

Manual

Ex- PC PC100



manual_PC100_v1.2_dak_rev1.doc



**Gönnheimer
Elektronic GmbH**

<http://www.goennheimer.de> Email: info@goennheimer.de



Dr.-Julius-Leber-Straße 2
67433 Neustadt/Weinstraße
Postfach 10 05 07
67405 Neustadt
phone: +49 (6321) 49919- 0
fax: +49 (6321) 49919 - 41

Contents

1	Safety Guidelines for explosion proofed devices	3
2	Ex- PC: PC100	4
2.1	Short description	4
3	Mounting and wiring	5
3.1	Exposition of the Ex- PC- System PC100	5
3.2	Mounting	5
3.2.1	Ways of mounting	6
3.3	Connecting	7
3.3.1	Mains connection	7
3.3.2	Connection of Video/Tastatur/Maus- Signal (KVM)	7
3.3.3	Terminals of UTP/STP- Connection	9
4	Start-up procedure	10
4.1	Display settings	11
4.2	Changing the monitor settings (OSD- Menu)	11
4.2.1	Changing the monitor settings with the buttons of the control panel	11
4.2.2	Monitor settings using the OSD menu	12
5	Trouble shooting	16
5.1	Keyboard	16
5.2	PS/2- Tracker ball	16
5.3	Video	16
5.4	General Questions	17
6	Annex	18
6.1	Technical Details	18
6.2	Terminals and limits	18
6.3	Intrinsic safety proof	19
6.4	Type code	20
6.5	Application example	20
6.6	Dimensions Display module PC100, Keyboard- and Tracker ball module	21
6.7	Dimensions Commander- Housing	22

1 Safety Guidelines for explosion proofed devices

Application and Standards

This instruction manual applies to explosion protected control panels of type of protection types below. This apparatus is only to be used as defined and meets requirements of EN 60 079 particularly EN60 079-14 "electrical apparatus for potentiality explosive atmospheres". It can be used in hazardous locations which are hazardous due to gases and vapours according to the explosion group and temperature class as stipulated on the type label. When installing and operating the explosion protected distribution and control panels the respective nationally valid regulations and requirements are to be observed.

General Instructions

The control panel has to have a back-up fuse as stipulated. The mains connection must have a sufficient short circuit current to ensure safe breaking of the fuse. To achieve an impeccable and safety device operation, please take care for adept transportation, storage and mounting, as well as accurate service and maintenance. Operation of this device should only be implemented by authorised persons and in strict accordance with local safety standards. The electrical data on the type label and if applicable, the "special conditions" of the test certificate *TÜV 00 ATEX 1607 X* is to be observed.

For outdoor installation it is recommended to protect the explosion protected distribution and control panel against direct climatic influence, e.g. with a protective roof. The maximum ambient temperature is 40°C, if not stipulated otherwise.

Terminal compartment in Increased Safety

When closing, it is to be ensured that the gaskets of the terminal compartment remain effective, thus maintaining degree of protection IP 54 to DIN 40 050. Unused entries are to be closed off by impactproof stopping plugs, which are secured against self-loosening and turning.

Maintenance Work

The gaskets of Ex-e-enclosures are to be checked for damages and replaced, if required. Terminals, especially in the Ex-e-chamber are to be tightened. Possible changes in colour point to increased temperature. Cable glands, stopping plugs and flanges are to be tested for tightness and secure fitting.

Intrinsically Safe Circuits

Erection instructions in the testing certificates of intrinsically safe apparatus are to be observed. The electrical safety values stipulated on the type label must not be exceeded in the intrinsically safe circuit. When interconnecting intrinsically safe circuits it is to be tested, whether a voltage and/or current addition occurs. The intrinsic safety of interconnected circuits is to be ensured. (EN 60079-14, section 12)

Safety Measures: to read and to comply

Work on electrical installations and apparatus in operation is generally forbidden in hazardous locations, with the exception of intrinsically safe circuits. In special cases work can be done on non-intrinsically safe circuits, on the condition that during the duration of such work no explosive atmosphere exists. Only explosion protected certified measuring instruments may be used to ensure that the apparatus is voltage-free. Grounding and short circuiting may only be carried out, if there is no explosion hazard at the grounding or short circuit connection.

Warning! Extreme caution is advised when handling this device. High electrical discharge is possible and can be fatal.

2 Ex- PC: PC100

2.1 Short description

The PC100 is the user interface of an industrial PC designed for use in Ex- zone 1.

Concept

The PC is located in the safe area. There are no more Ex- barriers necessary – the PC is unlimited network capable. A later update to a more powerful PC is possible at any time. The PC is connected with a Video- remote control to the PC100.

Installation

For the remote control usually a 4 x 2 AWG 24 (CAT 5/6) cable is recommended, but alternatively a glass fibre can be used. The customer do not have to follow the rules for intrinsically safe wiring, because the connection is not intrinsically safe:

Power supply

The power supply (e.g. 230V AC) of the display is connected to the integrated Ex e- terminal box. Therefore no Ex i- multi- power supplies are necessary. The intrinsically safe keyboard and stainless steel trackball (both IP65) are connected to the PC100 with a plug.

Housing

The modules above are integrated in a graceful designed commander housing. The housing is manufactured of stainless steel with a protection class of IP65. Therefore it can be used in pharmaceutical or food production. It is also possible to integrate the PC100 modules in actually existing control panels.

The PC100 gives his user the degree of freedom and flexibility; he needs now and in the future.

