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## 1 - General

The monitor has a 24" TFT display with a resolution of 1920 x 1080 pixels. The connection to the PC takes place via a VGA interface with 15-pin VGA plug or via a DVI interface with DVI-I Dual Link plug (24 + 1 pin) or the display port for the transmission of digital image signals.

Optionally, the monitor can be equipped with a resistive touch screen. The touch has a USB interface.



**Monitor with stainless steel front plate**

If the monitor is equipped without a touch, the display is protected against contact and contact with moisture and aggressive substances through a glass. There is a standard protective glass and a visually anti-glare protective glass available.

The monitor is available with a standard or stainless steel front plate and mounting bolts on the back. These two versions are intended for installation in a control cabinet or control panel. The front panel has a gasket. The degree of protection is IP 65.



**Monitor Back with standard front plate and mounting bolts**

The monitors have a standard 12 VDC power supply and are supplied with an external 230 VAC / 12 VDC power supply. All monitors are optional with a supply voltage of 24 VDC or with an internal power supply of 230 VAC available.

## 2 - Technical specifications

Technical specifications	
LCD - Type	24" TFT
resolution (Pixel)	1920 x 1080
act. screen area(mm)	476,64 x 268,11
pixel density (mm)	0,27675 x 0,27675
brightness (cd / m <sup>2</sup> )	300
contrast	5000 : 1
reaction time TR/TF (msec.)	25 / 25
Colors	16,7 Mio
Angle of view horizontally vertical	R / L = 75° / 89° O / U = 75° / 89°
Lifetime illumination (half-life)	LED backlight / 50,000 hours
Touch (Option)	Analog resistive touch with USB interface
VGA Port	FULL HD
DVI Port	DVI D Dual Link (24 + 1 Pin connector)
DP Port	Display Port (digital image signals)
OSD - Menü	Yes
supply voltage	12 VDC optional 24 VDC (intern) optional 100 - 230 VAC (intern)
power consumption	30 W
operating temperatur	0 to 50 °C
storage temperature	-20 to 60 °C
Front Plate	Front panel black powder coated, RAL 9005, with fixing bolts Stainless steel front plate with mounting bolts
Degree of protection front panel	IP 65 (Stainless steel and standard front)
VESA connection	No
weight	7,0 KG

Reserve technical changes.

### 3 - Power supply

#### 3.1 Monitor with 12 VDC power supply

The connector is located on the back of the monitor.  
The inner pin is plus, the outer minus.  
The inner plug has a diameter of 2.5 mm.

An external power supply unit with a supply voltage of 100 - 240 VAC / 12 VDC and 60 VA output is included in this version.



**Attention: pay attention to polarity**



**External power supply unit 230 VAC / 12 VDC**

#### 3.2 Monitor with 24 VDC power supply

On the back there is a 3-pin screw terminal connection.  
The supply voltage is 20 - 28 VDC.  
The power consumption is about 40 watts.

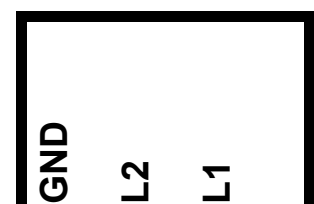
**24 VDC**



#### 3.3 Monitor with 230 VAC power supply

On the back there is a 3-pin screw terminal connection.  
The supply voltage is 100 - 230 VAC  
The power consumption is about 40 watts.

**100 - 230 VAC**



## 4 - Monitor Back



Button OSD menu on the back of the monitor

On the back of the monitor is the power supply connector, the VGA input, the DVI input, the DP connector, the connector on the Touch if the monitor is equipped with a touch screen, and 5 buttons for adjusting the OSD menu

The keys are labeled with:

- POWER:** Monitor on / off.
- MENU:** Enable and disable the OSD menu.
- SELECT:** Confirm selection in OSD main menu or OSD submenu.
- DOWN:** Selection of icons in the main and submenu as well as setting the values.  
The value to be set is lowered.
- UP:** Selection of icons in the main and submenu as well as setting the values.  
The value to be set is increased.

## 5 - OSD Menü

After pressing the MENU button, the OSD menu is displayed as shown in the lower picture. Then you can use the UP / DOWN buttons to select the various main menus. By pressing the SELECT key, the selected main menu with the associated submenu items is selected and the submenu items can be selected using the UP / DOWN keys. These are also acknowledged with the SELECT key.

Then select the desired value with the UP / DOWN keys and confirm with SELECT. Exit various menu items by pressing the MENU key.



