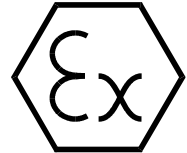




(1) **EC- TYPE- EXAMINATION CERTIFICATE**
(Translation)

(2) Equipment and protective systems intended for use in potential explosive Atmospheres – **Directive 94/9/EC**

(3) EC- type- examination Certificate number



TÜV 99 ATEX 1441

(4) Equipment: Keyboard type KB 153

(5) Manufacturer: Gönzheimer Elektronik GmbH

(6) Address: D-Neustadt an der Weinstraße

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

(8) The TÜV Hannover/Sachsen-Anhalt e.V., TÜV CERT-Zertifizierungsstelle, notified body No. 0032 in accordance with Article 9 of the Council Directive 94/9/EC of March 1994, certifies that 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 potentially explosive atmospheres, given in Annex II to the Directive.

The test results are recorded in the confidential report No. 99/PX12591.

(9) Compliance with to essential Health and Safety Requirements has been assured by compliance with:

EN 50 014:1997

EN 50 020:1994

(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 in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

(12) The marking of the equipment shall include the following:

 **II 2 G EEx ib IIC T4**

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

Hannover, 17.06.1999



Der Leiter



(13)

SCHEDULE

(14) **EC- TYPE-Examination CERTIFICATE No. TÜV 99 ATEX 1441**

(15) Description of equipment

The keyboard KB 153 could be used in Ex- hazardous areas. The build-in keyboard types must be placed in a housing with protection IP20 according to EN 60529 at least.

The maximum ambient temperature is 50°C.

Electrical details

Power supply and signal
circuits
(clamp 1, Pin 1 ..4)

In protection type intrinsic Safety EEx ib IIC
Exclusive connection to a certificated intrinsically
safe current circuit; Highest values each channel:
 $U_1 = 5,8 \text{ V}$
 $I_1 = 204 \text{ mA}$
 $P_1 = 392 \text{ mW}$

Maximum external capacity $C_1 = 25 \mu\text{F}$
Maximum external inductivity is negligible

(16) The test documents are listed in report No. 99/PX12591

(17) Special conditions for safe area

none

(18) Essential health and safety requirements

No additional



1. Amendment to the Conformity Certificate Nr. TÜV 99 ATEX 1441

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

The keyboard type KB 153 can also be manufactured according to the examination protocol, listed in the associated examination certificate.

The changes are related to the use of a further keyboard.

The electrical data and all further specification remain unchanged.

The test documents are listed in test report Nr. 03 YEX 551066.

TÜV NORD CERT GmbH & Co. KG

Hannover, 26.11.2003

TÜV CERT-Zertifizierungsstelle
Am TÜV 1
0-30519 Hannover
Tel.: 0511 986-1470
Fax: 0511 986-2555

Der Leiter



2. Amendment to the Conformity Certificate Nr. TÜV 99 ATEX 1441

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

The keyboard type KB 153 can also be manufactured according to the examination protocol, listed in the associated examination certificate.

The changes are related to use a further keyboard with the type code KB153.2.x respectively KB153.3.x, within the following changed specifications:

Electrical data

Power supply and signal
circuits
(clamp 1 and 2, Pin 1 ..4)

In protection type intrinsic Safety EEx ib IIC
Exclusive connection to a certificated intrinsically
safe current circuit; Highest values:

$U_1 = 5,8 \text{ V}$

$I_1 = 408 \text{ mA}$

$P_1 = 784 \text{ mW}$

Maximum external capacity $C_1 = 30 \mu\text{F}$

Maximum external inductivity is negligible.

All further specifications remain unchanged.

The test documents are listed in test report Nr. 04 YEX 551163.

TÜV NORD CERT GmbH & Co. KG

Hannover, 23.01.2004

TÜV CERT-Zertifizierungsstelle
Am TÜV 1
0-30519 Hannover
Tel.: 0511 986-1470
Fax: 0511 986-2555

Der Leiter



3. Amendment to EC- type certificate TÜV 99 ATEX 1441

Device: Keyboard type KB153
Manufacturer: Gönzheimer Elektronik GmbH
Dr.-Julius Leber-Str.2
Address: D-67433 Neustadt/Weinstraße
Germany

Changes:

The types KB153.4.x and KB153.5.x are keyboards with 30 buttons, like they already admitted types, for use in the explosion hazardous area. The keyboard of the type KB153.4.x is planned for the installation in a cabinet with protection class mind. IP20, in dry and clean environment. Inside other environments a raised cabinet protection class had to be kept (e.g. IP 65). The keyboard of the type KB153.5.x is mounted inside a steel housing.

The types KB153.6.x and KB153.7.x are wireless radio keyboards. The power supply is arranged with batteries. Changing of the batteries is only allowed in safe area. The keyboard of the type KB153.6.x is planned for the installation in a cabinet with protection class mind. IP20, in dry and clean environment. Inside other environments a raised cabinet protection class had to be kept (e.g. IP 65). The keyboard of the type KB153.7.x is mounted inside a plastic housing.

The receiver KB153 serves for the receipt of the (sending) signals of the radio keyboard and are useable the explosion hazardous area. In this case, the power supply has to be arranged by the certified keyboard interface type KI153. The receiver has a cabinet protection class of IP40 and is suited to the establishment in dry and clean environment. In other environment a raised cabinet protection (e.g. IP65) had to be kept.

Technical details:

Allowable ambient temperature: - 20°C up to 50°C
(no changes)

Electrical details:

Keyboard type KB153.4.x and KB153.5.x

Power supply and signal circuits In protection type intrinsic Safety EEx ib IIC
Exclusive connection to a certificated intrinsically
safe current circuit; Highest values:
 $U_1 = 5,8 \text{ V}$
 $I_1 = 204 \text{ mA}$
 $P_1 = 392 \text{ mW}$

Maximum external capacity $C_1 = 25 \mu\text{F}$
Maximum external inductivity is negligible

Keyboard type KB153.6.x and KB153.7.x

Transmitter power: Max. 250 mW
Power supply circuit Series connection of 2 batteries
Alkali-Mangandioxid, zinc chloride or lithium iron sulphide
(according to operating instructions of the manufacturer)

Receiver type KB153

Power supply and signal circuits (USB- or PS/2 connector) In protection type intrinsic Safety EEx ib IIB
Exclusive connection to a certificated intrinsically safe keyboard interface KI153:
Highest values:
 $U_1 = 5,8 \text{ V}$
 $I_1 = 204 \text{ mA}$
 $P_1 = 392 \text{ mW}$
max reactance $C_1 = 25 \mu\text{F}$
Maximum external inductivity is negligible

Marking of the test equipment:

Keyboard type KB153.4.x and KB153.5.x (no changes):

 II 2G EEx ib IIC T4

Keyboard type KB153.6.x and KB153.7.x:

 II 2G EEx ib IIB T4

Receiver type KB153:

 II 2G EEx ib IIB T4

The device according to this 3. amendment fulfils requests to the following standards:

EN 50 014: 1997 + A1 + A2

EN 50 020:2002



3. Amendment to certification number: TÜV 99 ATEX 1441

(16) The test documents are listed in report No. 05 YEX 551829.

(17) Special conditions

none

(18) Essential health and safety requirements

No additional

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Hannover, 27.09.2005

Der Leiter