3 Mounting and wiring

3.1 Exposition of the Ex- PC- System PC100

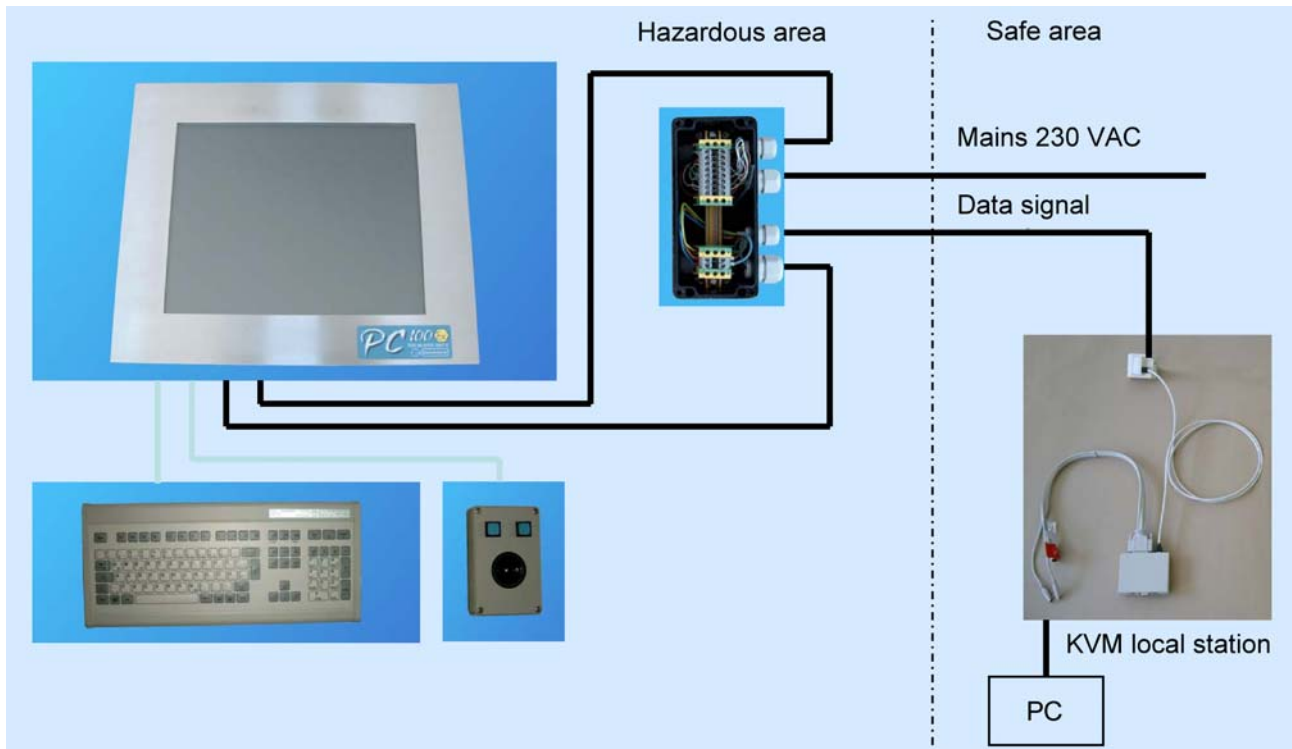


Figure 1: PC100 System, Data transfer with analogous KVM

3.2 Mounting

Choose a solid place for mounting.

Warning! **LINE VOLTAGE !**
 Extreme caution is advised when handling this device.
 High electrical discharge is possible and can be fatal

Warning! **Do not exceed terminal safety limits of each terminal.**
 See limits in technical details or declarations of conformity.

Tip Please note the following Standard of Compliance:
DMT 99 ATEX E 003 and the regulative EN 60079 especially EN 60079-14

Tip **Connect the housing of the PC100 to potential equalization in hazardous area**

Tip **Use the PC100 module (type PC100.x.x.x.0.x) only in a housing with minimum protection class IP54**

3.2.1 Ways of mounting

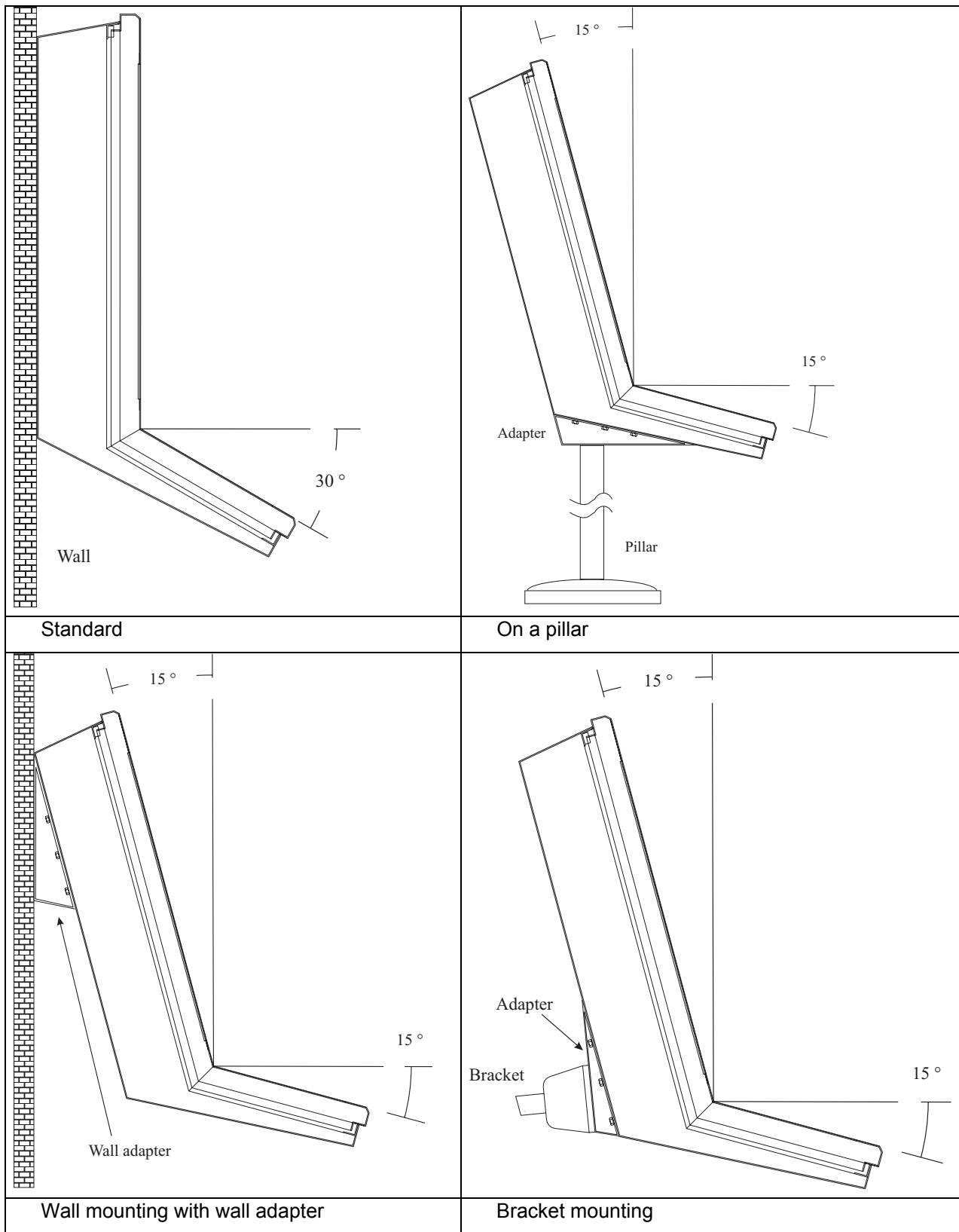
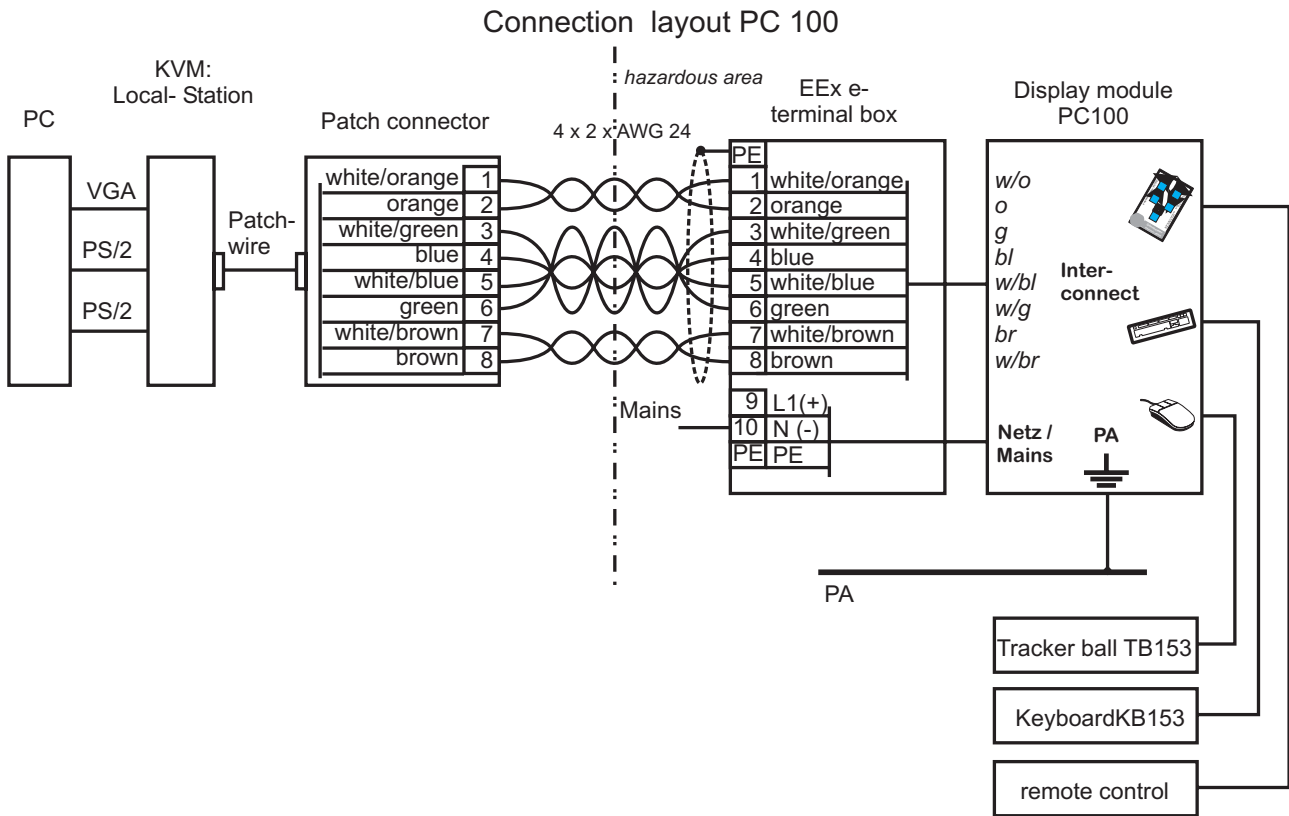