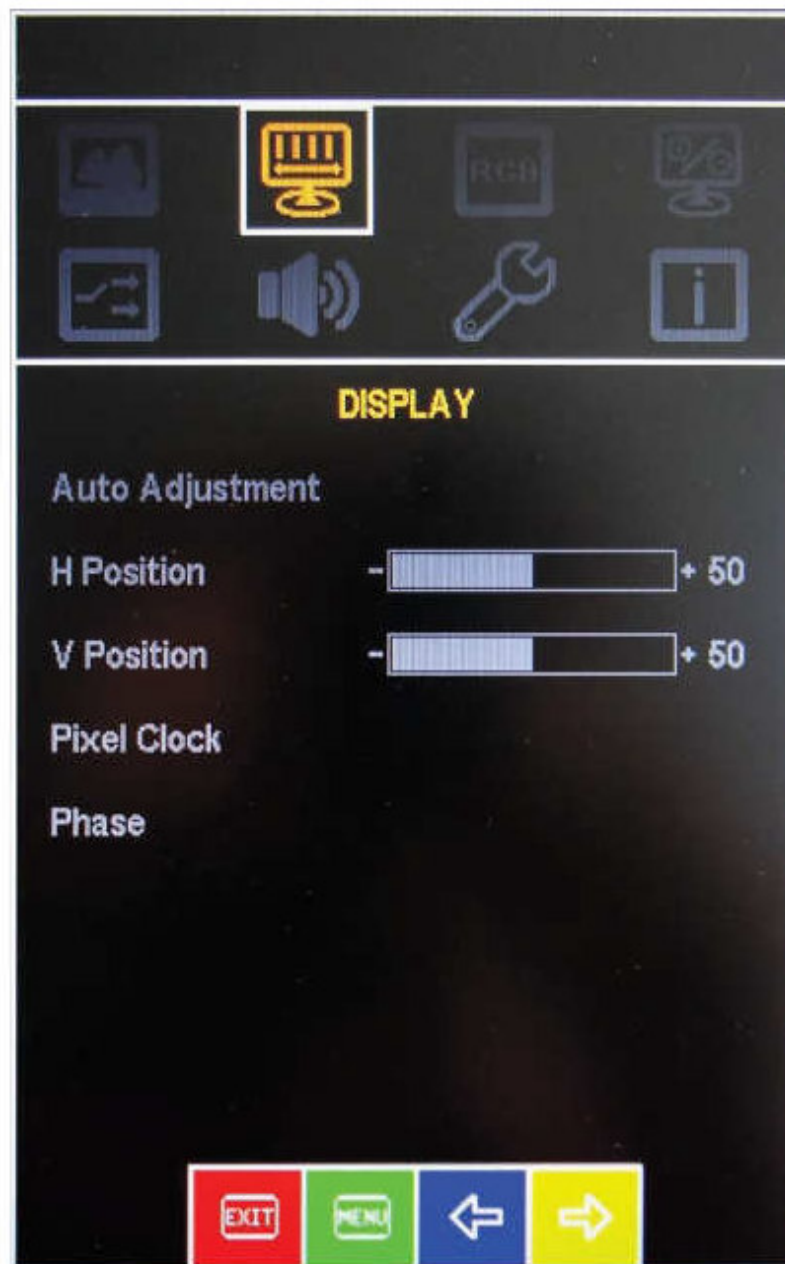
**Attention:** The OSD menu can only be activated when the input signal is present!

## 5.1 Picture



Backlight:	Adjustment of the backlight
Brightness:	Adjust the brightness
Contrast:	Contrast adjustment
Sharpness:	Adjust the focus

## 5.2 Display



Auto Adjustment:

The optimal picture setting is activated

H. Position:

The horizontal position can be adjusted

V. Position:

The vertical position can be adjusted

Pixel Clock:

The clock frequency can be adjusted

Phase:

