BARTEC

User manual Version 3.00

Ex Remote station XGA 15" family type 17-71KB-45../....
Ex Remote station SXGA 18" family type 17-71KB-55../....

BARTEC

User manual

Remote station XGA 15" family

Remote station SXGA 18" family

Publisher and copy rights:

BARTEC GmbH
Max-Eyth-Strasse 16
97980 Bad Mergentheim
Germany

Phone: +49 7931 597-0 (Switch Office)
Fax: +49 7931 597-183

Inhaltsverzeichnis

1. General

1.1 Components

The **Ex remote station** is a monitor extension with a keyboard and a trackball (optionally with mouse connection). Furthermore, the Ex remote station is optionally available with a touch-screen.

The device was especially developed for application in hazardous areas and is ATEX-certified:

- Remote station XGA 15" family type 17-71KB-45../…. for Zone 1
  Remote station SXGA 18" family type 17-71KB-55../….
- Remote station XGA 15" family type 17-71KB-450./.005 for Zone 21
  Remote station SXGA 18" family type 17-71KB-550./.005

The type of protection is Ex d – flameproof enclosure – with intrinsically safe circuits routed to the outside and Ex d cable glands or Ex d cable entries.

For Zone 21, only the aluminium version in connection with the BMF 105 stainless steel keyboard with mouse!

The complete Ex Remote station consists of the following components:

Ex d Remote station		Type 17-71K1-35../....	PTB 00 ATEX 1003 enclosed 1st supplement IBExU 02 ATEX 1163
Power limiting unit		Type 17-71K4-..01/....	KEMA 98 ATEX 1988 X enclosed 1st supplement enclosed 2nd supplement enclosed 3rd supplement
PC input device	keyboard trackball mouse	Type 17-71K3-...1/….	KEMA 98 ATEX 2558 X enclosed 1st supplement enclosed 2nd supplement enclosed 3rd supplement enclosed 4th supplement

For special conditions also see the appropriate EC-type-examination certificate.

1.2 Overview - Product family

Ex Remote station 15" family

Type 17-71KB-45../.0..	Standard version
Type 17-71KB-45../.005	DustEx version

Ex Remote station 18" family

Type 17-71KB-55../.0..	Standard version
Type 17-71KB-55../.005	DustEx version

Ex Remote station 15" and 18" family

Type 17-71KB-.53./.000	with touch screen

Ex Remote station 15" and 18" family

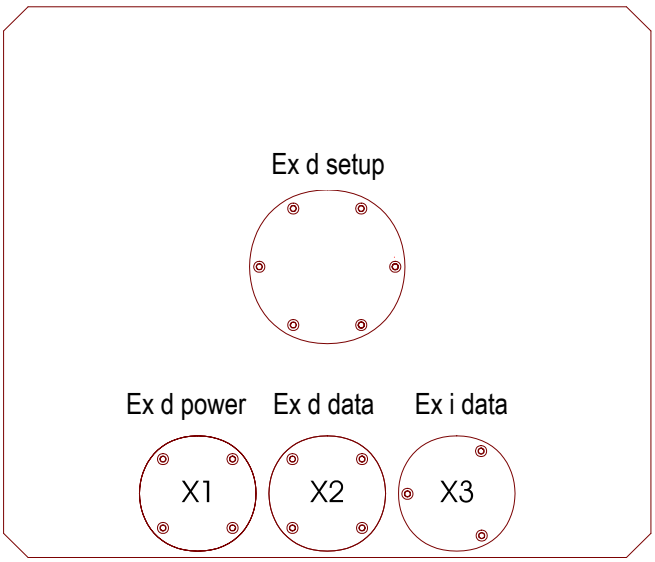
Type 17-71KB-.50./.3..	Stainless steel version

1.3 General installation instructions

Please observe the following points for safe commissioning:

The user must mount and install the Ex d enclosures with their corresponding electronic components within the Ex area prior to commissioning. The sealed Ex d enclosure may be installed directly within the Ex area. Altogether four sealed openings are located on the back of the device. The sealed openings that are accessible to the user are arranged and marked as follows.

Openings which are accessible for the user are set and marked as follows:



These openings have different functions and must be considered as separate units

1. Ex d compartment X1 with terminals for supply voltage (Ex d supply) as well as Ex d compartment X2 with terminals for data lines (Ex d data).

   Within explosive atmospheres, these terminal compartments may be opened and used exclusively when disconnected from the supply.

2. Terminal compartment X3 with terminals for an Ex i input unit (Ex i data). Keyboard, type 17-71K3-...1/.... - KEMA 98 ATEX 2558 X from BARTEC.

   Within explosive atmospheres, this terminal compartment can also be worked on when voltage is applied.

3. Opening for one-time settings on the device (Ex d settings).

   The access may be opened only when the absence of any explosive atmosphere is guaranteed.

   Prior to commissioning of the device (in the presence of explosive atmospheres) make sure that the enclosure is completely sealed and all screws tightened.

1.4 Assembly and disassembly

During installation ensure safe and secure mounting with easy accessibility on site.

- Do not fail to disconnect from supply prior to the enclosure's assembly and disassembly.

You need the following tools for assembly:

Ex d cable gland	open ring nut wrench DIN 3118, SW 27.
lid (back)	hexagon-socket wrench SW 3; DIN 911

1.5 Maintenance, modification and service

As the Ex Remote station is a very complex device, the manufacturer **must carry out** all maintenance and repair works, or persons authorized by the manufacturer.

1.6 Commissioning

Commissioning of the Ex Remote station requires the use of the openings of the Ex d enclosure described under „Commissioning".

Both voltage supply and necessary data line must be connected to the terminals provided and marked for such purpose (see the terminal description, chapter "Connections for operation").

Afterwards make sure to safely close the terminal compartments and to tighten all the screws.

The external PE connection must be included in the equipotential bonding system on site.

Trained personnel must carry out these activities. The terminals are located within separate terminal compartments in order to guarantee an easy installation of the connections. Furthermore, the user is kept from direct contact with the mounted hardware components.

Separately certified Ex d cable glands or Ex d cable entries are used.

When closing the flameproof compartments make sure that the joint surfaces have been cleaned and that all screws set equally tight.

The device may be commissioned only after complete assembly of the enclosure and in total absence of explosive atmospheres.

Connection cables:

The connection cables for the data and the Supply voltage must be installed according to EN 60079-14.

The terminal assignment of the individual compartments is described in the Operator panel manual.

Important information:

- The user is only allowed to carry out the necessary wiring works on the terminals accessible to him. Any further disassembly must be carried out by the manufacturer or persons authorised by the manufacturer.
- Ex d compartment X1 with terminals for supply voltage (Ex d supply) and Ex d compartment X2 with terminals for data lines (Ex d data).
- Within explosive atmospheres, these terminal compartments may be opened and used exclusively when disconnected from the supply.
- Compartment X3 with terminals for Ex i input unit (Ex i data). Keyboard type 17-71K3-...1/.... KEMA 98 ATEX 2558 X from BARTEC.
- Within explosive atmospheres, this terminal compartment can also be worked on when voltage is applied.
- Opening for one-time settings on the device (Ex d settings)
  The access may be opened only when the absence of any explosive atmosphere is guaranteed.
- Prior to commissioning of the device (in the presence of explosive atmospheres) make sure that the enclosure is completely sealed and all screws tightened.
- Devices, which have sustained any damage to the glass front, must be shut down immediately.

NPT threads are provided and marked for the Ex d line bushings or Ex d cable glands. Other, non-marked threads are manufactured according to the ISO standards.

2. Technical data

2.1 Specifications Remote station

Explosion protection Remote station

Type	:	17-71KB-.5.1/.... IIB version 17-71KB-.5.3/.... IIC version
Ex protection type	:	⟨Ex⟩ II 2G EEx d [ia] IIB resp. IIC T6 ⟨Ex⟩ II 2D T 80 °C IP 66 *
Certification	:	PTB 00 ATEX 1003 IBExU 02 ATEX 1163 *

Explosion protection keyboard

Type	:	17-71K3-...1/....
Ex protection type	:	⟨Ex⟩ II 2G EEx ia IIC T4
Certification	:	KEMA 98 ATEX 2558 X
Ambient temperature		0 to +50 °C

General data

Communication	:	connection to VGA port of a PC in the non hazardous area with keyboard and mouse via STP/S cable; 4 x 2 x 23 AWG
Requirement to base station	:	VGA graphics board with following technical data: – VGA-, SVGA-, XGA-, SXGA-resolution – Vertical sync frequency 60 to 75 Hz Keyboard and trackball (optional mouse) with a PS 2 connector Touch screen via interface RS232
Transmission distance	:	up to 300 m
Supply voltage	:	AC 230 V (85 V to 265 V), 47 Hz to 63 Hz
Power consumption	:	max. 60 watt
Dimensions	:	approx. (w) 500 x (h) 430 x (d) 150 mm
Weight	:	approx. 42 kg
IP-protection	:	IP 65 (front)
Fitting versions	:	with stand, table version, wall mounting, support arm mounting, customized solution
Surface material	:	Aluminium powder-coated, stainless steel

* only for aluminium version with stainless steel keyboard BMF 105

2.1.1 **Specification Remote station XGA 15" family** - Type 17-71KB-45../..

Display	:	– TFT-colour display, XGA-resolution, 1,024 x 768 pixels – 16.2 million colours – brightness 250 cd/m² (typ.) – contrast 300:1 (typ.) – view angle: left / right 65° – longlife CCFL-lighting

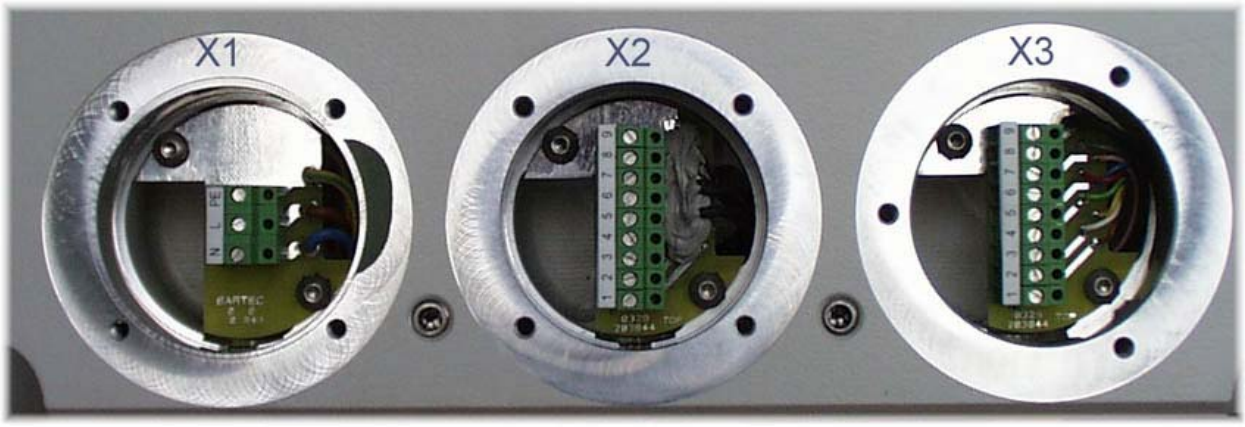
2.1.2 **Specification Remote station SXGA 18" family** - Type 17-71KB-55../..