Figure 2 Connecting chart

Mounting dd

3.3 Connecting

The PC100 is fed via the internal EEx e Terminal box with energy and data.



3.3.1 Mains connection

Mains is connected via terminals 9,10, PE:

Terminal	Connection
9	L rep. (+) at 24 VDC
10	N rep. (-)
PE	Ground wire

3.3.2 Connection of Video/Tastatur/Maus- Signal (KVM)

The Figure 3 shows the structure of the used cable consisting of 4 conductors with 2 veins each. Each Adenpaar consists of a basic colour and a pertinent white vein: e.g. orange/white orange.

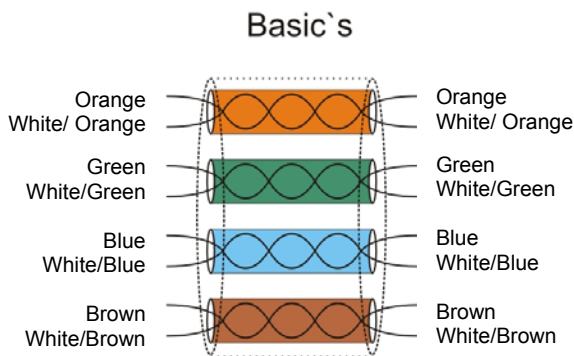


Figure 3: Structure 4 x 2 x AWG - cables

The Figure 4 shows the optimal preparation for the further processing of the cable. The cable is so far striped (1) that twisting (2) of the conductors in pairs can be seen. This is important, because in accordance with standard connection diagram PC100 you can see, which individual conductors are in pairs accordingly. If twisting is to be seen, then also the appropriate white/colored cable can be correctly assigned and presented with the connection to the color.

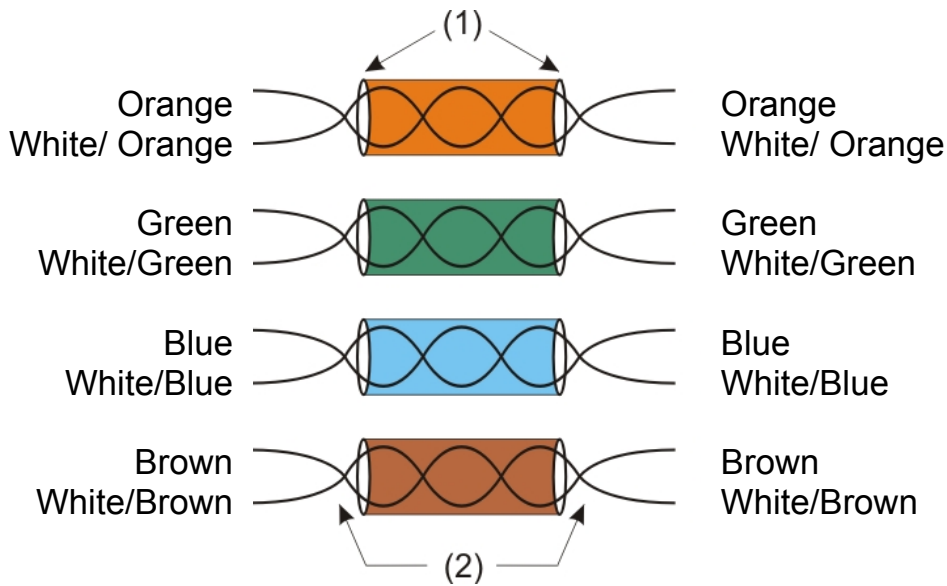


Figure 4: 4 x 2 x AWG cable strips

The Figure 5 shows the complete wiring from Patch box to the EEx e terminal box.

Note: The wiring between EEx e terminal box and display module may be changed under no circumstances!

