



Translation

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

(2) Equipment or protective system intended for use in potentially explosive atmospheres - **Directive 94/9/EC**



(3) EC-Type Examination Certificate Number

TÜV 02 ATEX 1796 X

(4) Equipment: Conductive filling level probes type EE-20, EE-21 with flameproof cable entry type FK-100, EE-22 and option lightning protector type BL-100

(5) Manufacturer: E.L.B. – Füllstandsgeräte Bundschuh GmbH & Co.

(6) Address: An der Hartbrücke 6, D-64625 Bensheim

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

(8) The TÜV NORD CERT GmbH & Co. KG, TÜV CERT-Certification Body, notified body number N° 0032 in accordance with Article 9 of the Council Directive of the EC of March 23, 1994 (94/9/EC), certifies that this equipment or protective system 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 N° 02 YEX 133272b.

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

EN 50 014: 1997

EN 50 020: 1994

EN 50284:1999

(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 in the schedule to this certificate.

(11) This EC-type examination certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. 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 equipment or protective system must include the following:



II 1 G EEx ia IIC T6 resp. EEx ia IIB T6

II 1/2 G EEx ia IIC T6 resp. EEx ia IIB T6

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

Hanover, 2002-06-06



TÜV NORD CERT

TÜV NORD CERT GmbH & Co. KG
legal successor of the notified body of
TÜV Hannover/Sachsen-Anhalt e.V.
German original certificate
issued on 2002-06-04

Head of the
Certification Body



(13)

SCHEDULE

(14) **EC-TYPE EXAMINATION CERTIFICATE N° TÜV 02 ATEX 1796 X**

(15) Description of equipment

The conductive filling level probes type EE-20, EE-21 and EE-22 are used for the control of filling levels of tanks filled with flammable fuels.

The filling sensor type EE-20 is intended for the mounting into the border wall to the area that requires apparatus of category 1.

The marking is:

II 1/2 G EEx ia IIC T6 for type EE-20.....IIC_ resp.

II 1/2 G EEx ia IIB T6 for type EE-20.....IIB_

The conductive filling sensors type EE-21 and EE-22 are intended for the operation in areas that require apparatus of the category 1.

The marking of these devices are:

II 1 G EEx ia IIC T6 for type EE-21.....IIC_ and EE-22.....IIC_
resp. II 1 G EEx ia IIB T6 for type EE-21.....IIB_ and EE-22.....IIB_

The electrical connection is realised with the flameproof cable entry type FK-100 for type EE-21

The maximum permissible ambient temperature in dependence on the category and the temperature class has to be taken from the tables.

Explosion hazardous areas that require electrical apparatus of the category 1/2 resp. category 1:

Temperature class	Max. permissible media- and ambient temperature r
T6...T1	60°C

Explosion hazardous areas that require electrical apparatus of category 2:

Temperature class	Max. permissible media- and ambient temperature	
T6	80°C	
T5	95°C	
	Max. permissible	
	media-temperature	ambient temperatur
T4	130°C	100°C
T3...T1	150°C	100°C



Electrical Data

Signal circuit
(flat connection in the
connection box)

in type of protection „Intrinsic Safety“ EEx ia IIC/IIB
only for the connection to certified intrinsically safe
circuits with the following maximum values:

$$\begin{aligned}U_i &= 13 \text{ V} \\I_i &= 10 \text{ mA} \\P_i &= 35 \text{ mW}\end{aligned}$$

The effective internal capacitance and inductance ist
negligibly small

Notes for the erection:

1. The determinations for the erection of EN 60079-14, especially paragraph 12.3, have to be observed during the installation.
2. In the case that the resistance between the intrinsically safe circuit and earth across the media is smaller than 200 k Ω then the intrinsically has to considered as operationally earthed (see also EN 60079-14, paragraph 12.2.4)
3. Requires the erection a protective measure against atmospheric electricity then the lightning protector type BL-100 is suited. When using this device the intrinsically safe circuit need not to be considered as operationally earthed.
4. The protective tube of the control cable of the FK-100 must be installed mechanically fixed inside of zone 0.

(16) Test documents are listed in the test report No.: 02 YEX 133272b.

(17) Special conditions for safe use

none

(18) Essential Health and Safety Requirements

no additional ones

1. Supplement to Certificate No. TÜV 02 ATEX 1796 X

Type key:

EE-2_._._._._._._._.(.)_(F)_

Technical data:

The maximum permissible media- and ambient temperature depending on the category and the temperature class has to be taken from the following tables.

Explosion hazardous areas that require electrical apparatus of the category 1/2 resp. category 1:

Temperature class	Max. permissible media- and ambient temperature
T6...T1	60°C

Explosion hazardous areas that require electrical apparatus of category 2:

Temperature class	Max. permissible media- and ambient temperature	
T6	80°C	
T5	95°C	
	Max. permissible	
	media-temperature	ambient temperature
T4	130°C	100°C
T3..T1	150°C	100°C

Explosion hazardous areas that require electrical apparatus of category 2, for use of the versions EE-21T resp. EE-22T:

Temperature class	Max. permissible media- and ambient temperature	
T6	80°C	
T5	95°C	
	Max. permissible	
	media-temperature	ambient temperature
T4	130°C	100°C
T3	195°C	100°C
T2..T1	200°C	100°C

1. Supplement to Certificate No. TÜV 02 ATEX 1796 X

Electrical data for all devices:

Signal circuit..... in type of protection „Intrinsic Safety“ Ex ia IIC/IIB
(flat connection in the only for the connection to certified intrinsically safe
connection box) circuits with the following maximum values:

$$\begin{aligned}U_i &= 15 \text{ V} \\I_i &= 10 \text{ mA} \\P_i &= 100 \text{ mW}\end{aligned}$$

The effective internal capacitance and inductance are negligibly small

All other details remain unchanged for this supplement.

(16) The test documents are listed in the test report No. 09 203 555209.

(17) Special conditions for safe use

no additional ones

(18) Essential Health and Safety Requirements

no additional ones

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, accredited 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 certification body



Schwedt

Hanover office, Am TÜV 1, 30519 Hanover, Tel.: +49 (0) 511 986-1455, Fax: +49 (0) 511 986-1590