Display	:	– TFT-colour display, SXGA-resolution, 1,280 x 1,024 pixels – 16.7 million colours – brightness 250 cd/m² (typ.) – contrast 600:1 (typ.) – view angle: left / right 89° – longlife CCFL-lighting

2.2 Overview

The connection cables of the interfaces must be installed in accordance with EN 60079-14.

The interfaces are labelled in the computer enclosure as follows:



Ex d power Ex d data Ex i data

2.3 Connections for operation

2.3.1 Power supply

Terminal strip X1	Connection values
L	AC 100 V to AC 120 V 50 to 60 Hz or AC 200 V to AC 240 V 50 to 60 Hz
N	Neutral
PE	Protective earth

- The power supply is to be fused to a maximum 16 A.
- The power supply must be supplied via a switch.

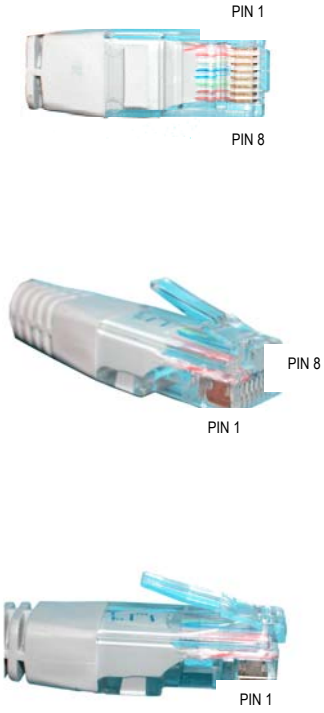
2.3.2 EEx i keyboard / mouse

The following functions are assigned to the individual terminals at interface X3 (keyboard and trackball):

Terminal strip X3 (Power limiting unit)		Keyboard with corresponding lead colours	
Designation	**Signal**	**BMF 12**	**BMF 102**
X3.1	keyboard 5V	brown	brown
X3.2	keyboard Data	white	white
X3.3	keyboard Clock	yellow	yellow
X3.4	keyboard earth	green	green
X3.5	trackball earth		blue
X3.6	trackball 5 V		red
X3.7	trackball Data		pink
X3.8	trackball Clock		grey
X3.9	screen	screen	screen

2.3.3 Data cable (video, keyboard and trackball) from local station

The following functions are assigned to the individual terminals of the interface X2 :



Terminal X2 (STP cable from local station)

Remote station terminal X2		STP cable Colour pair	Network socket function	
X2.1		ws/or	TxD 2	1
X2.2		or	RxD 2	2
X2.3		ws/gn	TxD 3	3
X2.4		bl	RxD 1	4
X2.5		ws/bl	TxD 1	5
X2.6		gn	RxD 3	6
X2.7		ws/bn	TxD 4	7
X2.8		bn	RxD 4	8
X2.9		screen	screen	

Colour sequence T568B

Note:

When connecting the network socket between the local and the remote station, it must be ensured that the numerical sequence imprinted on the power socket's PCB is attached in accordance with the colour code listed in the above table.

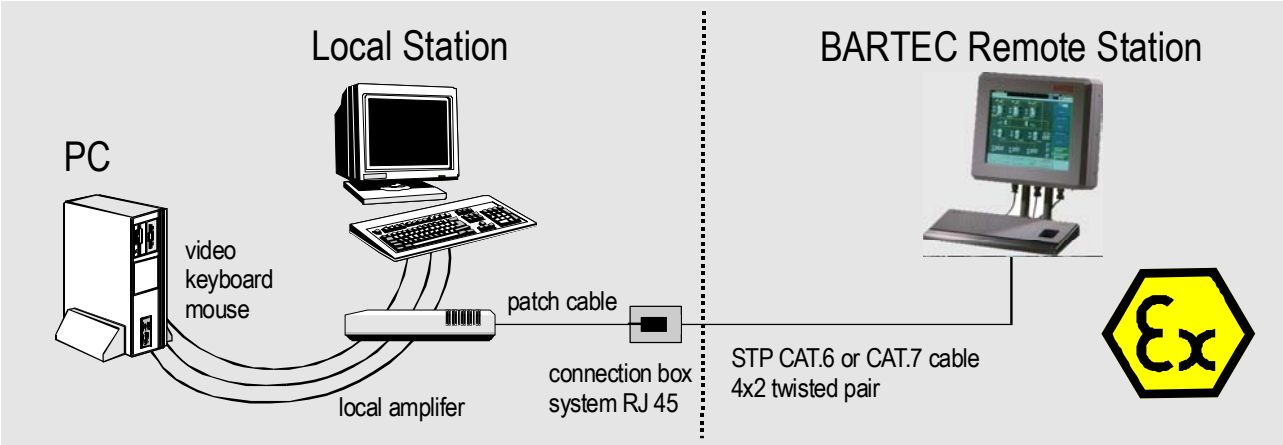
When connecting the network socket to the local station, the provided patch cable must be used!

Important:

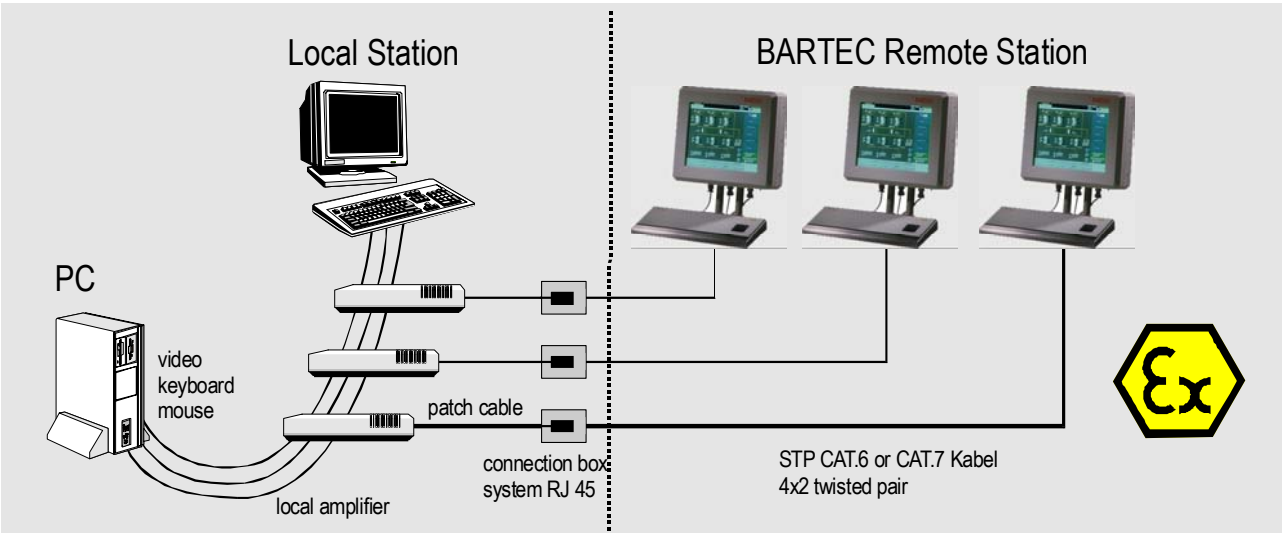
No crossed patch cables may be used!!

3. Overview of connection diagram

3.1 Standard application point to point



3.2 Special application cascade circuit

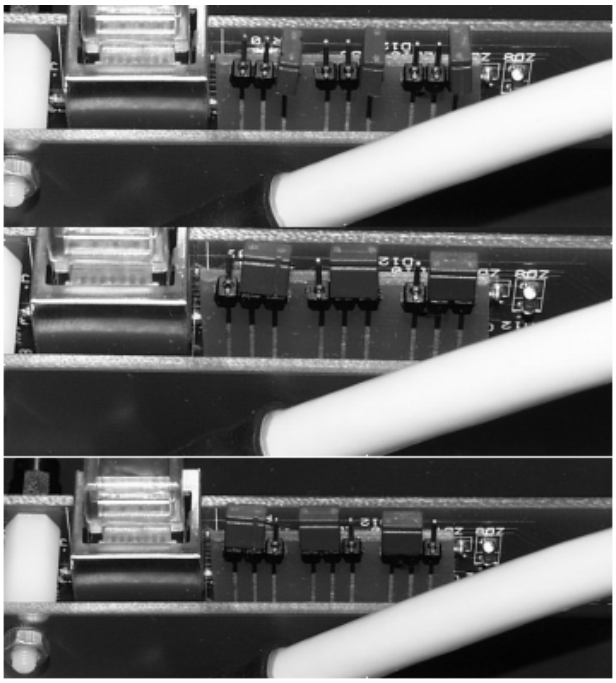


Special note:

When interconnecting three or more devices, a separate power supply unit (type 03-9911-0018) should be used for the local amplifiers.