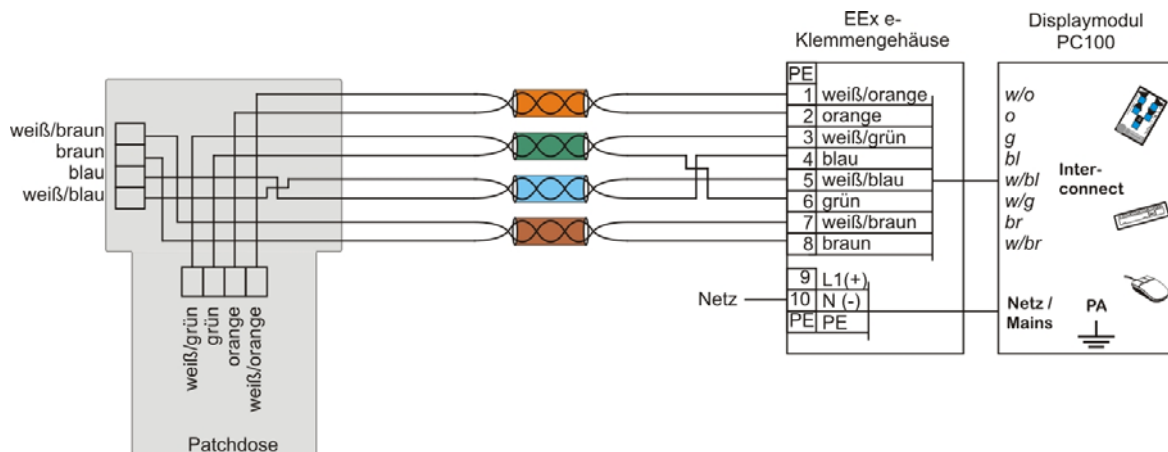


Figure 5: Detailed wiring in EEx e terminal area and Patch box

Sollten nach dem Anschluss des Übertragungskabels „Fehlfarben“ am Display auftreten, so liegt dieses mit hoher Wahrscheinlichkeit an vertauschten Adern.

Are wrong colours visible after the connection of the transmission cable, then this is with high probability because of exchanged conductors.

Apperance	Exchange wire		
Green/yellowish	White/Orange	<->	Orange
Violett	White/Green	<->	Green
Cyan	White/Blue	<->	Blue
Keyboard, Trackerball no Function	White/Brown	<->	Brown

3.3.3 Terminals of UTP/STP- Connection

The network cable between PC100 and local KVM is terminated with the RJ45 plug on the local station and the EEx e terminal box inside of the PC100. This connection should always be done according EIA/TIA standard (preferably schema B).

Tip: When you have a look on the plug of the local station, the Pin 1 is on the left side and the Pin 8 on the right side of the plug.

Pin	colour	wire pair
1	white / Orange	T2
2	Orange / white	R2
3	white / Green	T3
4	blue / white	R1
5	white / blue	T1
6	green / white	R3
7	white / Brown	T4
8	Brown / white	R4

Table 1: terminal layout of UTP/STP- Connection

Remark: the colours of the wires are according the EIA/TIA standard. In your experience the "Orange / white" wire is only orange. So we used this colours in figure 1

4 Start-up procedure



Note

Never exchange the local stations among themselves, if you use several PC100. A local station is co-ordinated with the respective PC100.

A permutation leads at least to a bad image quality, possibly also to the fact that the connection fails completely

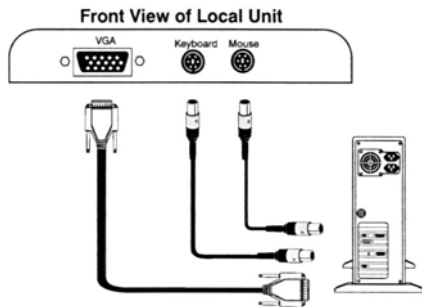


Figure 6 Connection of the local station

Step 1: Connecting and starting of the parts

1. Switch off your PC and connect up the VGA- output, keyboard and mouse terminals to the local station of the KVM (KVM = Keyboard, Video, Mouse- remote device of the PC100)
2. Connect the net work cable (4 x 2 x AWG) to the EEx e box inside of the PC100 (as shown in figure 1) and the patch box
3. Set the "PEAK" control on the PC100 Display module about midway, and set the "EQ" control fully counter-clockwise (no video compensation). The controls are located on the upper side of the (internal) PC100 – Display module.
4. Switch on the PC100
5. Switch on your PC and make sure that the keyboard operates correctly



Note

The quality of the Video signal may be worse at this time!

6. Boot an operation system (such as Windows) and make sure that the mouse does work

Keep the PC100 running.

Step 2: Adjust of the video compensation

Use this step if distance of PC and PC100 is more than 25 m

1. start an application using a high resolution on the display (e.g. Word)
2. If the video is **under-compensated** you will notice black smearing on the right-hand edge of large horizontal objects such as title bars. The degradation becomes more noticeable as cable length increases.
3. Look at a point on the monitor where the smearing is evident. Now rotate the "EQ" control clockwise until the smearing disappears and the edge becomes very bright and too sharp. At this point and beyond the video is **over- compensated**.
4. Rotate the "EQ" control back slightly until you reach the point where the edge looks at it should be (no smearing or over sharpness). The compensation is now adjusted correctly for the length of interconnection cable used.

- 5. The "PEAK" control is used to adjust the brightness of the overall picture. After adjusting the this control to suit, the EQ control may need a sight readjustment.



Tip

Please note that all practical purposes cable equalisation cannot be exact - the remote display can never be as good as the local display

4.1 Display settings

To adjust the display position, resp. Brightness and Contrast of the Display use the remote control shown below. The layout of the remote control and the adjust menu differs of the present display type.

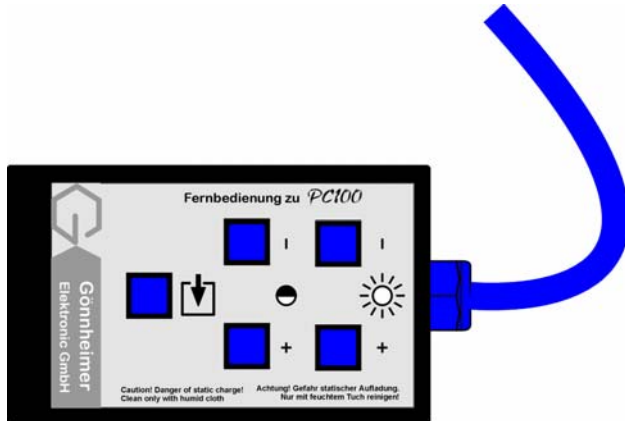
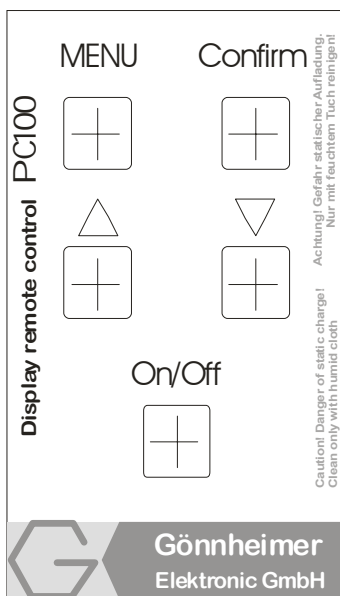


Figure 7 remote control for video adjustment

4.2 Changing the monitor settings (OSD- Menu)

When putting the monitor into operation for the first time, the screen display should be optimally adapted to the screen controller used and adjusted in accordance with your needs.

4.2.1 Changing the monitor settings with the buttons of the control panel



Use the buttons of the control panel to make the following monitor settings directly while the OSD menu is switched off.

Performing auto-adjustment of the monitor

- ▷ Press the AUTO button for approx. 1 second while the OSD menu is switched off.

