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

Head of the Certification Body

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

(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: U_i = 13 V I_i = 10 mA P_i = 35 mW 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 kΩ 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

Translation

1. SUPPLEMENT

to Certificate No.	**TÜV 02 ATEX 1796 X**
Equipment:	Conductive filling level probes type EE-20, EE-21 with or without flameproof cable entry type FK-100, EE-22 and option lightning protector type BL-100 as well as EE-21T and EE-22T
Manufacturer:	E.L.B.-Füllstandsgeräte Bundschuh GmbH + Co.
Address:	An der Hartbrücke 6 64625 Bensheim Germany
Order number:	8000555209
Date of issue:	2009-04-09

Amendments:

In the future the conductive filling level probes type EE-20, EE-21, EE-21T, EE-22 and EE-22T may also be manufactured and operated according to the test documents listed in the test report.

The changes concern some additional versions with a modified configuration resp. with an extended operation temperature range as well as the standards used for assessment.

The equipment incl. of this supplement meets the requirements of these standards:

EN 60079-0:2006 **EN 60079-11:2007** **EN 60079-26:2007**

The filling sensor type EE-20, EE-21 und EE-21T as well as the flameproof cable entry type FK-100 are intended for the mounting into the border wall to the area that requires apparatus of category 1.

The marking is:

⟨Ex⟩ II 1/2 G Ex ia IIC T6 resp. **⟨Ex⟩ II 1/2 G Ex ia IIB T6**

for group IIC for group IIB

The filling sensors type EE-21, EE-21T, EE22 and EE-22T are intended for the operation in areas that require apparatus of the category 1.

The marking is:

⟨Ex⟩ II 1 G Ex ia IIC T6 resp. **⟨Ex⟩ II 1 G Ex ia IIB T6**

for group IIC for group IIB

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	Max. permissible 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	Max. permissible ambient temperature
T4	130°C	100°C
T3	195°C	100°C
T2..T1	200°C	100°C

Electrical data for all devices:

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

U_i = 15 V
I_i = 10 mA
P_i = 100 mW

The effective internal capacitance and inductance are negligibly small

All other details remain unchanged fort his 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

Translation

2. SUPPLEMENT

to Certificate No.	**TÜV 02 ATEX 1796 X**
Equipment:	Conductive filling level probes type EE-20, EE-21 with or without flameproof cable entry type FK-100, EE-22 and option lightning protector type BL-100 as well as EE-21T and EE-22T
Manufacturer:	E.L.B. Füllstandsgeräte Bundschuh GmbH & Co. KG
Address:	An der Hartbrücke 6 64625 Bensheim Germany
Order number:	8000406479
Date of issue:	2012-02-15

Amendments:

In the future the conductive filling level probes type EE-20, EE-21, EE-21T, EE-22 and EE-22T may also be manufactured and operated according to the test documents listed in the test report.

The changes concern the potential equalization connection of the types EE-21 and EE-22.

Furthermore the equipment was evaluated according to the newest standards.

The equipment incl. of this supplement meets the requirements of these standards:

EN 60079-0:2009 **EN 60079-11:2012** **EN 60079-26:2007**

The filling sensor type EE-20, EE-21 und EE-21T as well as the flameproof cable entry type FK-100 are intended for the mounting into the border wall to the area that requires apparatus of category 1.

The marking is:

⟨Ex⟩ **II 1/2 G Ex ia IIC T6 Ga/Gb** resp. ⟨Ex⟩ **II 1/2 G Ex ia IIB T6 Ga/Gb**

for group IIC for group IIB

The filling sensors type EE-21, EE-21T, EE22 and EE-22T are intended for the operation in areas that require apparatus of the category 1.

The marking is:

⟨Ex⟩ **II 1 G Ex ia IIC T6 Ga** resp. ⟨Ex⟩ **II 1 G Ex ia IIB T6 Ga**

for group IIC for group IIB

All other details remain unchanged for this supplement.

(16) Test documents are listed in the test report No. 12 203 099259.

(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, 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

Schwedt

Hanover office, Am TÜV 1, 30519 Hannover, Fon +49 (0)511 986 1455, Fax +49 (0)511 986 1590