4. Possible adjustments

4.1 Adjustment of cable length



Setup cable length from 0 to 50 (short)

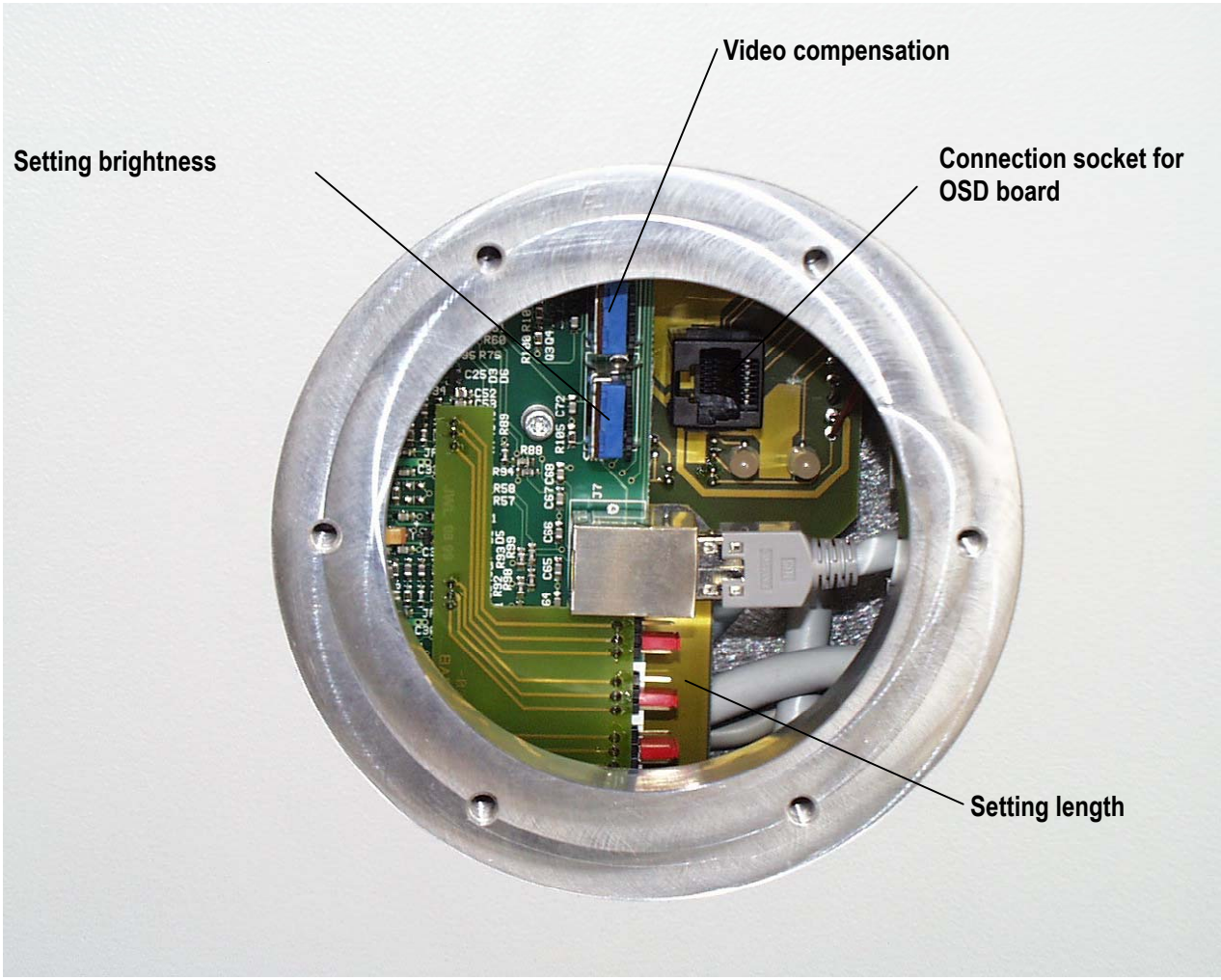
Setup cable length from 50 to 100 m (mid)

Setup cable length from > 100 m (long)

While maximum resolution is assumed, the stated cable lengths depend on the actual resolution. With lower resolutions, larger distances can be realized (up to 300 m)

All three jumper sets must be set on the same position. Only set the jumpers if the system is switched off.

4.2 Fine tuning picture quality



5. Operation

5.1 Connection local unit

The following steps are to do:

- switch off your computer
- disconnect keyboard, trackball and monitor from your computer.
- connect the Local station to your computer
- connect keyboard, trackball and monitor from your computer to the.
- Now you can power on your computer and check that the keyboard, mouse and monitor operates correctly.

5.2 Connect the Local station with Remote station

- Switch off your computer.
- make the connection between the Local station and Remote station.
- Pay attention for the adjustments of the cable length

5.3 Connection EEx i keyboard and remote station

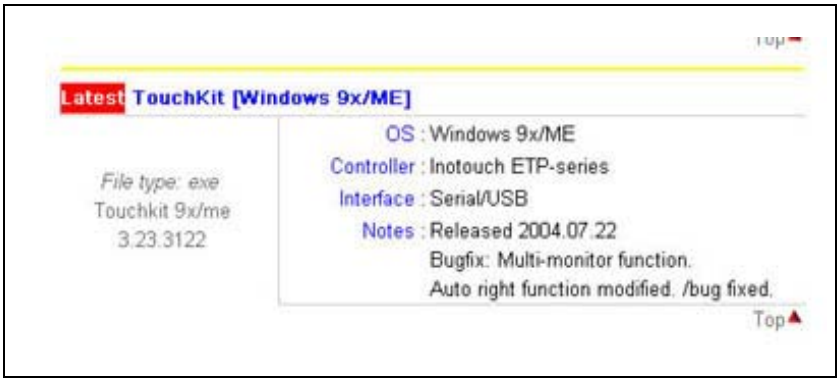
- make the connection between the Remote station and the EEx i keyboard

5.4 Installation touch screen (only for type 17-71KB-.53./....)

- Observe the notes contained in the manual on the enclosed CD!
- Install the touch driver on your PC from the enclosed CD or download it free of charge under www.inotouch.co.kr/support/software.asp

- Available drivers:
  - Windows 95, 98(SE), ME NT4, 2000
  - Windows XP, XP Tablet PC Edition
  - Windows CE2.12 / 3.0 / .Net, DOS
  - Redhat / MANDrake Linux
  - iMac

approx.



- Start the TouchKit program and calibrate the touch-screen.
- Normally, a 4-point calibration is sufficient. If not, a 25-point calibration is possible.

Notice:

A1. Operation

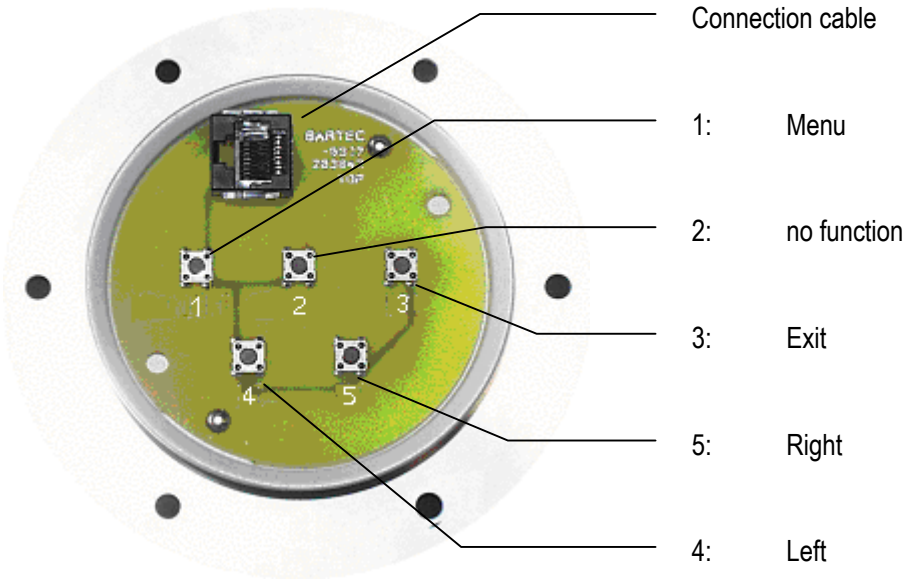
Please read this instruction first!

The factory settings of the OSD-Menu are optimised. The OSD Menu should be used only in the case of incorrect screens or for individual reasons. Once the factory settings are wrongly adjusted, for example, the screen is not filled completely, use "**Reset**" in the main menu "**Utility**". With this function the factory settings are restored.

The keys on the Remote station do have double functions. Please find the description of the functions below.

On Screen Display

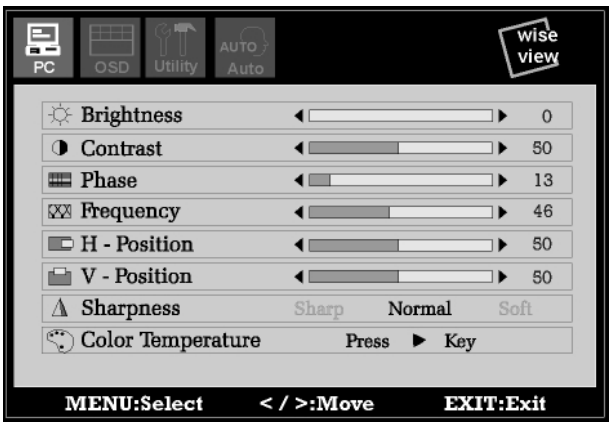
To start the **O**n **S**creen **D**isplay, loosen the operator panel from the back of the unit and connect it with the attached cable (see photo).



	Key	Main Menu	Sub Menu
1	Menu	Selection Menu	Leaf (previous)
2			
3	Exit	Leave Menu	Leave Sub menu
4	Left	Leaf (previous)	Increment
5	Right	Leaf (next)	Decrement

OSD-Menu

Main Menu



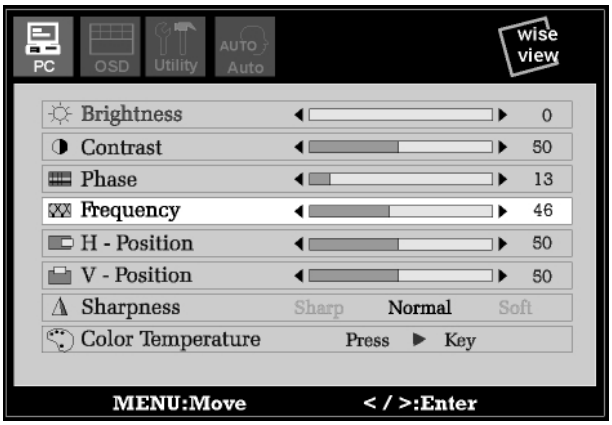
1: Menu: Select Sub menu

3: Exit: Leave menu

4: Left: Leaf (previous)

5: Right: Leaf (next)

PC



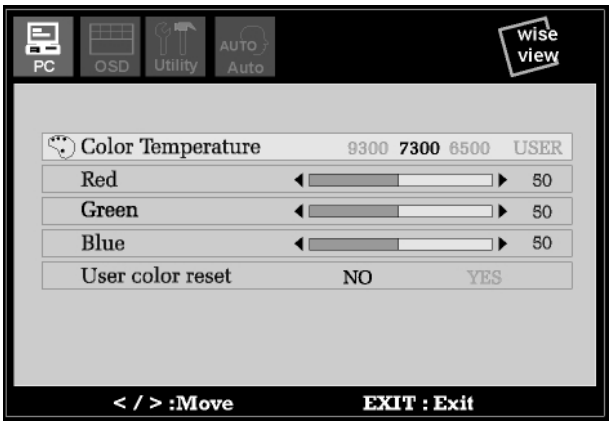
1: Menu: Select (next sub menu)

3: Exit: Leave sub menu.