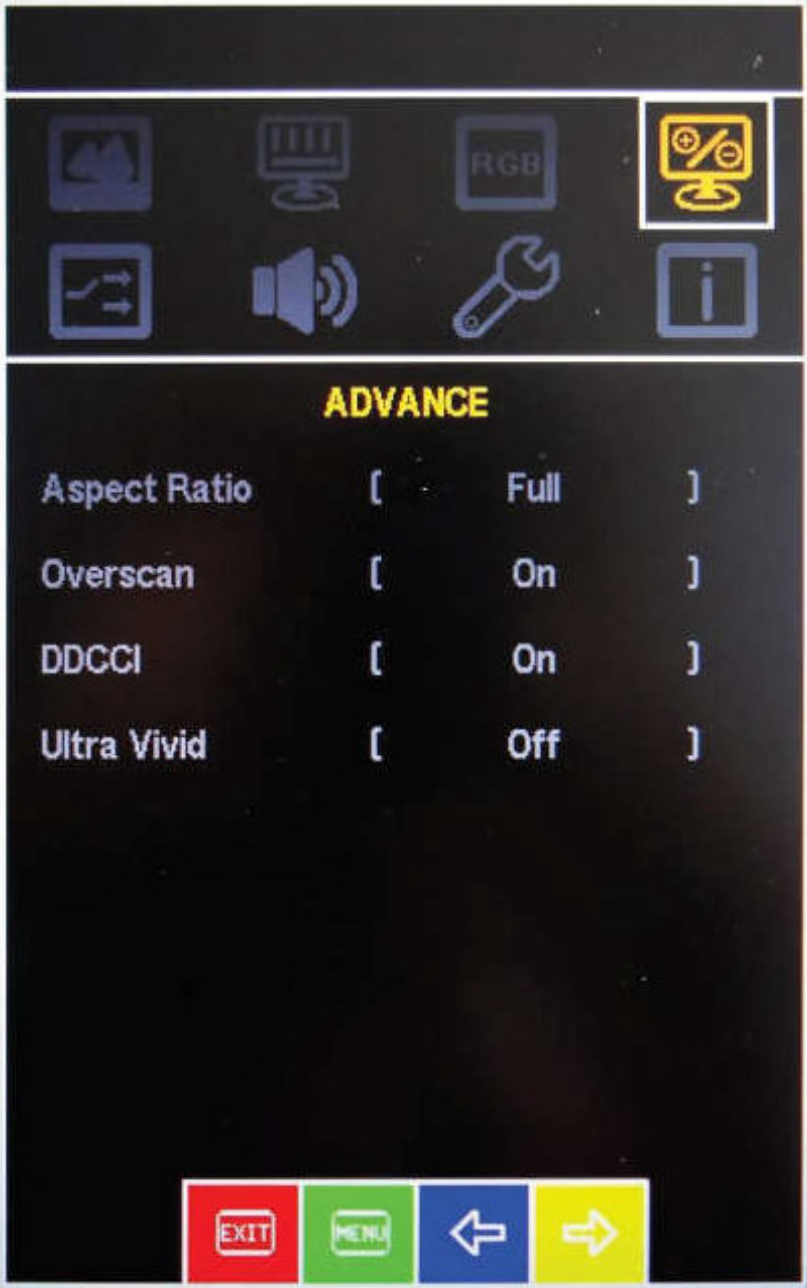
The clock rate can be adjusted

## 5.3 Color



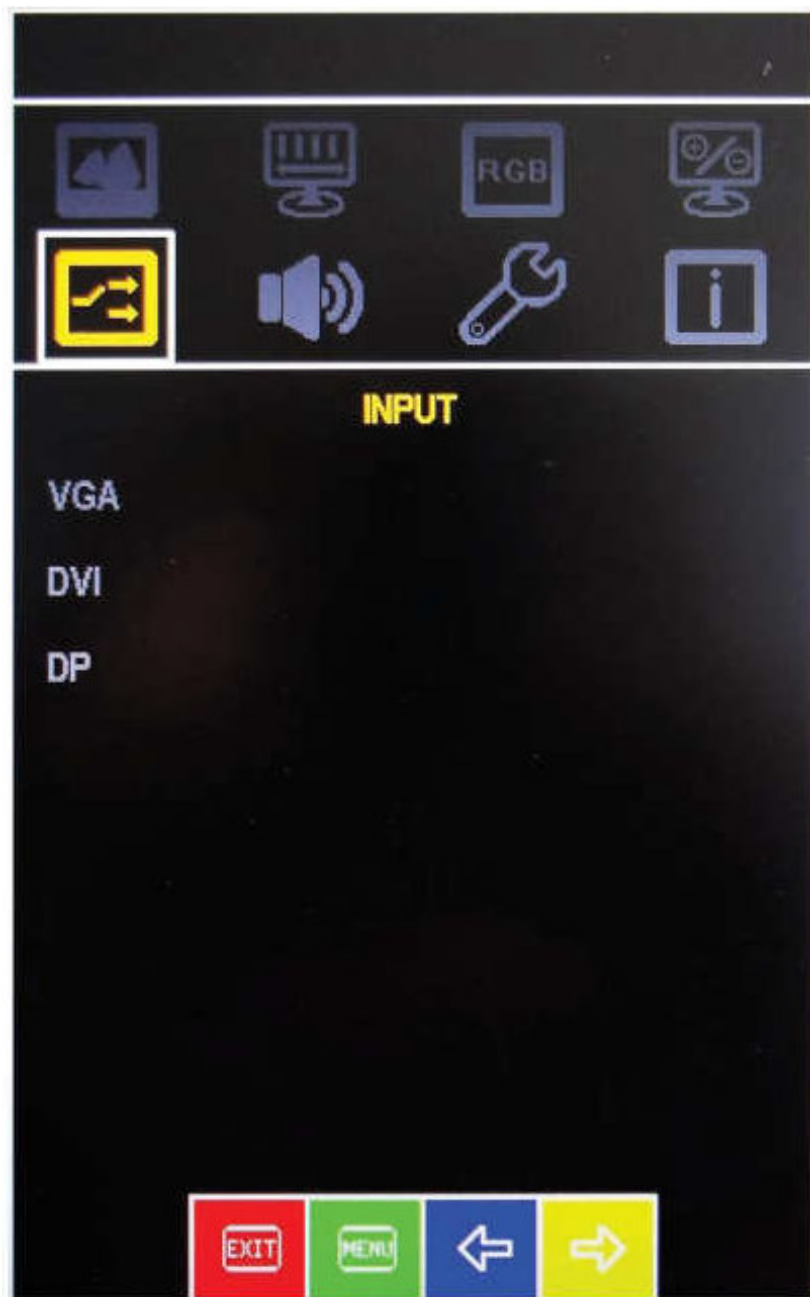
Gamma:	The gamma value can be adjusted
Color Temp.:	The color temperature can be adjusted
Color Effect:	A color effect can be set
Color Demo:	Selection for hue and saturation
Color Format:	Color space selection
Hue:	Adjust the color balance
Saturation:	Adjust the saturation

