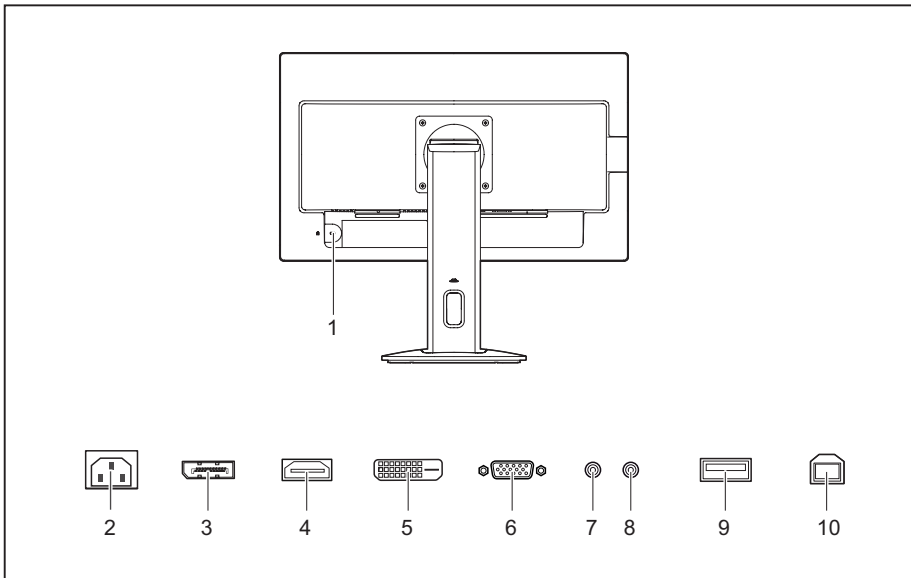
1 = Security slot for Security Lock
2 = Power connector
3 = Display port (B24-8 TE Pro)
4 = HDMI (B24-8 TS Pro)
5 = DVI-D socket (DVI)

6 = D-SUB socket (VGA)
7 = AUDIO-OUT socket
8 = AUDIO-IN socket
9 = USB 2.0 (Downstream)
10 = USB 2.0 (Upstream)

► Select the appropriate data cable for your computer.

► Insert the connector of the data cable into the D-SUB connector or DVI-D connector or into the HDMI connector (B24-8 TS Pro) / DP connection socket (B24-8 TE Pro) of the monitor. Secure the plug-in connection by tightening the safety screws.

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

► Insert one plug of the audio line in the AUDIO IN socket on the monitor and make sure it is properly engaged.
► Plug the power cable supplied into the power connector of the monitor.
► Plug the supplied USB cable into the USB IN socket and the other end of the cable into a USB socket of the computer.

i A lock (Security Lock) can be mounted in the security slot to protect the monitor against theft. A Security Lock is not included with the monitor at delivery.

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.

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

Operation

Switching the device on and off
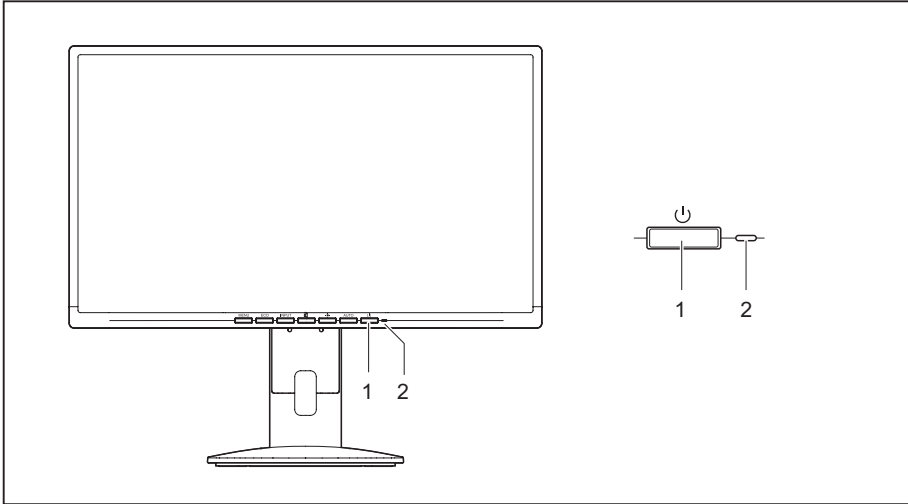
1 = ON/OFF switch   2 = Power supply indicator

The colour of the power indicator changes as follows:

Power indicator	Status
blue	Monitor and computer are switched on (normal mode).
green	Monitor and computer are switched on (ECO mode).
orange	Monitor is not receiving a video signal or is in power saving mode.
does not light up	Monitor is switched off.