4: Left: Increment (- / key)

5: Right: Decrement (+ / key)

Color Temperature



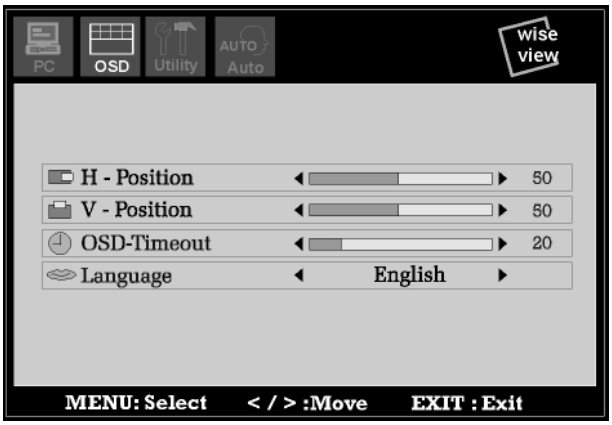
1: Menu: Select (next sub menu)

3: Exit: Leave sub menu

4: Left: Increment (- / key)

5: Right: Decrement (+ / key)

OSD



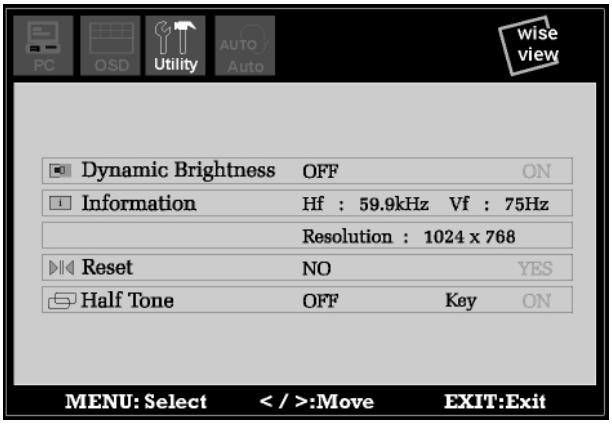
1: Menu: Select (next sub menu)

3: Exit: Leave sub menu

4: Left: Increment (- / key)

5: Right: Decrement (+ / key)

Utility



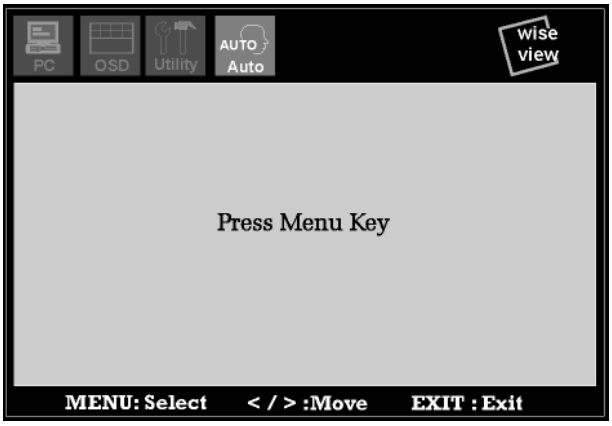
1: Menu: Select (next sub menu)

3: Exit. Leave sub menu

4: Left: Increment (- / key)

5: Right: Decrement (+ / key)

Auto Adjustment



1: Menu: Select (next sub menu)

3: Exit. Leave sub menu

4: Left: Increment (- / key)

5: Right: Decrement (+ / key)

Notice:

B1. Operation

Please read this instruction first!

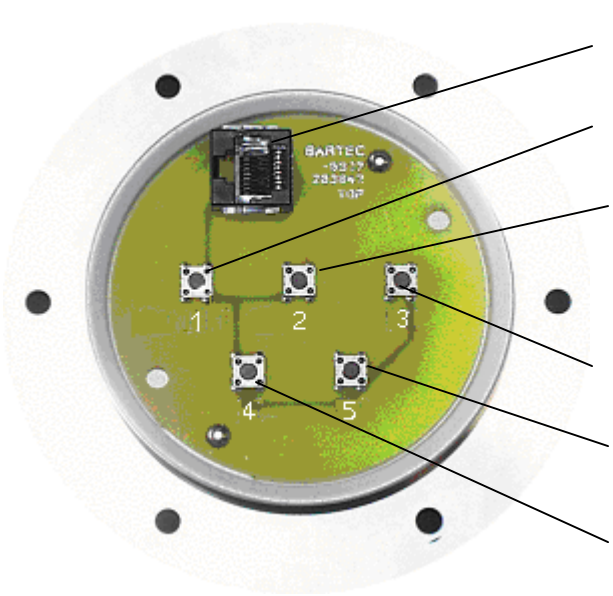
The factory settings of the OSD-Menu are optimised. The OSD Menu should be used only in the case of incorrect screens or for individual reasons. Once the factory settings are wrongly adjusted, for example, the screen is not filled completely, use **„Auto Adjust"** at Key 4. With this function the factory settings are restored.

The Key **1 (Menu)** leads into the TOP menu. Here the video mode is adjusted. Do only select the function **Analog RGB. Attention:** An other selection leads to mis-function!

The keys on the operator panel do have double functions. Please find the description of the functions in the table under B1.1

B1.1. On Screen Display

To start the **O**n **S**creen **D**isplay, loosen the operator panel from the back of the unit and connect it with the attached cable (see photo).



Connection cable

Menu

Select

Power On/Off

UP

DOWN

	Key	Main Menu	Sub Menu
1	Menu	Selection / Deselection Main Menu	Leave Sub Menu
2	Select	Selection Menu (upwards)	Select function
3	Power On / Off		
4	DOWN	Leaf (previous)	Leaf (previous)
5	UP	Leaf (next)	Leaf (next)

B1.1.1. OSD-Menu

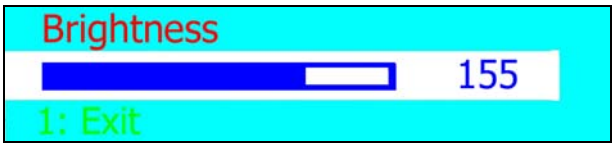
Main Menu Brightness

1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)



1: Menu:Leave sub menu

4: Down: Decrement (- / Key)

5: Up: Increment (+/ Key)

Main Menu Black Level

1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

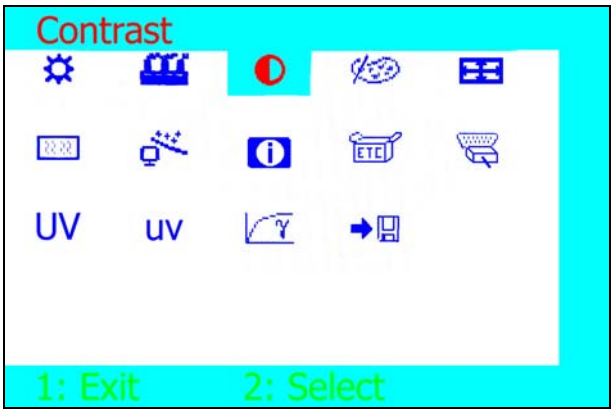
5: Up: Leaf (next)

1: Menu:Leave sub menu

4: Down: Decrement (- / Key)

5: Up: Increment (+/ Key)

Main Menu **Contrast**

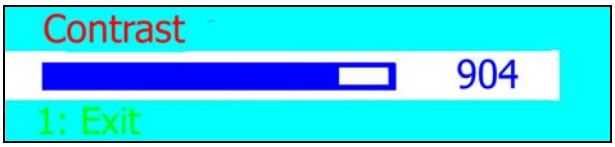


1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)

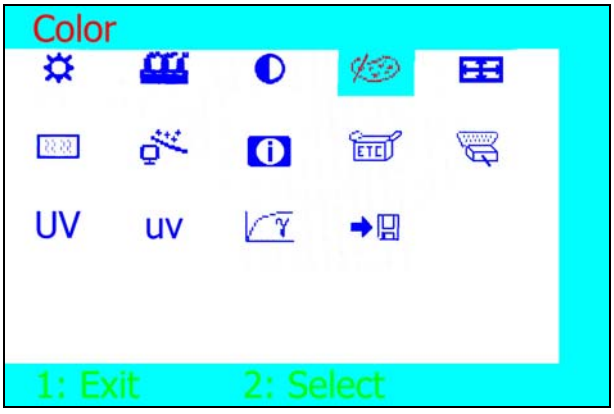


1: Menu:Leave sub menu

4: Down: Decrement (- / Key)

5: Up: Increment (+/ Key)

Main Menu **Color**

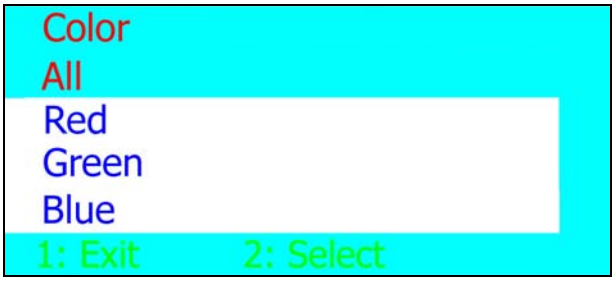


1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)



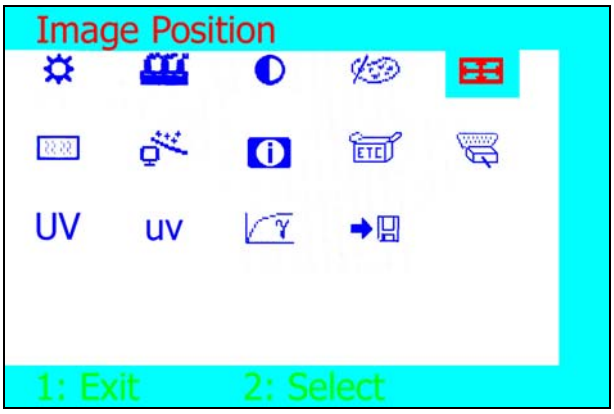
1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)

Main Menu **Image Position**



1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)

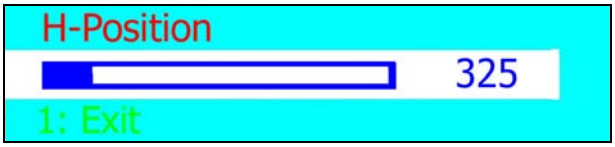
Sub Menu **Image Position**

1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)



1: Menu:Leave sub menu

4: Down: Decrement (- / Key)

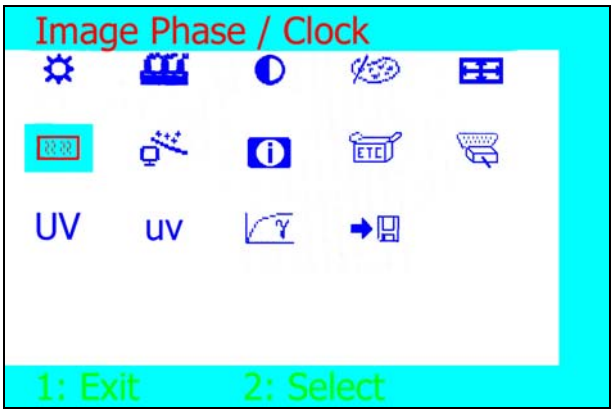
5: Up: Increment (+/ Key)

1: Menu:Leave sub menu

4: Down: Decrement (- / Key)

5: Up: Increment (+/ Key)