5.4 Advance



- |               |                               |
|---------------|-------------------------------|
| Aspect ratio: | Adjust aspect ratio           |
| Overscan:     | Overscan function on or off   |
| DDCCI:        | Turn DDCCI support on or off  |
| Ultra Vivid:  | Select the type of color mode |

## 5.5 Input

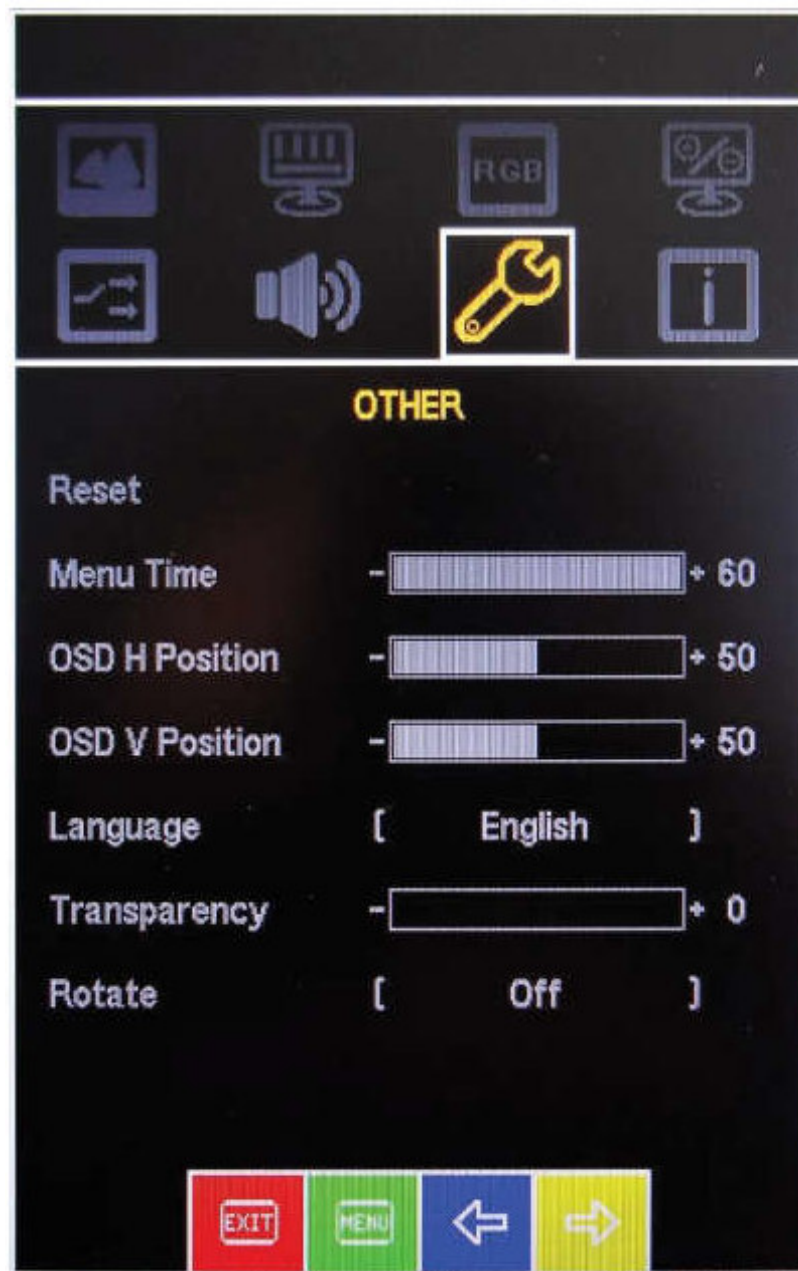


VGA: Select VGA as the input source

DVI: Select DVI as the input source

DP: Select DP as the input source

## 5.6 more settings



Reset:	Reset to factory settings
Menu Time:	Presentation time OSD menu
OSD H Position:	Horizontal adjustment OSD menu
OSD V Position:	Vertical adjustment OSD menu
Language:	Language: German or English
Transparency:	Transparency OSD menu setting
Rotate:	Turn OSD Menu On / Off

## 5.7 Information



Information about:

signal input

H and V frequency

clock speed

HDCP functional status

Firmware version

## 6 - Touch Screen

If the monitor is equipped with a resistive touch screen, the CD comes with the driver software for the touch screen.

When touched with a USB interface, the touch is powered by the PC.

The connection to the PC is made via a USB plug type A. The plug is located on the back of the monitor.

A connecting cable of 3 meters is included.

To install the driver software, insert the CD-ROM into the drive.

**Do not connect the USB cable to the PC.**

Enter D: \ Setup.exe and confirm with OK.

Instructions on the screen.

For USB interface: DMC, TSC-10 Series, select USB.

The driver software is now installed.

After completing the installation, connect the USB cable to the PC.

The New Hardware Installation Wizard appears.

When asked, "Connect to the Internet" - **NO this time** -

Select and select **Next**.

Click on "Install software automatically" and select **Next**.

When asking for verification - **continue installation** - select.