The *Auto Processing* message is displayed.

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

Adjusting background lighting

- ▷ Press the button for calling the *Brightness* setting window.
- ▷ Press the _ or _ button to adjust the brightness.

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

Activating/deactivating muting

- ▷ Press the button to switch the sound off and on again.

A message is displayed that the action has been performed.

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.

A message is displayed that the action has been performed.

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 both buttons _ and _ simultaneously for a few seconds.

A message is displayed that the action has been performed.

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

4.2.2 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). With the OSD function *Language* in the *OSD*

Setup you can select another language.

To set the OSD menu, perform the following steps:

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

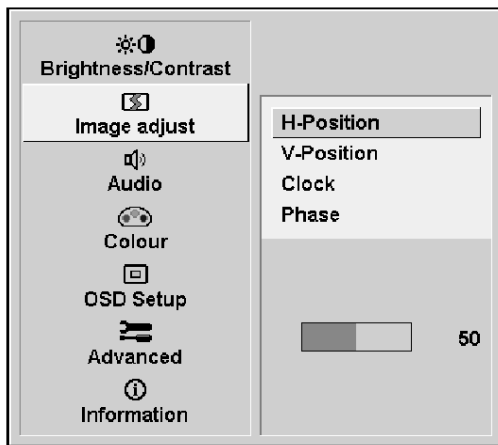
The main menu appears on the screen (on the left-hand side) with icons for the setting functions.



The first symbol (*Brightness/Contrast*) is highlighted. In the right-hand part of the display the associated functions are shown.

- ▷ If necessary, press the ▽ or △ button to mark another icon (e.g. *Image adjust*).
- ▷ Press the SELECT/MENU button to select the highlighted icon.

The corresponding setting window (here: *Image Adjust*) is displayed (on the right-hand side).



The first function (*H-Position*) is highlighted.

- ▷ If necessary, press the ▽ or △ button to mark another function.
- ▷ Press the SELECT/MENU button to select the highlighted function.
- ▷ Press the ▽ or △ button to adjust the value for the selected function.
- ▷ Press the EXIT/AUTO button to exit the function.
- ▷ If necessary, press the button ▽ or △ to mark another 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.


Adjusting the brightness and contrast

	Calling the Brightness / Contrast setting window
Brightness	Setting the brightness of the display With this function you change the brightness of the background lighting.
Contrast	Setting the contrast of the display With this function you modify the contrast of bright colour tones.
Auto Level	Setting the brightness of the display With this function you can automatically set the contrast. Press the SELECT/MENU button to activate the function.


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 size and position


	Calling the Image adjust setting window
H-Position	Adjusting the horizontal position With this function you move the picture to the left or to the right.
V-Position	Adjusting the vertical position With this function you move the picture up or down
Clock	Setting synchronisation With this function you adjust the picture width to eliminate vertical picture disturbances.
Phase	Eliminating picture interference With this function you fine-tune your monitor to eliminate picture interference

	Calling the <i>Audio</i> setting window (without function, remember the PC100 does not have speakers)
---	--

Setting colour temperature and colours


	Calling the <i>Colour</i> setting window
	<p>Selecting 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 select from 6500 K, 9300 K, Native and Custom Colour.</p> <p>Native = Original colour of the LCD display</p> <p>Custom Colour = User-defined colours</p> <p>In the user-defined setting you can change the colour ratios of the basic colours (red, green, blue) as required.</p>

Setting display of the OSD menu


	Calling the <i>OSD Setup</i> setting window
Language	Setting language for the OSD menu With this function you choose between English (default setting), French, German, Italian and Spanish as the language for the OSD menu.
OSD H-Position	Setting the horizontal position of the OSD menu With this function you move the OSD menu to the left or to the right.
OSD V-Position	Setting the vertical position of the OSD menu With this function you move the OSD menu up or down.
OSD Timeout	Setting the display duration of the OSD menu With this function you select a value from 10 to 120 seconds.

	If the set time expires without a setting being made, the OSD menu is automatically faded out.
--	--

Setting functions in the "Advanced " menu

	Calling the <i>Advanced</i> setting window
Resoluti- on Notifier	<p>Displaying monitor data</p> <p>The optimum resolution for this monitor is 1280 x 1024 pixels. With the function activated (On), a message appears on the screen after approx. 30 seconds if a different resolution is set.</p> <p>Change the resolution to 1280 x 1024 to achieve optimum picture quality. With the function deactivated (Off), no message appears.</p>
Factory Recall	<p>Activating the factory settings</p> <p>With this function all settings are reset to the factory settings without prompting for confirmation.</p> <p>Press the SELECT/MENU button to activate the function. The Auto Processing message is displayed.</p>

Displaying information

	<p>Calling the Information setting window</p> <p>With this function the model designation, serial number, resolution, H/V frequency, input signal and polarity of the synchronisation signal are displayed</p>
--	--

5 Trouble shooting

5.1 Keyboard

The PC starts up correctly without any warning, but the keyboard doesn't work

1. the cable is loose. – Plug in the plug again and press 'Scroll Lock'
2. You use the wrong cable, maybe keyboard and mouse are interchanged

Display shows wrong characters or some characters are missing

1. the keyboard works in a wrong mode. Make a reset of the keyboard using 'Scroll Lock'
2. Switch of the hole system and start again

The PC reports constantly 'keyboard error' while start up procedure

1. If the system works properly after you press F1 (or ESC). Configure the PC BIOS to 'no keyboard test'.

5.2 PS/2- Tracker ball

The tracker ball pointer is shown but it doesn't move

1. Press die 'Scroll Lock' on the keyboard for reset
2. If the cable is loose please reconnect the cable and press 'Scroll Lock'
3. You use the wrong cable, maybe keyboard and mouse are interchanged
4. Restart the PC100

The system or any application does not find the tracker ball

1. You use the wrong cable, maybe keyboard and mouse are interchanged on the local station
2. If the cable is loose please reconnect the cable and press 'Scroll Lock'
3. Make sure that the keyboard cable of the local station is properly connected to the PC
4. Reboot the PC.

The movements of the tracker ball are not constant and unsteady.

1. Make a reset of the keyboard using 'Scroll Lock'

5.3 Video

No Picture, Num-Lock- LED on the keyboard flashes shortly while starting up

Make sure that the PS/2 wire of tracker ball and keyboard is properly installed to the PC and is not interchanged.

The display is very blurred

1. The video compensation is not well adjusted, please read chapter 0

The pixels are not assembled (red, green, blue into white)

1. Make sure that the UTP/ATP- connection is according EIA 568 standard
2. Check the wiring of wrong or bad connection

Permanently vertical distortion on the screen (interference)

1. the wiring is next to a high powered disturbances source, please rewire the cable on a better place

5.4 General Questions

Witch kind of wire is better UTP or STP ?

The UTP- wire is better for long distance, because it have less capacity. STP are better in a area with disturbances.

How to avoid interference by using a UTP wire ?

The product is designed to use a UTP wire either on long distances. To reduce the potential of interference regard the following items:

1. Make sure that the Computer and the PC100 are connected to the same mains system.
2. wire the cable not next to other cables

It is possible to connect the local station to a network?