Main Menu **Image**



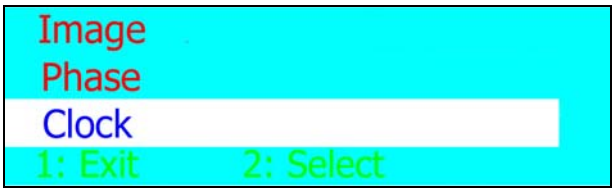
1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)

Sub Menu **Image**



1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)

1: Menu:Leave sub menu

4: Down: Decrement (- / Key)

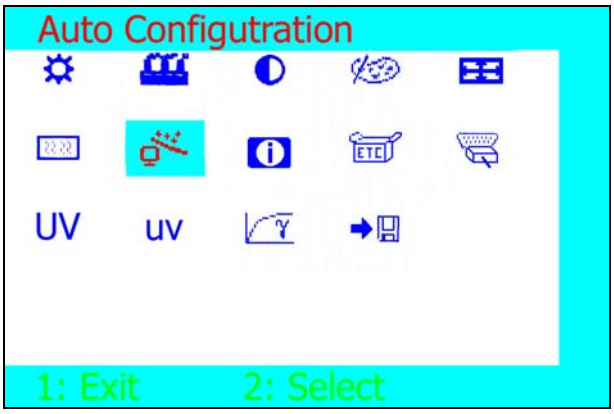
5: Up: Increment (+/ Key)

1: Menu:Leave sub menu

4: Down: Decrement (- / Key)

5: Up: Increment (+/ Key)

Main Menu **Auto Configuration**

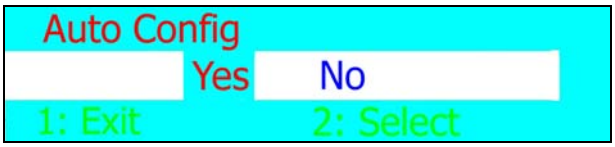


1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)



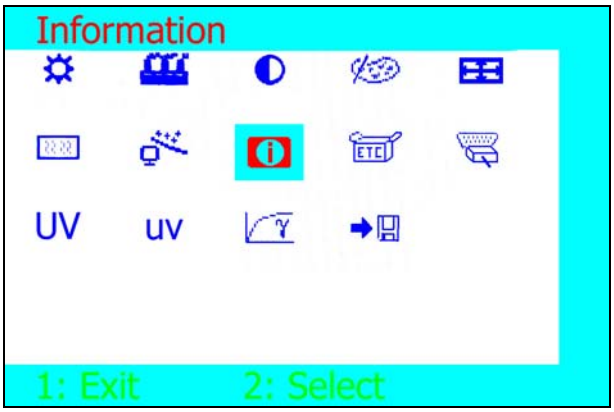
1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)

Main Menu **Information**



1: Menu:Leave sub menu

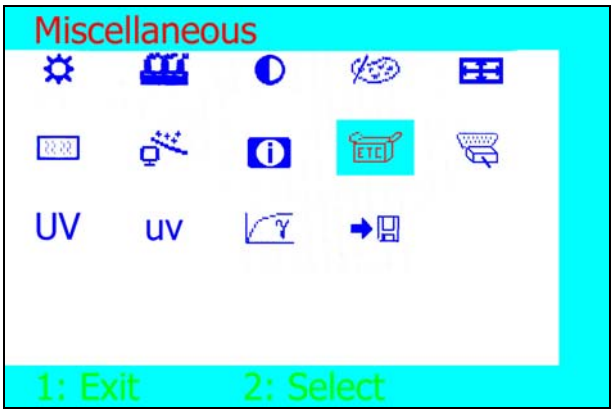
2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)

1: Menu:Leave sub menu

Main Menu **Miscellaneous**



1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)

Sub Menu **Miscellaneous**

1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

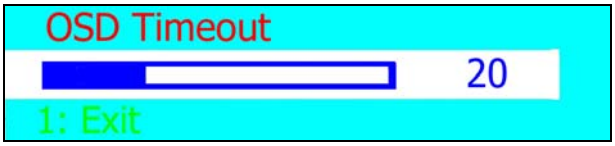
5: Up: Leaf (next)

1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

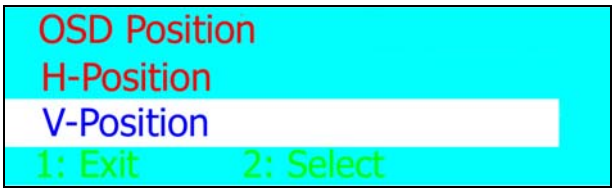
5: Up: Leaf (next)



1: Menu:Leave sub menu

4: Down: Decrement (- / Key)

5: Up: Increment (+/ Key)

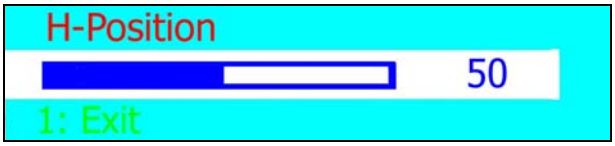


1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

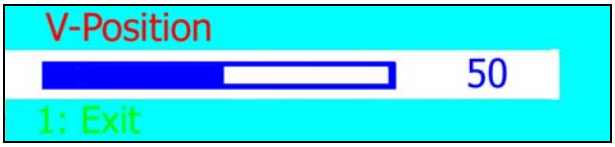
5: Up: Leaf (next)



1: Menu:Leave sub menu

4: Down: Decrement (- / Key)

5: Up: Increment (+/ Key)



1: Menu:Leave sub menu

4: Down: Decrement (- / Key)

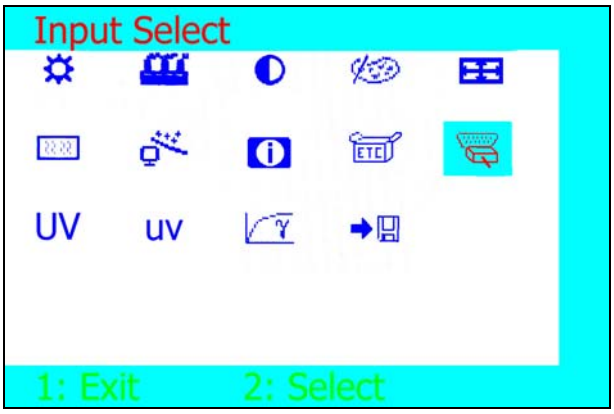
5: Up: Increment (+/ Key)

1: Menu:Leave sub menu

4: Down: Decrement (- / Key)

5: Up: Increment (+/ Key)

Main Menu **Input Select**



1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)

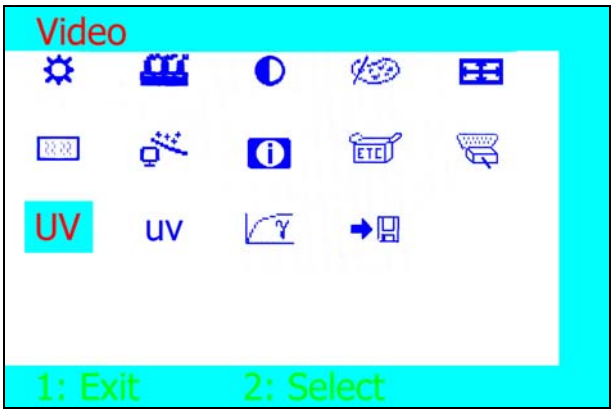
1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)

Main Menu **Video**



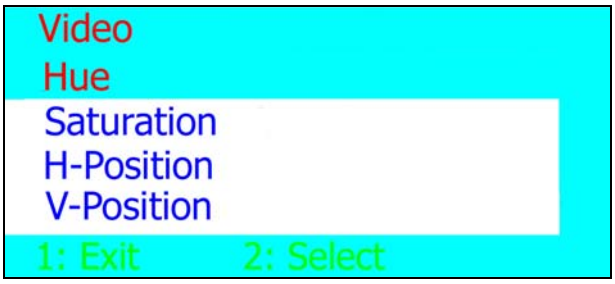
1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)

Sub Menu **Video**

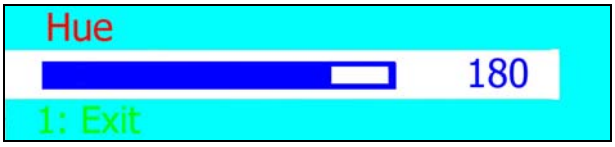


1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

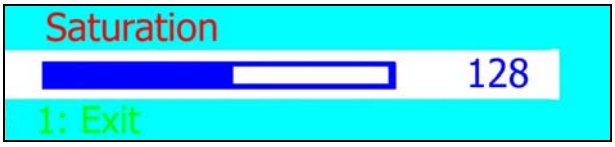
5: Up: Leaf (next)



1: Menu:Leave sub menu

4: Down: Decrement (- / Key)

5: Up: Increment (+/ Key)



1: Menu:Leave sub menu

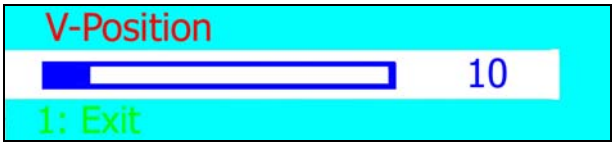
4: Down: Decrement (- / Key)

5: Up: Increment (+/ Key)

1: Menu:Leave sub menu

4: Down: Decrement (- / Key)

5: Up: Increment (+/ Key)

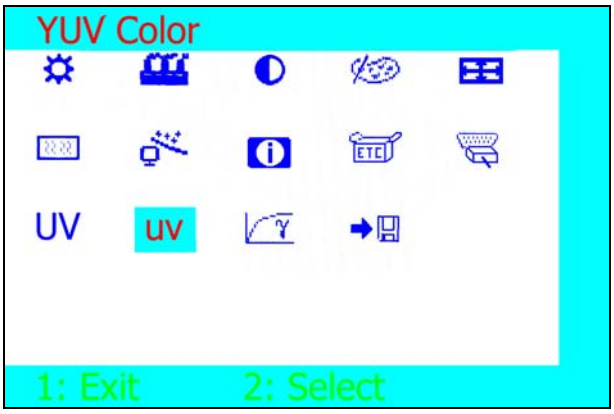


1: Menu:Leave sub menu

4: Down: Decrement (- / Key)

5: Up: Increment (+/ Key)

Main Menu **YUV Color**



1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)

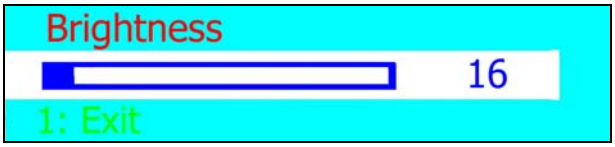
Sub Menu **YUV Color**

1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)