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

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

i The buttons on the control panel have multiple functions. When the OSD
menu is active, the current meaning of the buttons is shown directly
over the buttons on the edge of the screen.

The display (softkey icon) over the buttons varies depending on the sub-menu chosen.

Key	Function
MENU	Call up OSD menu
ECO	Activate/deactivate ECO operating mode
INPUT	Select input signal (digital/analog)
◁	Adjust volume
☼	Adjust brightness
AUTO	Perform auto-adjustment of the monitor with analog input
⏻	Monitor: switching on/off

Softkey icon	Function
↑	Selecting the next menu item (sub-menu)
↓	Selecting the previous menu item (sub-menu)
→	Opening the selected sub-menu
	Going to the next setting
←	Going to the previous setting
—	Decreasing the set value
+	Increasing the set value
✓	Accepting the applied settings and returning to main menu
↰	Cancelling the applied settings and returning to main menu
✕	Exiting OSD menu
⫰	Loudspeaker: switching off/on

i When the OSD menu is not activated, you can apply the following settings directly:

Select OSD language

When an OSD menu button is activated for the first time, the language selection window will appear:

► Press the ↑ button or the ↓ button to choose the desired language.

► Press the ✓ button to confirm.

> **i** After selecting the OSD language for the first time, you can change it at any time in the OSD.

Activate/deactivate ECO operating mode

> **i** The power consumption of the device can be decreased by reducing the brightness of the picture.

► Press the ECO button to switch the ECO operating mode on or off.

↳ The message *ECO Mode on* or *ECO Mode off* is displayed.

If the ECO operating mode is activated, the following OSD settings are changed:

Mode	Office
Color	6500 K
Brightness	reduced

After the ECO operating mode is switched off, the brightness previously set by the user is restored.

Selecting the input signal

► Press the INPUT button to open the *Input select* setting window.

► Press the ↑ button or the ↓ button to select the desired monitor connection (VGA, DVI, HDMI for B24-8 TS Pro or DP for B24-8 TE Pro).

► Press the ✓ button to confirm or the ↩ button to cancel.

> **i** This setting window can also be called up when the OSD menu is locked.

Adjusting the volume

► Press the ◁ button to open the *Volume* setting window.

► Press the — button or the + button to set the desired volume for the built-in speakers.

► Press the ✗ button to activate/deactivate the mute function.

► Press the ✗ button to close the menu.

Adjusting the brightness

► Press the ☼ button to open the *Brightness* setting window.

► Press the ─ button or the ✛ button to set the desired brightness.

► Press the ✓ button to activate/deactivate the low blue light function.

► Press the ✕ button to close the menu.

Performing auto-adjustment of the monitor

i	This function is only intended for analogue image transmission (VGA).

► Press the AUTO button for about 1 second.

↳ The *Auto Processing* message appears.

Picture quality and position are set to optimum values for your system.

Locking the OSD menu

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

► Press the **MENU** button and the ON/OFF button at the same time and keep them pressed for approximately 10 seconds.

↳ The message *OSD locked / unlocked* is displayed.

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

Lock the ON/OFF button

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

► Press the buttons **ECO** and **INPUT** at the same time and keep them pressed for a few seconds.

↳ The message *Power button locked / unlocked* is displayed.

i	To remove the locking of the ON/OFF button again, proceed in the same way.