The local station has in fact the same cable connector, but it can not used for network connection. For network connection please use a suitable Ethernet adapter.

6 Annex

6.1 Technical Details

Mains	230V AC, special voltage: 24V DC
Power consumption	19" Display: approx. 100W; 15" Display: approx. 60 W
Mounting	hazardous area, Zone 1
Certificate	TÜV 00 ATEX 1607 X
Ex- Protection	II 2 G, EEx e q [ib] IIC T4
Protection class	Front: IP 65
Umgebungstemperatur	0°C (Standard) bis 40°C
Display	15" (XGA: 1024 x 768), 19" (SXGA: 1280 x 1024)
Dimensions	Display module: 530 x 450 x 105 mm
Weight	complete: ca. 50 kg

6.2 Terminals and limits

generally binding are the limits in the certificate TÜV 00 ATEX 1607 X

Intrinsically safe inputs					
terminal	U ₀	I ₀	P ₀	C ₀ , L ₀	Comment
Plug 3 Pins 2, 1	27,4V	2,7mA	77mW	87nF, 1mH	Only to connect passive switches
Plug 3 Pins 3, 1	27,4V	2,7mA	77mW	87nF, 1mH	Only to connect passive switches
Plug 3 Pins 4, 1	27,4V	2,7mA	77mW	87nF, 1mH	Only to connect passive switches
Plug 3 Pins 5, 1	27,4V	2,7mA	77mW	87nF, 1mH	Only to connect passive switches
Plug 3 Pins 6, 1	27,4V	2,7mA	77mW	87nF, 1mH	Only to connect passive switches
Plug 1 Pins 1 ... 4	5,8V	204mA	392mW	46µF, 0,5mH	
Plug 2 Pins 1 bis 4	5,8V	204mA	392mW	46µF, 0,5mH	
Other					
terminal	U _m	I _m	P	Comment	
Mains wire	253V AC			mains	
Data wire	253V AC			VGA Signal	

Table 1 Ex- limits

6.3 Intrinsic safety proof

Name / dev.	Seeger	Phone.	+49 6321 49919-19	Fax	49 6321 49919-41
company	Gönnheimer Elektronik GmbH	Location	plant		
building		Measurement circuit	Measurement location		
			Ex-Zone		

assumed wire data:

Capacity: 200 pF/m	Inductivity 100nH/m	Sicherheitsfaktor
--------------------	---------------------	-------------------

Active equipment		1. passive equipment		2. passive equipment	
identifier	Keyboard interface	identifier	Keyboard	identifier	Tracker ball
Type	KI 153	Type	KB 153	Type	TB 153
Manufacturer	Gönnheimer Elektronik GmbH	Manufacturer		Manufacturer	
Mat_Nr.		Mat_Nr.		Mat_Nr.	
Help power		Help power		Help power	
Special		Special		Special	
Certificate	TÜV 99 ATEX 1440 X	Certificate		Certificate	
Additional		Additional		Additional	
Ex- protection	[EEx ib] II C	Ex- protection	EEx ib II C T4	Ex- protection	EEx ib II C T4
T max		T max	50 °C	T max	50 °C
U ₀ max [V]	5,8 V	U ₀ max [V]	5,8 V	U ₀ max [V]	5,8 V
I _k max [mA]	204 mA	I _k max [mA]	204 mA	I _k max [mA]	204 mA
P max [W]	392 mW	P max [W]	392 mW	P max [W]	392 mW
La max [mH]	0,5 mH	Li max [mH]	-	Li max [mH]	-
Ca max [nF]	46 µF	Ci max [nF]	25 µF	Ci max [nF]	5 µF
	Max. wire length		..105 m		

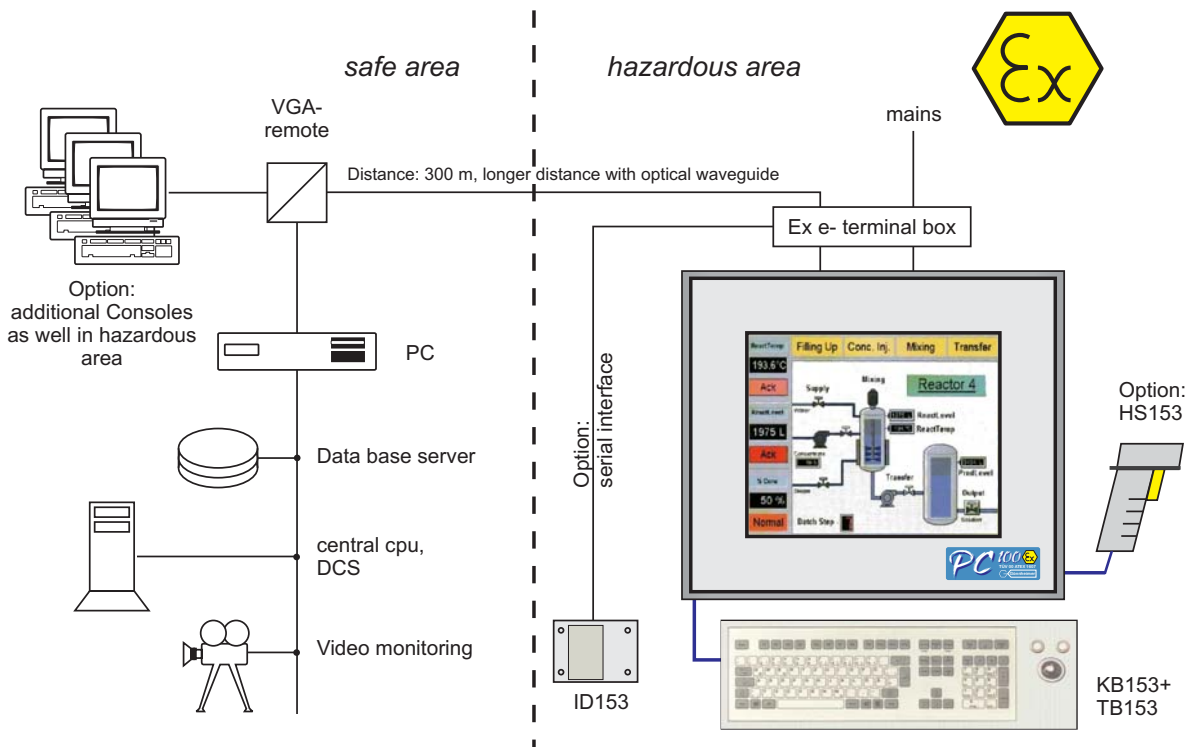
Conclusion:

The combination is suitable for T4 <input type="checkbox"/> T5 <input type="checkbox"/> T6 <input type="checkbox"/>	Date	Subscription
---	------	--------------