1: Menu:Leave sub menu

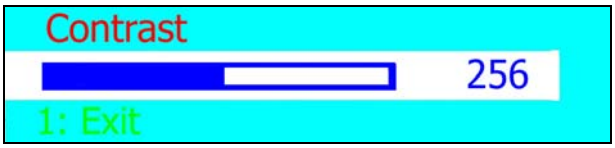
4: Down: Decrement (- / Key)

5: Up: Increment (+/ Key)

1: Menu:Leave sub menu

4: Down: Decrement (- / Key)

5: Up: Increment (+/ Key)



1: Menu:Leave sub menu

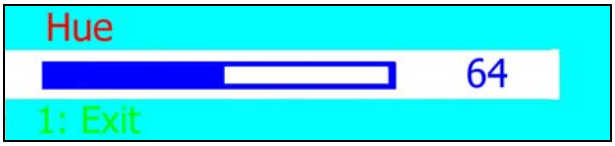
4: Down: Decrement (- / Key)

5: Up: Increment (+/ Key)

1: Menu:Leave sub menu

4: Down: Decrement (- / Key)

5: Up: Increment (+/ Key)



1: Menu:Leave sub menu

4: Down: Decrement (- / Key)

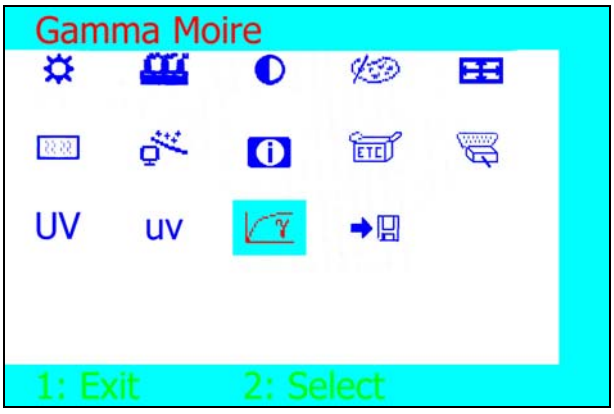
5: Up: Increment (+/ Key)

1: Menu:Leave sub menu

4: Down: Decrement (- / Key)

5: Up: Increment (+/ Key)

Main Menu Gamma Moire



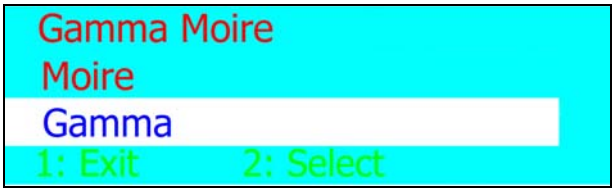
1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)

Sub Menu **Gamma Moire**



1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)

1: Menu:Leave sub menu

4: Down: Decrement (- / Key)

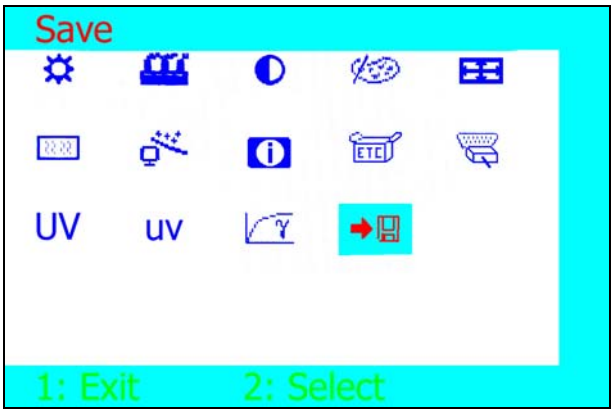
5: Up: Increment (+/ Key)

1: Menu:Leave sub menu

4: Down: Decrement (- / Key)

5: Up: Increment (+/ Key)

Main Menu **Save**

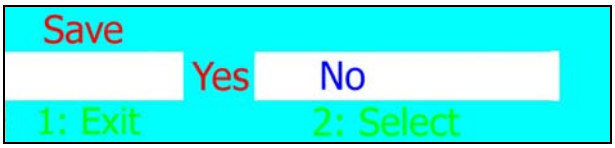


1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)



1: Menu:Leave sub menu

2: Select: Select

4: Down: Leaf (previous)

5: Up: Leaf (next)

Notice:

Declaration of EC-Conformity

■ Ex d Remote station	Type 17-71KB-45../....
	Type 17-71KB-55../....

EC-Type-Examination Certificates

■ Ex d-Remote station	PTB 00 ATEX 1003
	IBExU 02 ATEX 1163
■ Power limiting unit	KEMA 98 ATEX 1988 X
	enclosed 1st supplement
	enclosed 2nd supplement
■ PC input device	KEMA 98 ATEX 2558 X
	enclosed 1st supplement
	enclosed 2nd supplement
	enclosed 3rd supplement

Erklärung der EG-Konformität
Declaration of EC-Conformity
Attestation de conformité CE

BARTEC GmbH
Max-Eyth-Straße 16
97980 Bad Mergentheim

Wir	We	Nous
BARTEC GmbH,		
erklären in alleiniger Verantwortung, dass das Produkt	declare under our sole responsibility that the product	attestons sous notre seule responsabilité que le produit
EX d-PC Remotestation	**EX d-PC** Remotestation	**EX d-PC** Remotestation

Typ-Nr.: 17-71KB-45../....

auf das sich diese Erklärung bezieht den Bestimmungen der folgenden Richtlinien entspricht	to which this declaration relates is in accordance with the provision of the following directives	se référant à cette attestation correspond aux dispositions des directives sulvantes
94/9/EG **89/336/EWG**	**94/9/EC** **89/336/EEC**	**94/9/CE** **89/336/CEE**
und mit folgenden Normen oder normativen Dokumenten übereinstimmt	and is in conformity with the following standards or other normative documents	et est conforme aux normes ou documents normatifs ci-dessous

EN 50014,EN 50018,EN 50020,EN 61000-6-4 (2002),EN 61000-6-2 (2002),EN 60950

Kennzeichnung	Marking	Marquage

CE 0032

Ex II 2G EEx d (ia) II B bzw. II C T6
PTB 00 ATEX 1003;KEMA 98 ATEX 1988X;KEMA 98 ATEX 2558X

Bad Mergentheim, den 13.10.2004

Dipl.-Ing. Gisbert Schmahl
Geschäftsleitung Technik

Erklärung der EG-Konformität
Declaration of EC-Conformity
Attestation de conformité CE

BARTEC
BARTEC GmbH
Max-Eyth-Straße 16
97980 Bad Mergentheim

Wir	We	Nous
BARTEC GmbH,		
erklären in alleiniger Verantwortung, dass das Produkt	declare under our sole responsibility that the product	attestons sous notre seule responsabilité que le produit
EX d-PC Remotestation	**EX d-PC** Remotestation	**EX d-PC** Remotestation

CE

Typ-Nr.: 17-71KB-55../....

auf das sich diese Erklärung bezieht den Bestimmungen der folgenden Richtlinien entspricht	to which this declaration relates is in accordance with the provision of the following directives	se référant à cette attestation correspond aux dispositions des directives sulvantes
94/9/EG **89/336/EWG**	**94/9/EC** **89/336/EEC**	**94/9/CE** **89/336/CEE**
und mit folgenden Normen oder normativen Dokumenten übereinstimmt	and is in conformity with the following standards or other normative documents	et est conforme aux normes ou documents normatifs ci-dessous

EN 50014,EN 50018,EN 50020

Kennzeichnung	Marking	Marquage

CE 0032

Ex II 2G EEx d (ia) II B bzw. II C T6
PTB 00 ATEX 1003;KEMA 98 ATEX 1988X;KEMA 98 ATEX 2558X
EN 61000-6-4 (2002);EN 61000-6-2 (2002)

EN60950

Bad Mergentheim, den 03.12.2003

Dipl.-Ing. Gisbert Schmahl
Geschäftsleitung Technik

Physikalisch-Technische Bundesanstalt
Braunschweig and Berlin

(1) **EC-TYPE-EXAMINATION CERTIFICATE**

(2) Devices and safety systems for the use in explosive areas as prescribed – directive 94/9/EC

(3) EC prototype test certification number

PTB 00 ATEX 1003

(4) Device: Ex d remote station type 17-71K1-35..../....

(5) Manufacturer: BARTEC Componenten und Systeme GmbH

(6) Address: Max-Eyth-Straße 16, D-97980 Bad Mergentheim

(7) The type of construction of this device as well as the different permissible versions are specified in the appendix to this prototype test certification.

(8) The Physikalisch-Technische Bundesanstalt as authorized institution no. 0102 according to article 9 of the directives of the Council of the European Community of March 23rd , 1994 (94/9/EC) certifies the fulfillment of the fundamental safety and health requirements for the conception and construction of devices and safety systems to be used in explosive areas according to appendix II of the directive.

The test results are put down in the confidential test report PTB Ex 00-10285.

(9) The basic safety and health requirements are fulfilled by their correspondence with
EN50014:1997 EN 50018:1994 EN50020:1994

(10) If the certification number is followed by the sign "X", special conditions for the safe application of the device will be indicated in the appendix to this certification.

(11) This EC prototype test certification merely refers to the conception and construction of the device specified according to directive 94/9/EC. Additional requirements of this directive apply to the manufacturing and distribution of this device.

(12) The marking of the device must include the following information:

II 2 G EEx d[ia] IIB resp. IIC T6

Zertifizierungsstelle Explosionsschutz Braunschweig, 20.04.2000

Signed for the PTB

Dr.-Ing. U. Klausmeyer

Page 1 of 3

Physikalisch-Technische Bundesanstalt
Braunschweig and Berlin

(13) **Appendix**

(14) **EC- type examination certificate number PTB 00 ATEX 1003**

(15) Description of the device
The Ex d remote station type 17-71K1-35../.... consists of a flameproof enclosure with window and operator opening. The Ex d remote station is run by means of a PC input device of type 17-71K3-...1/.... . The connection is established via terminal departments with direct and flameproof line bushings or connection thread for a conduit system.

Electrical data

Rated insulation voltage	up to	250 V
Rated voltage		100 V to 240 V, 50 Hz to 60 Hz
Data cable	up to	24 V ±5%
Power dissipation		
monitor frame	max.	35 W
electronics frame	max.	25 V
Rated cross section		
keyboard (intrinsically safe)	max.	8 x 1.5 mm²
supply	max.	3 x 1.5 mm²
data interface	max.	8 x 1.5 mm²

The Ex d remote station is equipped with intrinsically safe power circuits, i.e. type of protection "i".

Ambient temperature 0° C to +50° C

(16) Test report PTB Ex 00-10285

(17) Special conditions
none

Additional information for manufacturing and operation

The Ex d remote station may also be connected by means of suitable line bushings or tubing that correspond to the requirements of EN 50018 sections 13.1 and 13.2 and dispose of a separate test certificate.