Changing the monitor settings using the OSD menu

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

i | The English menu names are used in the following description (default setting).
The OSD menu of your device may differ in several ways from the functional scope described.
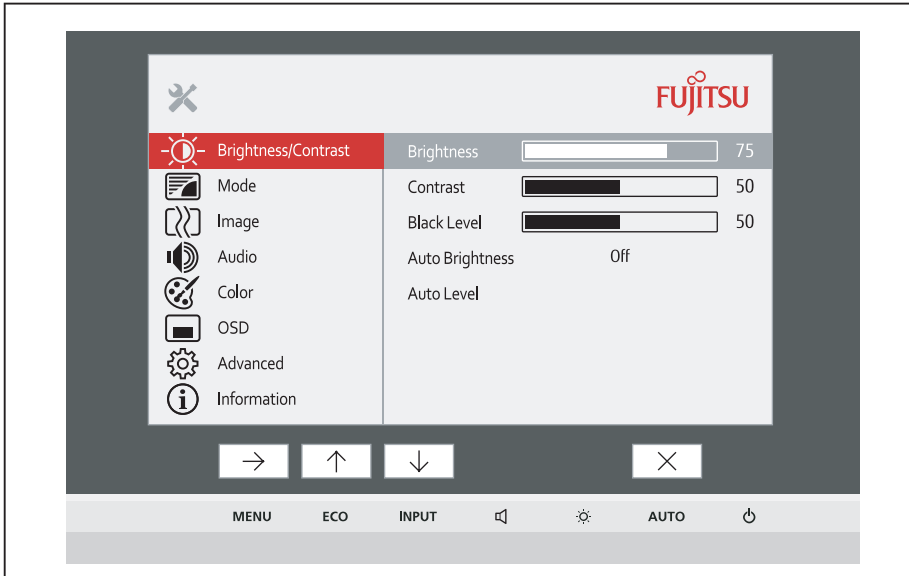
i | The softkey icons may deviate from those shown here.

► Press the MENU button to activate the OSD menu.
↳ The OSD menu appears, with menu items for the setting functions.
   The first menu item (*Brightness/Contrast*) is highlighted and the associated functions are visible in the right-hand menu field.
► Press the ↑ button or ↓ button to highlight another icon (e.g. *Image*).
► Press the → button to select the highlighted icon.
↳ The *Image* setting window will be displayed.
► Press the ✕ button to close the OSD menu.
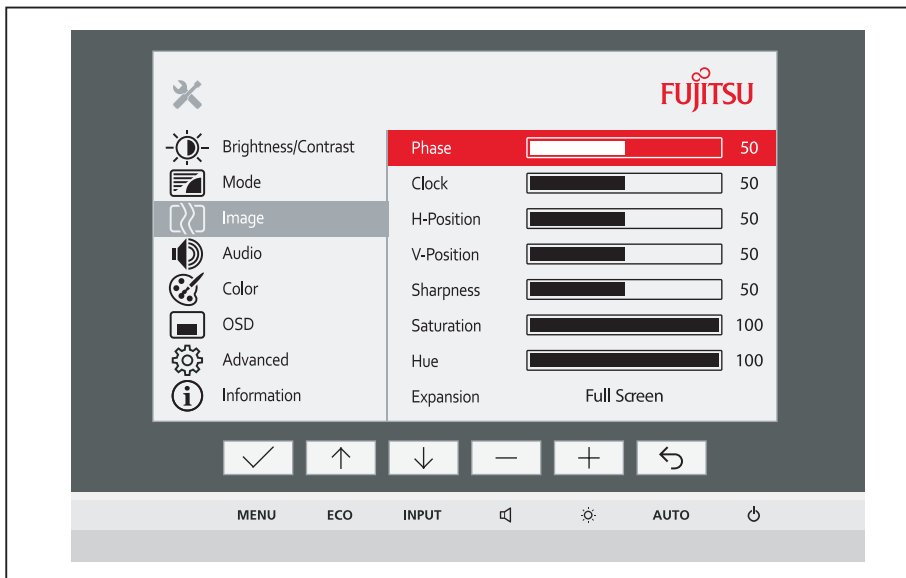
► Press the ↑ button or ↓ button to highlight another function.

► Press the ＋ button or the ― button to change the setting.

► Press the ✓ button to save the change or the ↩ button to quit the function without making a change.

> **i** If you wish to change other settings, select the corresponding function from the OSD main menu. All the settings options in the main menu are described below.

OSD menu functions

> **i** The OSD menu for analogue 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 *Brightness/Contrast* setting window
Brightness	Set the brightness of the display
	With this function you change the brightness of the background lighting.
Contrast	Set the contrast of the display
	With this function you modify the contrast of bright colour tones.
Black level	Set the brightness of the display
	With this function you modify the contrast of dark colour tones.
ACR	Enable/disable dynamic contrast
	This function improves the contrast by automatically controlling the background lighting in relation to the image being displayed.
	This setting can only be configured in *Video* application mode.
Auto level	Adjust the signal level
	With this function you can automatically set the contrast.
	The function is executed using →.

i	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.