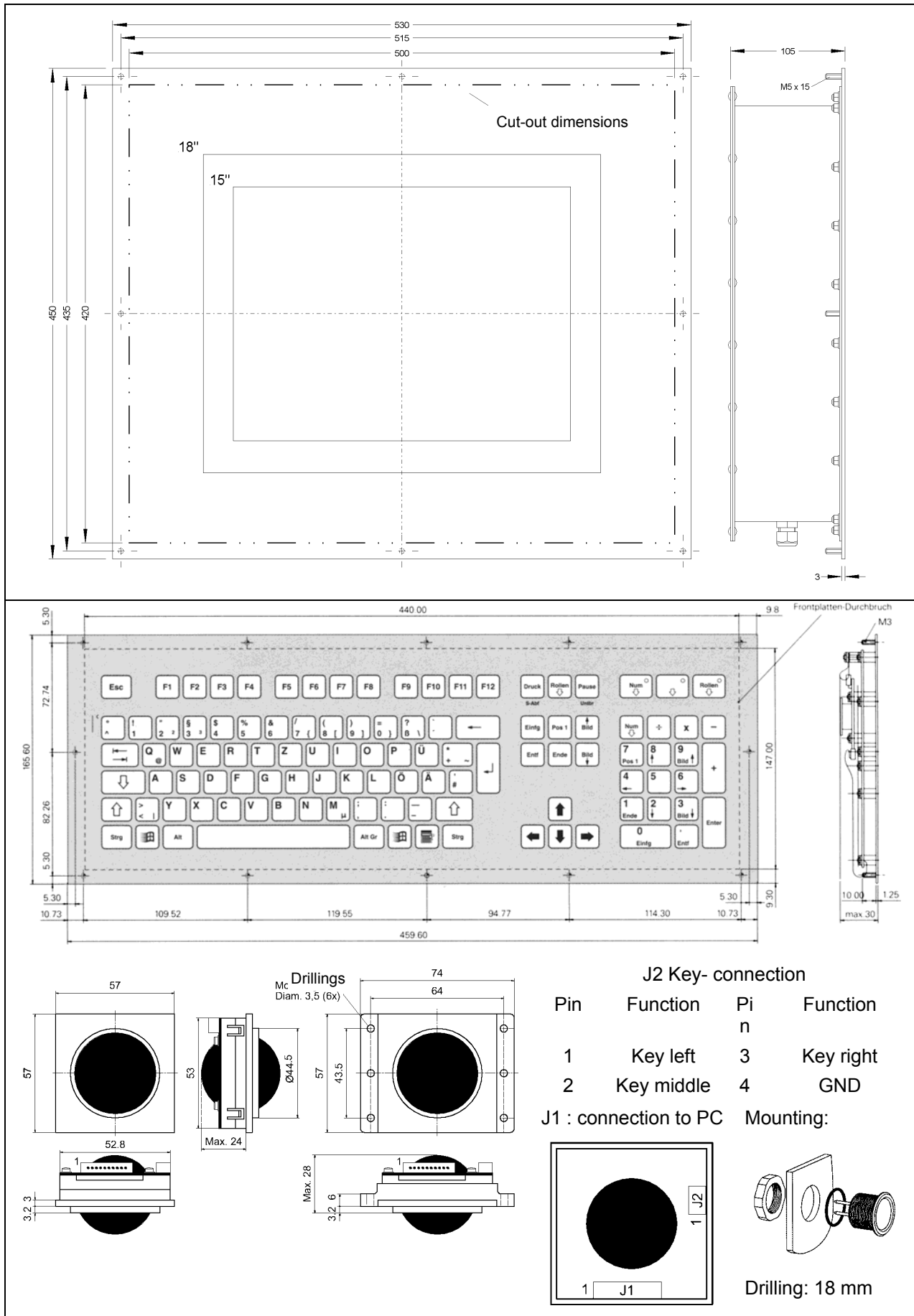
6.4 Type code

	PC100	.X	.X	.X	.X	.X
mains:						
230V AC.....	.0					
120V AC.....	.2					
110V AC.....	.3					
24V AC.....	.5					
24V DC.....	.6					
Display size:						
TFT with 15 " .....	.0					
TFT with 18 " .....	.1					
TFT with special size .....	.9					
Connection to PC:						
4 x 2 Twisted pair .....	.0					
fibre optics .....	.1					
Housing:						
no housing .....						.0
stainless steel .....						.1
steel lacquered.....						.2
Aluminium.....						.3
Special .....						.9
Window:						
Normal .....						.0
Anti reflection coating .....						.1

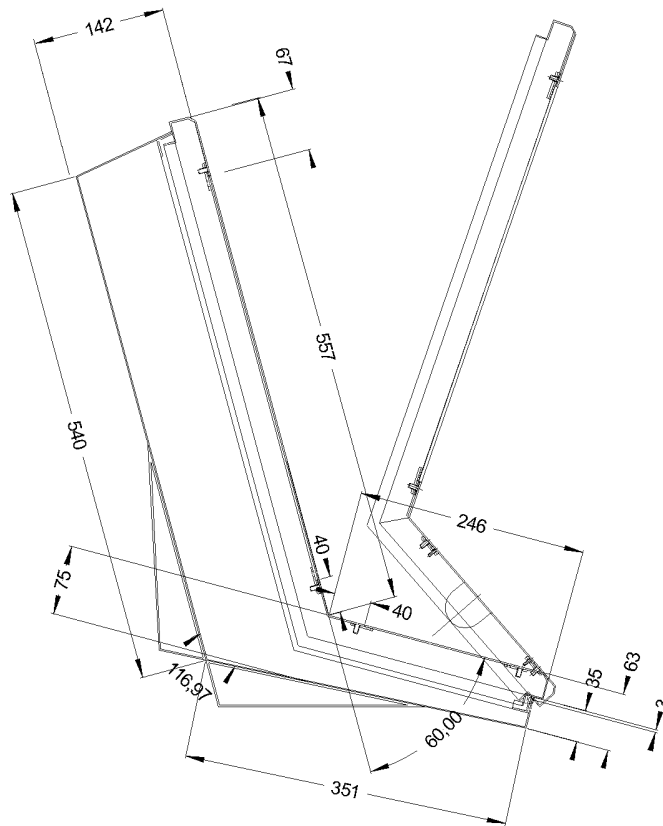
6.5 Application example



6.6 Dimensions Display module PC100, Keyboard- and Tracker ball module



6.7 Dimensions Commander- Housing





(1) **EG-Baumusterprüfbescheinigung**

(2) Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen - **Richtlinie 94/9/EG**



(3) EG Baumusterprüfbescheinigungsnummer

TÜV 00 ATEX 1607 X

(4) Gerät: Explosionsgeschützte PC Komponente Typ PC100...

(5) Hersteller: Gönzheimer Elektronik GmbH

(6) Anschrift: D-67433 Neustadt/Weinstraße, Dr.-Julius Leber-Str.2

(7) Die Bauart dieses Gerätes sowie die verschiedenen zulässigen Ausführungen sind in der Anlage zu dieser Baumusterprüfbescheinigung festgelegt.

(8) Der TÜV Hannover/Sachsen-Anhalt e.V., TÜV CERT-Zertifizierungsstelle, bescheinigt als benannte Stelle Nr. 0032 nach Artikel 9 der Richtlinie des Rates der Europäischen Gemeinschaften vom 23. März 1994 (94/9/EG) die Erfüllung der grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Geräten und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anhang II der Richtlinie.

