

Translation

(1) **EU-Type Examination Certificate**

TÜV NORD

- (2) Equipment and protective systems
intended for use in potentially
explosive atmospheres, **Directive 2014/34/EU**



- (3) **Certificate Number** **TÜV 99 ATEX 1440 X** **issue: 00**
(4) for the product: Keyboard Interface type KI153.x.x


- (5) of the manufacturer: Gönnheimer Elektronik GmbH

- (6) Address: Dr.-Julius-Leber-Straße 2
67433 Neustadt an der Weinstraße

Order number: 8000488249

Date of issue: 2019-01-09

- (7) The design of this product and any acceptable variation thereto are specified in the schedule to this EU-Type Examination Certificate and the documents therein referred to.
- (8) The TÜV NORD CERT GmbH, Notified Body No. 0044, in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in the confidential ATEX Assessment Report No. 19 203 228755.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012+A11:2013 EN 60079-11:2012
except in respect of those requirements listed at item 18 of the schedule.
- (10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions for Use specified in the schedule to this certificate.
- (11) This EU-Type Examination Certificate relates only to the design, and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.
- (12) The marking of the product shall include the following:

 II (2) G [Ex ib Gb] IIC
II (2) D [Ex ib Db] IIIC

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, notified by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the notified body


Roder

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(13) SCHEDULE

(14) EU-Type Examination Certificate No. TÜV 99 ATEX 1440 X issue 00

(15) Description of product

The keyboard interface type KI153.x.x is used for the connection of intrinsically safe input devices (e. g. keyboard, mouse, trackball) to a non intrinsically safe PC.

It converts non intrinsically safe USB interfaces to intrinsically safe circuits.

The permissible ambient temperature range is -20 °C ... +50 °C.

Type key:

KI153		.x	.x
Number of USB channels:			
One USB1.1 channel for the connection to KB153 and TB153.....		.0	
Two USB1.1 channels for the connection to KB153 and TB153.....		.1	
One USB2.0 channel for the connection to FD153.....		.2	
One USB1.1 channel and one USB2.0 channel.....		.3	
Two USB2.0 channels for the connection to FD153.....		.4	
Installation:			
Mounting on 35mm rail according to DIN EN 50022.....		.0	
Wall installation.....		.1	
Tabletop housing.....		.2	
Without housing for integration into PC100.....		.3	

Electrical data

Non intrinsically safe circuits:
(Connector 1 - pin 1...4,
Connector 3 - pin 1...4
for execution with 2 channels)

$U_m = 50 \text{ V a. c. resp. } 70 \text{ V d. c. for both channels}$

Keyboard interface type KI153.0.x and KI153.1.x:

Intrinsically safe circuits:
(Connector 2 - pin 1...4,
Connector 4 - pin 1...4
for execution with 2 channels)

in type of protection intrinsic safety Ex ib IIC resp. Ex ib IIIC
Max. values per circuit:
 $U_o = 5.4 \text{ V}$
 $I_o = 202 \text{ mA}$
 $P_o = 380 \text{ mW}$
Characteristic line: angular
Max. permissible external capacitance: $25 \mu\text{F}$
Max. permissible external inductance: $3 \mu\text{H}$

Schedule to EU-Type Examination Certificate No. TÜV 99 ATEX 1440 X issue 00

Keyboard interface type KI153.2.x and KI153.4.x:

Intrinsically safe circuits:	in type of protection intrinsic safety Ex ib IIC resp. Ex ib IIIC
(Connector 2 - pin 1...4,	Max. values per circuit:
Connector 4 - pin 1...4	$U_o = 5.4 \text{ V}$
for execution with 2 channels)	$I_o = 952 \text{ mA}$
	$P_o = 1.6 \text{ W}$
	Characteristic line: angular
	Max. permissible external capacitance: $25 \mu\text{F}$
	Max. permissible external inductance: $3 \mu\text{H}$

Keyboard interface type KI153.3.x:

Intrinsically safe circuits:	in type of protection intrinsic safety Ex ib IIC resp. Ex ib IIIC
(Connector 2 - pin 1...4)	Max. values:
	$U_o = 5.4 \text{ V}$
	$I_o = 202 \text{ mA}$
	$P_o = 380 \text{ mW}$
	Characteristic line: angular
	Max. permissible external capacitance: $25 \mu\text{F}$
	Max. permissible external inductance: $3 \mu\text{H}$

(Connector 4 - pin 1...4)	Max. values:
	$U_o = 5.4 \text{ V}$
	$I_o = 952 \text{ mA}$
	$P_o = 1.6 \text{ W}$
	Characteristic line: angular
	Max. permissible external capacitance: $25 \mu\text{F}$
	Max. permissible external inductance: $3 \mu\text{H}$

(16) Drawings and documents are listed in the ATEX Assessment Report No. 19 203 228755

(17) Specific Conditions for Use

1. The terminal for earth connection has to be connected with the potential equalization in the explosion hazardous area.
2. It has to be ensured, that potential equalization exists in the complete course of the erection of the intrinsically safe circuits.
3. The keyboard interface type KI153.x.3 has to be erected in such a way, that a degree of protection of min IP20 is fulfilled.

(18) Essential Health and Safety Requirements

no additional ones

- End of Certificate -