Selecting the application mode

▤	Call up the *Mode* setting window
sRGB	Predefined settings for sRGB (reduced brightness)
Office	Office settings (the settings for *Color* and *sharpness* can be adjusted)
Photo	Predefined settings for Photo (*Color*, *Sharpness*, *Saturation*)
Video	Predefined settings for Video (*Colour*, *Sharpness*, *ACR*)
Low blue light	Default setting for low blue light (5000 K reduced brightness)

Setting screen display

⟨⟩	Open the *Image* window
Phase	Eliminate picture disturbance With this function you fine-tune your monitor to eliminate picture disturbance.
Clock	Set synchronisation With this function you adjust the picture width to eliminate vertical picture disturbances.
H-Position	Adjust the horizontal position With this function you move the picture to the left or to the right.
V-Position	Adjust the vertical position With this function you move the picture up or down.
Sharpness	Adjust the sharpness of the picture for the *Photo* and *Video* modes.
Saturation	Setting colour saturation This setting only applies for devices with YUV output (e.g. BluRay players).
Hue	Setting the colour tone This setting only applies for devices with YUV output (e.g. BluRay players).
Expansion	Adjust the picture size *Full screen* = selection of full screen mode *Keep aspect* = maximum picture size without distortion

Adjusting the volume

🔊	Call the *Audio* setting window
Volume	Set the volume for playback with the integrated loudspeakers
Mute	Switch the loudspeakers off or on
Input	Selecting the audio input signal (DP, HDMI, PC Audio)

Setting colour temperature and colours

✍	Opening the *Color* setting window
	Select the colour temperature
	The "warmth" of the screen colours is set using the colour temperature. The colour temperature is measured in K (= Kelvin). You can choose between *sRGB*, *5000 K*, *6500 K*, *7500 K*, *native* and *custom colour*.
	The options *sRGB*, *Native* and *Custom Color* are only available in the *Office* setting mode.
	You can change the colour ratios of the basic colours (red, green, blue) as required using *Custom Color*. You can use → to select the colour channels.
	The *6500K* and *sRGB* settings are recommended for general Windows applications.
	The setting *5000 K* reduces the blue light emission of the monitor.
	In the *Native* and *Custom Color* settings, the full colour space of the LCD panel can be used.

Setting the OSD menu

▣	Call up the *OSD* window
Language	Selecting the language for the OSD menu
	With this function you select the language for the OSD menu.
	The default setting is English.
Timeout	Setting the display duration of the OSD menu
	With this function you can select a value from 10 to 120 seconds.
	If the set time expires without a setting being made, the OSD menu is automatically hidden.
Rotation	Adjust the orientation of the OSD menu.
	This function can be used to turn the OSD menu through 90°.
	This function makes it easier to read the OSD menu while the pivot function is being used.
	Auto = orientation of the OSD menu will be matched to the monitor.
	On = OSD menu will be turned through 90°.

Advanced setting functions

⚙	Calling up the *Advanced* window
Input select	Select the input signal
	This function is used to select the input signal (VGA, DVI, DP or HDMI).
	This is on condition that the display adapter supports this function.
Overdrive	Activating/deactivating the overdrive function
	This function can be used to improve the focus in fast moving images.
	This setting can only be configured in *Video* application mode.
DDC-CI	Activating/deactivating the DDC-CI function
	DDC-CI (Display Data Channel - Command Interface)
	Data can be exchanged through the connection between the PC and the display.
Factory recall	Activate the factory settings
	With this function all settings are reset to the factory settings on reconfirmation.
	The function is executed using →. The *Auto Processing* message is displayed via a VGA data cable. The language selection menu appears.

Displaying information

ⓘ	Call the *Information* setting window
	This function displays details such as the serial number, signal input, resolution, H/V frequency and ECO mode.

Notes on the program "DisplayView"

DisplayView is a programme for Microsoft Windows operating systems, which provides the user with a simple user interface for adapting functions that are normally assigned to the OSD.

Changes to brightness, contrast, image position and other default monitor settings can be made easily and intuitively.