Die Ergebnisse der Prüfung sind in dem vertraulichen Prüfbericht Nr. 00 PX 18000 festgelegt.

(9) Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit

EN 50 014:1997

EN 50 017:1994

EN 50 019:1994

EN 50 020:1994

(10) Falls das Zeichen "X" hinter der Bescheinigungsnummer steht, wird auf besondere Bedingungen für die sichere Anwendung des Gerätes in der Anlage zu dieser Bescheinigung hingewiesen.

(11) Diese EG-Baumusterprüfbescheinigung bezieht sich nur auf die Konzeption und den Bau des festgelegten Gerätes gemäß Richtlinie 94/9/EG. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und das Inverkehrbringen dieses Gerätes.

(12) Die Kennzeichnung des Gerätes muss die folgenden Angaben enthalten:

 **II 2 G EEx e q [ib] IIC T4**

TÜV Hannover/Sachsen-Anhalt e.V.
TÜV CERT-Zertifizierungsstelle
Am TÜV 1
D-30519 Hannover

Hannover, 01.09.2000



Der Leiter



(13) **A N L A G E**

(14) **EG-Baumusterprüfbescheinigung Nr. TÜV 00 ATEX 1607 X**

(15) Beschreibung des Gerätes

Die explosionsgeschützte PC Komponente Typ PC100... dient als Anzeigeeinheit für einen Industrie PC, der außerhalb des explosionsgefährdeten Bereiches errichtet werden muss und ermöglicht den Anschluss von Bedienkomponenten für diesen PC. Der PC100 darf innerhalb explosionsgefährdeter Bereiche, in denen Betriebsmittel der Kategorien 2 und 3 erforderlich sind, betrieben werden.

Elektrische Daten

Alle nicht eigensicheren Anschlüsse sind in der Zündschutzart „Erhöhte Sicherheit“ ausgeführt.

Versorgungsstromkreis (Kabelschwanz)	U = 230 V AC U _m = 253 V AC
---	---

Datenstromkreise (Kabelschwanz oder optional Glasfaserausführung)	VGA Signal U _m = 253 V AC
---	---

Versorgung (Klemmen 11, 12)	U = 24 V, nur zum internen Anschluss U _m = 253 V AC
--------------------------------	---

Schaltausgänge (Klemmen 1 ... 10)	nur zum internen Anschluss U _m = 253 V AC
--------------------------------------	---

PA Anschluss (Klemme 13)	Potenzialausgleich, nur zum internen Anschluss
-----------------------------	--

PA Anschluss (Mantelklemme)	zum Anschluss an den Potenzialausgleich
--------------------------------	---

Displaysteuerung (Buchse 3 Pin 2, 1; 3, 1; 4, 1; 5, 1; 6,1)	in Zündschutzart Eigensicherheit EEx ib IIC nur zum Anschluss passiver Kontakte Höchstwerte je Stromkreis: U _o = 27,4 V I _o = 2,7 mA P _o = 77 mW höchstzulässige äußere Induktivität 1 mH höchstzulässige äußere Kapazität 87 nF
---	---



Anlage zur EG-Baumusterprüfbescheinigung Nr. TÜV 00 ATEX 1607 X

Bedienkomponentenanschlüsse (Buchse 1, Pin 1 ... 4 und Buchse 2, Pin 1 ... 4)	in Zündschutzart Eigensicherheit EEx ib IIC Höchstwerte je Kanal: $U_o = 5,8 \text{ V}$ $I_o = 204 \text{ mA}$ $P_o = 392 \text{ mW}$ höchstzulässige äußere Kapazität $46 \mu\text{F}$ höchstzulässige äußere Induktivität $0,5 \text{ mH}$
---	--

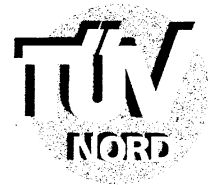
(16) Prüfungsunterlagen sind im Prüfbericht Nr. 00 PX 18000 aufgelistet.

(17) Besondere Bedingung

Die Mantelklemme muss mit dem Potenzialausgleichsleiter verbunden werden.

(18) Grundlegende Sicherheits- und Gesundheitsanforderungen

keine zusätzlichen



1. ERGÄNZUNG

zur

EG-Baumusterprüfbescheinigung Nr. TÜV 00 ATEX 1607 X

der Firma: Gönzheimer Elektronik GmbH
Dr.-Julius Leber-Str.2
D-67433 Neustadt/Weinstraße

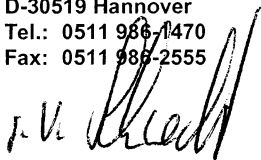
Das Display der explosionsgeschützten PC-Komponente Typ PC100... darf künftig auch entsprechend den im Prüfbericht aufgeführten Prüfungsunterlagen gefertigt werden. Die Änderungen betreffen die Displaygrößen 17" und 19" sowie eine Ausführung mit im Display integriertem Touchscreen.

Alle übrigen Angaben sowie die „Besondere Bedingung“ bleiben unverändert.

Die Prüfungsunterlagen sind im Prüfbericht Nr. 03 YEX 550785 aufgelistet.

TÜV NORD CERT GmbH & Co. KG
TÜV CERT-Zertifizierungsstelle
Am TÜV 1
D-30519 Hannover
Tel.: 0511 986-1470
Fax: 0511 986-2555

Hannover, 25.08.2003



Der Leiter



TÜV NORD CERT

TÜV NORD CERT GmbH Postfach 81 06 32*30506 Hannover

Gönzheimer Electronic GmbH
Postfach 10 05 07

67405 Neustadt an der Weinstraße

Ihre Nachricht vom

Durchwahl
-1582

Email
khoferichter@tuev-nord.de

Bitte bei Antwort angeben
TÜV NORD CERT-ho-bd

Datum
20.05.2003

TÜV 00 ATEX 1607X – Gerät PC 100

Sehr geehrter Herr Gönzheimer,

die mit Schreiben vom 14.05.2003 eingereichten technischen Änderung haben wir erhalten. Gegen diese Änderungen bestehen aus sicherheitstechnischer Sicht keine Bedenken. Die Änderungen werden im Rahmen der nächsten Ergänzung eingearbeitet.

TÜV NORD CERT

Mit freundlichen Grüßen

Klaus Hoferichter

TÜV NORD CERT GmbH & Co. KG • Am TÜV 1 • 30519 Hannover

Tel.: (0511) 986 - 1453
Fax: (0511) 986 - 1590
info.tncert@tuev-nord.de
www.tuev-nord.de

Amtsgericht Hannover, HRA 26558
Ust-IdNr.: 813295207 Steuer-Nr.: 25/07/01093
Bankverbindung:
Deutsche Bank Hannover (BLZ 250 700 70) 19 23 747

TÜV NORD CERT Verwaltungs GmbH, Hannover
Geschäftsführer:
Dipl.-Ing. Hans-Günter Seewald,
Dipl.-Ing. Herbert Stürwold