Page 2 of 3

Physikalisch-Technische Bundesanstalt
Braunschweig and Berlin
Appendix to the EC prototype test certification PTB 00 ATEX 1003

Unused openings must be sealed according to EN 50018 section 11.

Cable and line bushings as well as sealing plugs of simple construction must not be used for the non-intrinsically safe terminal boxes.

The Ex d remote station must be operated together with the PC input device type 17-71K3-...1/.... .

(18) Fundamental safety and health requirements
The tests carried out and their positive results evidence that the Ex d remote station corresponds to the requirements of directive 94/9/EC as well as to the standards indicated on the front page.

Braunschweig, 20.04.2000

Zertifizierungsstelle Explosionsschutz

Signed for the PTB

Dr.-Ing. U. Klausmeyer

IBExU Institut für Sicherheitstechnik GmbH
An-Institut der TU Bergakademie Freiberg

[1] **EC-TYPE EXAMINATION CERTIFICATE**
(Translation)

[2] Equipment and Protectiv Systems intended for use in Potentially Explosive Atmospheres, Directive 94/9/EC

[3] EC-Type Examination Certificate Number: **IBExU02ATEX1163**

[4] Equipment or Protectiv System: Ex d-Remotestation Typ 17-71K1-35../....

[5] Manufacturer: BARTEC GmbH

[6] Address: Max-Eyth-Str. 16
D-97980 Bad Mergentheim

[7] This equipment or protective system and any acceptable variation thereto are specified in the schedule to this EC-Type Examination Certificate.

[8] IBExU Institut für Sicherheitstechnik GmbH, NOTIFIED BODY number 0637 in accordance with article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of components intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in confidential test report IB-01-121/3 of 23.01.2003.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 50014:1997+A1 +A2 and EN 50281-1-1:1998 +A1.

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified under [17] in the schedule to this EC-Type Examination Certificate.

[11] This EC-Type Examination Certificate relates only to the design and construction of the specified component. If applicable, further requirements of this directive apply to the manufacture and supply of this component.

[12] The marking of the equipment or protectiv system shall include the following:

Ex II 2 D T 80 °C IP 66

IBExU Institut für Sicherheitstechnik GmbH
Fuchsmühlenweg 7 - D-09599 Freiberg
Tel.: 00493731 3805-0 - Fax: 00493731 23650

Authorised for certifications Explosion protection

By order

(Dr. Lösch)

Zertifizierungsstelle Explosionsschutz IBExU Institut für Sicherheitstechnik GmbH Kenn-Nr. 0637
- Seal -
(ID no. 0637)

Freiberg, 24.01.2003

Certificates without signature and seal are not valid.
Certificates may only be duplicated completely and unchanged. In case of dispute, the German text shall prevail.

Schedule

IBExU Institut für Sicherheitstechnik GmbH
An-Institut der TU Bergakademie Freiberg

[13] **Schedule**

[14] **to the EC-TYPE EXAMINATION CERTIFICATE IBExU02ATEX1163**

[15] **Description of equipment or protective system**

The Ex d-Remotestation type 17-71K1-35../.... consists of a flameproof enclosure with a display and a using opening. The Ex d-Remotestation has for use a PC input device BMF 105 type 17-71-K3 12.1/.... and is connected with a PC work station in the safe area.The line connection has to be made by boxes with flameproof cable entries devices or a conduit system.

Operating temperature range:	0 °C bis + 50 °C
Degree of protection:	IP 66
Maximum r.m.s voltage:	100 V- 240 V, 50 Hz- 60 Hz
Signal line:	up to 24 V ± 5 %
Power dissipation:	max. 60 W
integreted keyboard terminal:	type of protection EEx [ia] IIC/IIB (values s. PTB00ATEX1003)

Further details are included in the test documents (see Annex).

[16] **Test report**
The test results are recorded in confidential test report IB-01-121/3 of 23.01.2003.

Summary:
The Ex d-Remotestation type 17-71K1-35../.... fulfils the requirements of explosion protection for equipment group II and equipment category 2D, type of protection protected by enclosures in accordance with IP66 with a maximum surface temperature of 80 °C C for combustible dust.

Safety instructions
Not used openings are to shut off by means of locking pieces with a degree of protection of IP 66 in accordance with EN 60529. The work station is running by the intrinsically PC input device BMF 105 type 17-71-K3 12.1/.... .

[17] **Special conditions for safe use**

none

[18] **Essential Health and Safety Requirements**

Confirmed by norms (see [9]).

By order

Freiberg, 24.01.2003

(Dr. Lösch)

Test detailed list of the examined technical documents (annex) is contained in the German version of the EC-Type Examination Certificate IBExU02ATEX1163.

Page 2 of 2
IBExU02ATEX1163

(1) **EC-type-examination Certificate (translation)**

(2) Equipment and Protective Systems intended for Use in Potentially Explosive Atmospheres – **Directive 94/9/EC**

(3) EC-type-examination Certificate Number: **KEMA 98ATEX1988X**

(4) Equipment or Protective System: Power-limiting unit Type 17-71K4-1.01/....

(5) Manufacturer: BARTEC Componenten und Systeme GmbH

(6) Address: Max-Eyth-Straße 16, 97980 Bad Mergentheim, Germany

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) KEMA, notified body No. 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report no. 81988.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with

EN 50014 : 1992 + prA1 EN 50020: 1994

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type-examination Certificate relates only to the design and construction of the specified equipment or protective system. Further requirements of this Directive may apply to the manufacture and supply of this equipment.

(12) The marking of the equipment or protective system must include the following

Ex II(2) G (EEx ia) IIC or
Ex II(2) G (EEx ia) IIB

Arnhem, 9 November, 1998
By order of the Director of N.V. KEMA

C.M. Boschloo

This certificate may only be circulated in unabbreviated and unaltered form.

N.V.KEMA
Utrechtsweg 310, 6812 AR Arnhem
P.O.Box 9034, 8800 ET Arnhem, The Netherlands
Telephone: +31 26 3 68 27 48, Facsimile: +31 26 3 61 01 78

CERTIFIED BY THE
DUTCH CERTIFICATION
COUNCIL

Page 1/3

(13) **Schedule**

(14) **to the EC-type-examination Certificate No. KEMA 98ATEX1988X**

(15) **Description**

The power-limiting unit Type 17-71K4-1.01/.... is set up in the certified pressure-resistant enclosure of the Ex-d-PC of the Type series 17-71K2, with EC-type-examination Certificate No. KEMA 98ATEX2217X.
The power-limiting unit serves the supply and data transfer of a certified intrinsically safe PC-input device such as the keyboard and/or mouse of the Type series 17-71K3 with EC-type examination Certificate No. KEMA 98ATEX2558X.

Ambient temperature range – 20°C ... + 80°C

Electrical data

Circuits for the keyboard:

Supply and connection (Terminals X11.1, X11.2, X11.3 and X11.4 or X11.5 or X11.6)	Rated value 5 Vdc. U_m = 253 Vac
Supply and data (Terminals X1.1, X1.2, X 1.3 and X1.4 or X 1.5 or X1.6)	With type of protection: Intrinsic Safety: EEx ia IIC or EEx ia IIB, with the maximum values: U_o = 6.5 V; I_o = 186 mA; P_o = 300 mW. For device group IIC: Highest admissible outer capacitance C_o = 25 µF, highest outer inductance L_o = 0.6 mH. For device group IIB: Highest admissible outer capacitance C_o = 570µF, highest outer inductance L_o = 5 mH. The circuits have been earthed for safety.

Circuits for the mouse:

Supply and connection (Terminals X11.7, X11.8, X11.9 and X11.4 or X11.5 or X11.6)	Rated value 5 Vdc. U_m = 253 Vac
Supply and data (Terminals X1.7, X1.8, X 1.9 and X1.4 or X 1.5 or X1.6)	With type of protection: Intrinsic Safety: EEx ia IIC or EEx ia IIB, with the maximum values: U_o = 6.5 V; I_o = 86 mA; P_o = 140 mW. For device group IIC: Highest admissible outer capacitance C_o = 25 µF, highest outer inductance L_o = 3 mH. For device group IIB: Highest admissible outer capacitance C_o = 570µF, highest outer inductance L_o = 9 mH. The circuits have been earthed for safety.

(13) **Schedule**

(14) **to the EC-type-examination Certificate KEMA 98ATEX1988X**

(16) **Test Report**

KEMA No. 81988

(17) **Special conditions**

1. The equipotential bonding cable of the power-limiting unit must be connected to the equipotential bonding system within the potentially explosive atmosphere by means of the equipotential bonding connection of the enclosure of the aforementioned Ex-d-PC.

2. Refer to (15) for the ambient temperature range and the electrical data. The ambient temperature is the temperature within the enclosure of the aforementioned Ex-d-PC.

(18) **Essential Health and Safety Requirements**

Essential Health and Safety Requirements which are not covered by the standards mentioned under (9)	
Section	Subject
1.0.5	Marking
1.0.6 (b)	Operating instructions

These Essential Health and Safety Requirements have been checked and the results provided in the test report specified under (16).

(19) **Documents**

				Signed on
1.	Description	(14 pages)		12.10.1998
		(6 pages)		26.10.1998
2.	Drawing no.	11-71K4-6101	)	
		11-71K4-6101 St	)	27.05.1998
		11-71K4-6102 (2 pages)	)	
		11-71K4-6103	)	
		11-71K4-6104		13.10.1998
3.	Test sample			

Page 3/3

1st SUPPLEMENT

to EC Type Test Certificate KEMA 98ATEX1988 X

Manufacturer: **BARTEC Componenten und Systeme GmbH**

Address: **Max-Eyth-Strasse 16, 97980 Bad Mergentheim, Germany**

Description

The power limiting unit, type 17-71K4-1.01/….,can also be built into a separate enclosure. The power limiting unit may be used here only in combination with certified PC computers of type series 17-71K.-…. (for example with Type Test Certificate KEMA 98ATEX2217 X).

The power limiting unit, type 17-71K4-1.01/…., may also be manufactured according to the test documents given below.

The alterations are concerned with the interior construction.

Special conditions

The power limiting unit must be installed outside the hazardous area. It must be built into an enclosure with a protection class suitable for the application and the environmental conditions - at least to IP 20, according to
EN 60529.

Within the hazardous area the power limiting unit must be built into an enclosure which is suitable for this application, and the combination must be certified.

The equipotential bonding conductor of the power limiting unit must be connected with the potential equalisation system within the hazardous area.

For the ambient temperature range and electrical data, see (15) of the appendix of this EC Type Test Certificate. The ambient temperature is taken as the temperature within the above described enclosure.

All other data remain unchanged.