The program also supports extended functions such as Auto-Rotation and Desktop Partitioning.

i Your device may differ from the described scope of function in some areas.
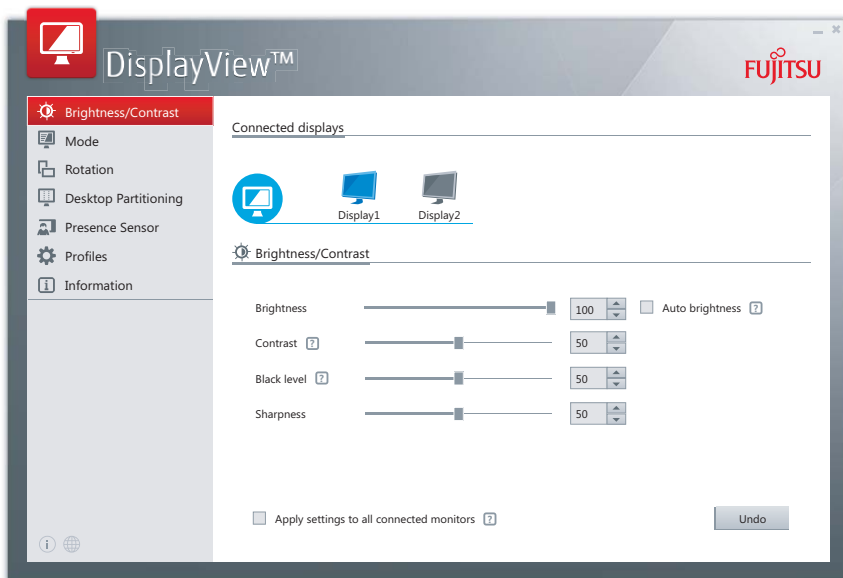
DisplayView Can be downloaded here: "www.fujitsu.com/fts/displayview"

Function overview:

- OSD management for screens equipped with DDC/CI
- OSD direct access for quick changes
- Settings for power saving mode and security settings for the presence sensor (only for models with presence sensor)
- Automatic rotation and partitioning of screen contents
- Supports analogue and digital monitor ports
- Supports up to 4 monitors
- Supports the Microsoft Windows 10 operating system

Presence sensor

In the presence sensor submenu, you can activate and configure the power saving (PC Standby) and security (Lock PC) settings based on the user's presence status.

Rotation function

The rotation menu allows you to rotate the screen content pursuant to the screen orientation.

Desktop partitioning

The desktop area of the Microsoft Windows operating system can be divided into several areas into which program windows can be fitted automatically by adjusting their size.
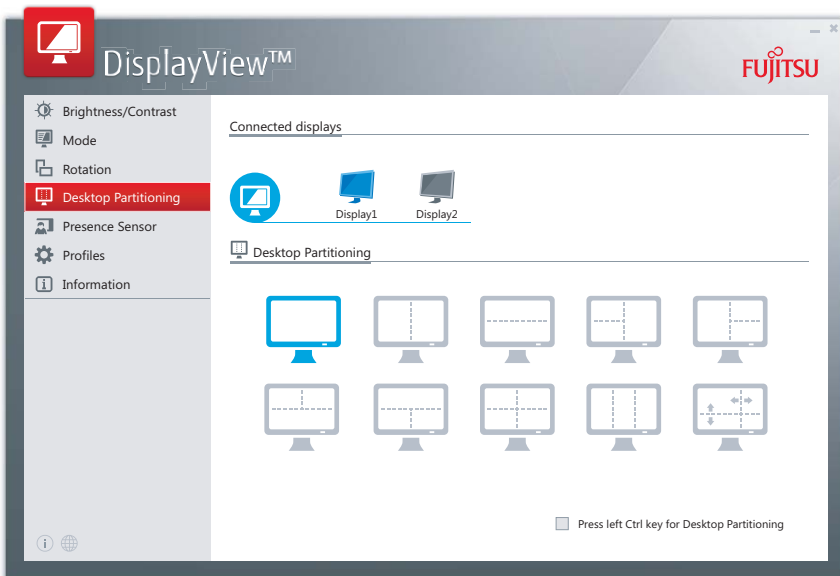
Driver installation

<table><tr><td>**i**</td><td>The display drivers are automatically installed when the Microsoft Windows operating system is updated.</td></tr></table>