**Select Finish.**

**Select Close.**

The software and driver are now installed and the touch should be at fingertip react.

Calibrate Touch Screen Now (Start, All Programs, UPDD, Calibrate)

**ATTENTION:** If a different touch driver is installed on the PC, remove it completely from the PC before installation.

A not completely uninstalled driver can cause the touch does not work. If necessary, restart PC after installation.

## **7 - Monitor maintenance**

**Only clean the touch with a damp cloth!**

**DO NOT use a pressure washer.**

**Touch only with your fingers, do not use hard and sharp objects.**

## **8 - Screensaver**

Avoid displaying the same image over a long period of time.

Even with TFT monitors, this can lead to "burn in" the display.

It is called the "memory effect".

Therefore use a screensaver.

If a different picture is displayed for a longer time, the "Memory Effect" will disappear automatically.

## **9 - Safety**

The operating voltage of the device may only be in the specified range.

The device complies with the requirements of the applicable European standards and EMC guidelines.

The front of the monitor is splash-proof.

There are ventilation slots on the back. These must remain free and it must be ensured that there is sufficient space for air circulation.

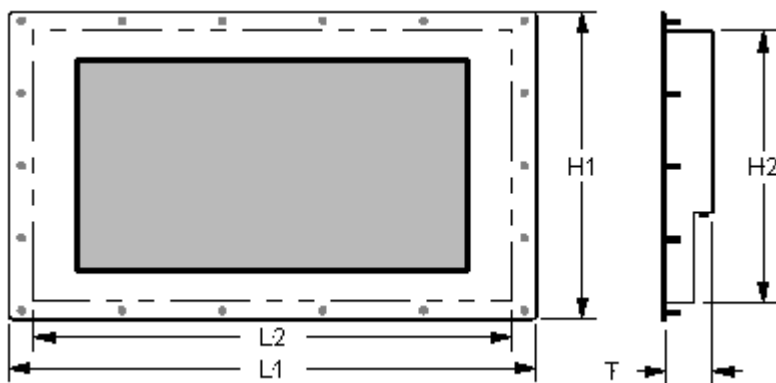
No objects should be put through the slots.

There must be no moisture or liquid in the monitor.

The monitor is not intended for use in hazardous areas.

## 10 - Mechanical dimensions

### 10.1 monitor with standard or stainless steel front plate



L1 = 642 mm  
L2 = 602 mm  
H1 = 410 mm  
H2 = 372 mm  
T = 55 mm

Front plate thickness = 3 mm

Cut Out: 606 x 376 mm

All dimensions in mm, technical changes reserved

## Front Panel Cutout Monitor 19 "



**Notes:**