Test documents	Date of signing
1. Description (4 pages)	18.11.1999
2. Drawing no. 11-71K4-6101 St	08.11.1999

Arnhem, 24th November 1999
On behalf of the management of N.V. KEMA

C.M.Boschloo
Certification Manager

Ex protection type: ⟨Ex⟩ II (2) G [EEx ia] IIC or ⟨Ex⟩ II (2) G [EEx ia] IIB [99.6906]

This supplement may be distributed only in full and unchanged. Page 1/1

2nd SUPPLEMENT

to EC Type Test Certificate KEMA 98ATEX1988 X

Manufacturer: **BARTEC GmbH**

Address: **Max-Eyth-Strasse 16, 97980 Bad Mergentheim, Germany**

Description

The power limiting unit, type 17-71K4-1.01/…., can also be manufactured in future according to the test documents given below.

The name of the manufacturer has been changed, and is as mentioned above.

Construction of part of the electric circuits has been changed, and therefore also the data – as given below. All other data remain unchanged.

Electrical data

Circuits for the keyboard:

Circuits to terminals X1.1 and X1.4, X1.5 and X1.6 respectively — in protection class intrinsically safe EEx ia IIC or EEx ia IIB, with following maximum values:

U_o = 6.5 V
I_o = 186 mA
P_o = 300 mW

For device group IIC:

C_o = 25 µF
L_o = 0.6 mH

For device group IIB:

C_o = 570 µF
L_o = 5 mH

Circuits to terminals X1.2, X1.3 and X1.4 and X1.5 and X1.6 respectively — in protection class intrinsically safe EEx ia IIC or EEx ia IIB, with following maximum values:

U_o = 6.6 V
I_o = 186 mA
P_o = 300 mW

For device group IIC:

C_o = 22 µF
L_o = 0.6 mH

For device group IIB:

C_o = 500 µF
L_o = 5 mH

The circuits are earthed for safety.

2nd SUPPLEMENT

to EC Type Test Certificate KEMA 98ATEX1988 X

Electrical data (continued)

Circuits for the mouse:

Circuits to terminals
X1.7 and X1.4 or X1.5 or X1. — in protection class intrinsically safe EEx ia IIC or EEx ia IIB, with following maximum values:

U_o = 6.5 V
I_o = 86 mA
P_o = 140 mW

For device group IIC:

C_o = 25 µF
L_o = 3 mH

For device group IIB:

C_o = 570 µF
L_o = 9 mH

Circuits to terminals X1.8, X1.9
and X1.4 or X1.5 or X1.6 — in protection class intrinsically safe EEx ia IIC or EEx ia IIB, with following maximum values:

U_o = 6.6 V
I_o = 86 mA
P_o = 140 mW

For device group IIC:

C_o = 22 µF
L_o = 3 mH

For device group IIB:

C_o = 500 µF
L_o = 9 mH

The circuits are earthed for safety.

Test documents

	Date of signing
1. Description (5 pages)	10.03.2003
2. Drawing no. 11-71K4-6101 St	10.03.2003

Arnhem, 27th May 2003
KEMA Quality B.V.

C.G.van Es
Certification Manager

[2029303]

(1) **EC-type-examination Certificate (translation)**

(2) Equipment and Protective Systems intended for Use in Potentially Explosive Atmospheres – **Directive 94/9/EC**

(3) EC-type-examination Certificate Number: **KEMA 98ATEX2558X**

(4) Equipment or Protective System: PC input device Type 17-71K3-...1/....

(5) Manufacturer: BARTEC Componenten und Systeme GmbH

(6) Address: Max-Eyth-Straße 16, 97980 Bad Mergentheim, Germany

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) KEMA, notified body No. 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report no. 82558.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with

EN 50014 : 1992 + prA1 EN 50020: 1994

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type-examination Certificate relates only to the design and construction of the specified equipment or protective system. Further requirements of this Directive may apply to the manufacture and supply of this equipment.

(12) The marking of the equipment or protective system must include the following
Ex II 2 G EEx ia IIC T4

Arnhem, 9 November, 1998
By order of the Director of N.V. KEMA

C.M. Boschloo

This certificate may only be circulated in unabbreviated and unaltered form.

N.V.KEMA
Utrechtsweg 310, 6812 AR Arnhem
P.O.Box 9034, 8800 ET Arnhem, The Netherlands
Telephone: +31 26 3 68 27 48, Facsimile: +31 26 3 61 01 78

CERTIFIED BY THE
DUTCH CERTIFICATION
COUNCIL

Page 1/3

(13) **Schedule**

(14) **to the EC-type-examination Certificate No. KEAM 98ATEX2558 X**

(15) **Description**

The PC-input device Type 17-71K3-...1/... includes the keyboard and/or a mouse and is, for example, connected to the connecting terminals within the Ex-d-PC (in pressure-resistant enclosure), of the series 17-71K2 with EC-type-examination certificate No. KEMA 98ATEX2217 X by means of a shielded multi-core cable.

Ambient temperature range – 20°C ... + 60°C

Electrical data

Circuits for the keyboard:
Supply current circuit and data current circuit (for Type 17-71K3-1..1/..., Type 17-71K3-2..1/.... and Type 17-71K3-3..1/.... Cores BN, WH, GN and YE)

With type of protection: Intrinsic Safety: EEx ia IIC, only for connection to certified, intrinsically safe circuits, with the following maximum values:

U_1	=	6.5	V
I_1	=	186	mA
P_1	=	300	mW

The effective inner capacitance C_1 = 17 µF, the effective inner inductance L_1 are negligibly small.

The circuits have been earthed for safety.

Circuits for the mouse:
Supply current circuit and data current circuit (for Type 17-71K3-1..1/..., Cores BU, PK, GY and RD and for Type 17-71K3-4..1/.... Cores BN, WH, GN and YE)

With type of protection: Intrinsic Safety: EEx ia IIC, only for connection to certified, intrinsically safe circuits, with the following maximum values:

U_1	=	6.5	V
I_1	=	86	mA
P_1	=	140	mW

The effective inner capacitance C_1 = 24 µF, the effective inner inductance L_1 are negligibly small.

The circuits have been earthed for safety.

(16) **Report**
KEMA No. 82558

(17) **Special conditions**

1. The shielding of the cable is to be connected to the equipotential bonding system within the potentially explosive atmosphere, for example by means of the equipotential bonding connection of the enclosure of the aforementioned Ex-d-PC.
2. Refer to (15) for ambient temperature range and electrical data.

(13) **Schedule**

(14) **to the EC-type-examination certificate KEMA 98ATEX2558X**

(18) **Essential Health and Safety Requirements**

Essential Health and Safety Requirements which are not covered by the standards mentioned under (9)	
Section	Subject
1.0.5	Marking
1.0.6 (b)	Operating instructions

These Essential Health and Safety Requirements have been checked and the results provided in the test report specified under (16).

(19) **Documents**

			Signed on
1.	Description (11 pages)		13.10.1998
2.	Drawing no.	11-71K3-6101)	
		11-71K3-6102 St)	10.08.1998
		11-71K3-6103)	
		11-71K3-6103 St)	
		11-71K3-6104)	13.10.1998
		11-71K3-6105 (3 pages))	
		11-71K3-6102 (3 pages)	26.10.1998
3.	Test sample		

1st supplement

to the EC prototype test certification KEMA 98ATEX2558 X

Manufacturer: BARTEC Componenten und Systeme GmbH
Address: Max-Eyth-Straße 16, 97980 Bad Mergentheim, Germany

Description

The PC input unit type 17-71K3-...1/.... may be manufactured in correspondence with the following test documents.

All modifications apply to its interior structure.

All other data remain unchanged.

Test documents

1. Description (2 pages) signed
2. Drawing no. 11-71K3-6102 (3 pages) March 8th, 1999

Arnhem, April 16th, 1999
Board of directors of the N.V.KEMA

C.M. Boschloo
Certification Manager

Trade mark: Ex II 2 G EEx ia IIC T4 [99.2807]

This supplement may be distributed in its original version only Page 1/1

2nd SUPPLEMENT

to EC Test Type Certificate KEMA 98ATEX2558 X

Manufacturer: **BARTEC Componenten und Systeme GmbH**

Address: **Max-Eyth-Strasse 16, 97980 Bad Mergentheim, Germany**

Description

The PC input device, type 17-71K3-…1/…, can also be constructed in future with a track ball mouse, according to the documents given below.

The type designation here is changed to 17-71K3-6…1/… or 17-71K3-7…1/… .

Electrical data

Power supply circuit and
data circuit……
(for type 17-71K3-6..1/…
cores red, pink, grey, blue
and for type 17-71K3-7..1/…
cores brown, white, yellow, green)

in protection class intrinsically safe EEx ia IIC, only for connection to certified intrinsically safe electric circuits, with following maximum values:

U_i = 6.5 V
I_i = 86 mA
P_i = 140 mW

The effective internal capacitance C_i = 2 µF, the effective internal inductivity L_i is negligably small.

The circuits are earthed for safety.

All other data remain unchanged.

Test documents

	Date of signing
1. Description (5 pages)	
2. Drawing no. 17-71K3-6106 (2 pages) 17-71K3-6106 St	30.07.2001
3. Test sample	

Arnhem, 30th November 2001
KEMA Quality B.V.

T.Pijpker
Certification Manager

 [2014320]

3rd SUPPLEMENT

to EC Test Type Certificate KEMA 98ATEX2558 X

Manufacturer: **BARTEC GmbH**

Address: **Max-Eyth-Strasse 16, 97980 Bad Mergentheim, Germany**

Description:

The type designation of the already certified PC input devices has been changed as follows:

17-71K3-11.1/… (was 17-71K3-1..1/…)
17-71K3-21.1/… (was 17-71K3-2..1/…)
17-71K3-31.1/… (was 17-71K3-3..1/…)
17-71K3-41.1/… (was 17-71K3-4..1/…)
17-71K3-51.1/…(was 17-71K3-5..1/…)
17-71K3-61.1/…(was 17-71K3-6..1/…)
17-71K3-71.1/…(was 17-71K3-7..1/…)

In future the PC input device, type 17-71K3-…1/… can be constructed with a mouse according to the documents given below.
The type designation of this added design is 17-71K3-12.1/… or 17-71K3-42.1/…

The name of the manufacturer has changed and is now as mentioned above.

Electrical data

Supply circuit and
data circuit
(for type 17-71K3-12.1/…
cores red, pink, grey, blue
and for type 17-71K3-42.1/…
cores brown, white, yellow, green)

In intrinsically safe type of protection EEx ia IIC, for connection only to certified intrinsically safe circuits, with the following maximum values:

U_i = 6.5 V
I_i = 86 mA
P_i = 140 mW
C_i = 17 µF
L_i = 0 mH

The circuits are earthed for safety.

All other data remain unchanged.

Test documents	Date of signing
1. Description (6 pages)	
2. Drawing no. 17-71K3-6107 (2 pages) 17-71K3-6107 St	16.07.2003

Arnhem, 15th September 2003
KEMA Quality B.V.

C.G. van Es
Certification Manager