► For manual installation, download the monitor drivers from "http://www.fujitsu.com/fts/download".
► Unpack the zip file.
► Open the *Device Manager* and select directory *Monitors*.
► Double click on a listed *Generic PnP Monitor* to open the *Properties* window.
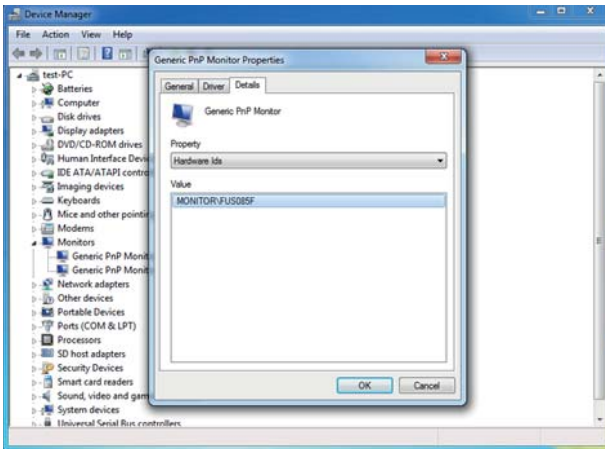
► If more than one *Generic PnP Monitor* device is displayed, check whether the correct device is selected.
To do this, go to tab *Details*, *Property* and set "Hardware Ids".

"Monitor\FUSxxxx" is displayed under *Value*. Otherwise, select the other *Generic PnP Monitor* device.

► Click on *Update Driver* in tab *Driver*.
► Click on *Browse my computer for driver software*.
► Click on *Browse*, navigate to the unpacked zip file and confirm with *OK*.
► Click on *Next* and wait until the driver is installed.

Notes on power management

If your computer is equipped with power management (power-saving mode), the monitor can fully support this function. Here the monitor does not distinguish between the individual energy-saving 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.

Mode	State	Power consumption		
		Typical	Maximum	Power indicator
Power On – maximum operation	Maximum brightness / with USB and audio	31 W	40 W	
Power On – normal mode	Maximum brightness / without USB and audio	17.9 W	25 W	
Energy Star	Brightness 200 cd/m², without USB and audio	15 W	−	
EU Energy Label	Without USB and audio	17 W	−	−
ECO	Without USB and audio	14.6 W	22 W	
Readiness (standby)	Without USB devices connected	0.24 W	0.3 W	
Off	Without USB devices connected	0.13 W	0.15 W	

If the computer detects inactivity (no input) it sends an appropriate signal to the monitor to reduce the power consumption (power saving mode). The power indicator of the monitor changes colour to show the change in status. ECO mode is the preset factory default.

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

i For detailed information on how energy-saving mode operates, please refer to the operating manual or technical manual of the computer.

Notes on low blue light mode

This monitor has a "low blue light" function, which can be selected in the OSD menu. This "low blue light" function reduces the blue light emission of the monitor to a minimum. In this way, the device complies with the "low blue light" certification of the Technical Inspection Association.

LED backlights no longer emit blue light as a conventional source of white light.

Further information can be found in Chapter "Selecting the application mode", Page 24.

The viewing distance to the monitor should be approximately 50 cm. Further information can be found in Chapter "Setting up an ergonomic video workstation", Page 12.

When working continuously at a display screen, it is recommended that you take a five minute break every hour. During these breaks, do eye exercises to relax your eyes.

To prevent eye strain and dryness, focus regularly on objects in the distance.

Notes on ergonomic colour adjustment

| i |

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.

Explanatory information about standard ISO 9241-307

Permanently unlit or lit pixels

Today's production techniques cannot guarantee an absolutely fault-free screen display. Depending on the total number of pixels (resolution), there may be a few constantly lit or unlit pixels or subpixels.
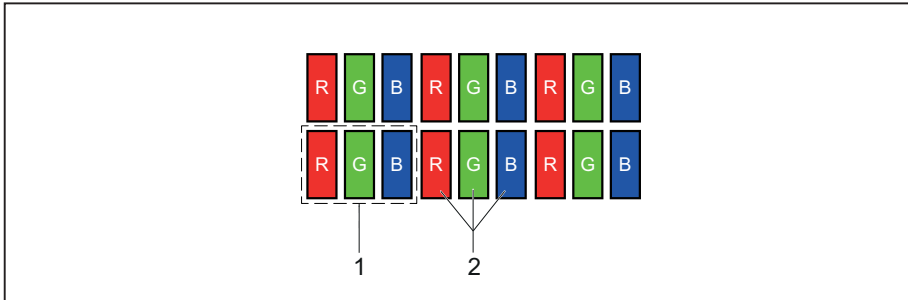
1 = Pixel   2 = Subpixel

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.
Pixel fault	All 3 subpixels are lit/unlit. The result is a brighter or darker pixel.
Subpixel fault	Only one subpixel is lit/unlit. The result is a pixel with missing colours.

The maximum permitted number of faulty pixels is stipulated in the international standard ISO 9241-307. The LCD displays from Fujitsu comply to at least Class I. Fujitsu guarantees displays that are free of pixel faults, so that only subpixel faults may occur.

Examples:

A flat-screen monitor with a resolution of 1280 x 1024 has 1280 x 1024 = 1,310,720 pixels. Each pixel consists of three subpixels (red, green and blue), making a total of about 3.9 million subpixels. According to ISO 9241- 3 (Class II), a maximum of 3 lit and 3 unlit pixels plus 7 lit or 13 unlit subpixels, or a corresponding combination, may be faulty (1 lit subpixel counts as two unlit subpixels).

A flat-screen display with a resolution of 1920 x 1080 has 1920 x 1080 = 2073600 pixels. Each pixel consists of three subpixels (red, green and blue), making a total of about 6,2 million subpixels. According to ISO 9241-3 (Class I), a maximum of 2 lit and 2 unlit pixels plus 5 lit or 10 unlit subpixels, or a corresponding combination, may be faulty (1 lit subpixel counts as two unlit subpixels). Because Fujitsu supplies displays that are free of pixel faults, only subpixel faults enter into the evaluation.

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 cannot solve the problem, please contact our Service Desk.

Having this problem?	Check the following points:
No screen display Power indicator does not light up	► 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	► 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`	► 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 1920 x 1080 with 60 Hz`
	The input signal (horizontal frequency and refresh rate) at the displayed input does not correspond to the technical data for the monitor.
	
	► Reboot the system after connecting it to the screen. The VGA port does not support 'hot plugging'.
	► 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	The monitor recognises an undefined mode (see chapter "Technical specification", Page 37). ► Press the AUTO button to conduct the auto-adjustment of the screen.
Picture is shaking	► Check whether the data cable for the monitor is correctly attached to the monitor port on the computer. ► Press the AUTO button to conduct the auto-adjustment of the screen.
Picture is wrongly adjusted	► Run the *Factory Recall* function in the OSD menu. The *Auto Processing* message appears.

Having this problem?	Check the following points:
Picture disturbances (vertical lines)	► Press the AUTO button to conduct the auto-adjustment of the screen.
Picture disturbances (horizontal lines, picture noise)	► Press the AUTO button to conduct the auto-adjustment of the screen.
The screen becomes darker	The background lighting has a limited lifetime. If your monitor display should become too dark, the background lighting will have to be replaced. ► Contact our Service Desk.

Technical specification

⚠ Condensation is not permitted, neither in the rated range of operation nor in the limit range of operation.

Product name		**B24-8 TE Pro / B24-8 TS Pro**
Name of model		B24-8T

Dimensions and weight		
Visible diagonals		60.47 cm
Dot pitch		0.2745 mm
Image size	Width	527.04 mm
	Height	296.46 mm
Maximum resolution		1920 x 1080
Dimensions incl. monitor base	Width	553 mm
	Height	347 mm
	Depth	230 mm
Weight (without packaging)		approx. 5.60 kg
Storable display modes		46
Pixel error classes according to ISO 9241-307	Class	I

Electrical data		
Video	Analog	Positive, 0.7 V_{pp}, 75 Ω
	Digital	DVI-D, HDMI/DP with HDCP
Synchronisation		Separate Sync. TTL, positive or negative
Horizontal frequency		30 kHz .... 82 kHz (multi-scanning)
Refresh rate		56 Hz .... 76 Hz
Maximum pixel rate		165 MHz
Power supply		Automatic switching 100 V – 240 V, 50/60 Hz
Sound output		2 W left; 2 W right
Total power consumption	see chapter "Notes on power management", Page 31	

Environmental conditions

Environment class 3K2, DIN IEC 721

Rated range of operation	15°C .... 35°C
Humidity	20% 85%
Limit range of operation	5°C .... 35°C
Humidity	15 % 85%
Max. operating altitude	5000 m

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

> **i** The picture position and size have been set to optimum values at the factory for the operating modes listed above. Depending on the display adapter used, it may be necessary to adjust the picture position and size. In this case, you can change and save the settings (see chapter "Changing the monitor settings", Page 19).
>
> For ergonomic reasons, a screen resolution of 1920 x 1080 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.

Most frequent operating modes

Screen resolution	Refresh rate
640 x 480	60/75 Hz
720 x 400	70 Hz
800 x 600	60/75 Hz
1024 x 768	60/75 Hz
1280 x 720	60 Hz
1280 x 1024	60/75 Hz
1366 x 768	60 Hz
1440 x 900	60 Hz
1600 x 900	60 Hz
1680 x 1050	60 Hz
1920 x 1080	60 Hz

Video/TV operating modes using Displayport or HDMI

Screen resolution	Refresh rate	Aspect ratio
720 x 480 i	60 Hz	4:3 / 16:9
720 x 480 p	60 Hz	4:3 / 16:9
720 x 576 i	50 Hz	4:3 / 16:9
720 x 576 p	50 Hz	4:3 / 16:9
1280 x 720 p	50 / 60 Hz	16:9
1920 x 1080 i	50 / 60 Hz	16:9
1920 x 1080 p	50 / 60 Hz	16:9

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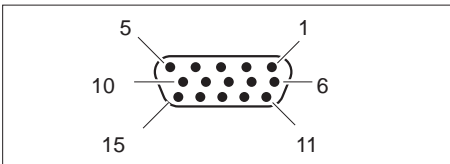
Pin	Meaning
1	Video input red
2	Video input green
3	Video input blue
4	Ground
5	Ground
6	Video ground red
7	Video ground green
8	Video ground blue
9	+5 V (DDC)
10	Sync. ground
11	Ground
12	DDC Data
13	H. sync
14	V. sync
15	DDC Clock

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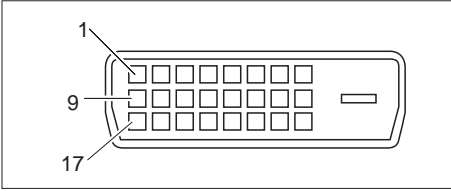
Pin	Meaning
1	TMDS Data2–
2	TMDS Data2+
3	TMDS Data 2/4 Shield
4	not connected
5	not connected
6	DDC Clock
7	DDC Data
8	Analog Vertical Sync
9	TMDS Data1–
10	TMDS Data1+
11	TMDS Data 1/3 Shield
12	not connected
13	not connected
14	+5V Power
15	Earth
16	Hot Plug Detect
17	TMDS Data0–
18	TMDS Data0+
19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

Displayport socket

i	The Displayport connection is only available in the model B24-8 TE Pro.
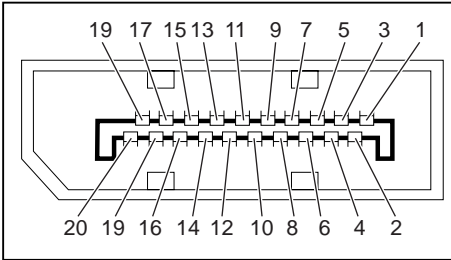
Pin	Meaning
1	Lane 3 (negative)
2	Earth
3	Lane 3 (positive)
4	Lane 2 (negative)
5	Earth
6	Lane 2 (positive)
7	Lane 1 (negative)
8	Earth
9	Lane 1 (positive)
10	Lane 0 (negative)
11	Earth
12	Lane 0 (positive)
13	Connected to earth
14	Connected to earth
15	Auxiliary channel (positive)
16	Earth
17	Auxiliary channel (negative)
18	Hot Plug Detect
19	Return for Power
20	Power for connector (3.3 V 500 mA)

HDMI port

i

The HDMI connection is only available in the model B24-8 TS Pro.
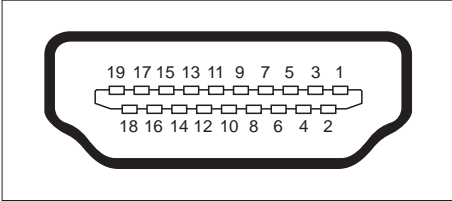
Pin	Meaning
1	TMDS Data2+
2	TMDS Data2 Shield
3	TMDS Data2–
4	TMDS Data1+
5	TMDS Data1 Shield
6	TMDS Data1–
7	TMDS Data0+
8	TMDS Data0 Shield
9	TMDS Data0–
10	TMDS Clock+
11	TMDS Clock Shield
12	TMDS Clock–
13	CEC
14	N.C.
15	SCL
16	SDA
17	DDC/CEC Ground
18	+5 V Power
19	Hot plug detect