#### Translation

# (1) EC-Type Examination Certificate

(2) Equipment and protective systems intended for use in potentially explosive atmospheres, Directive 94/9/EC



(3) Certificate Number

**TÜV 98 ATEX 1357** 

(4) for the component:

Protective Relays type KR-163/A/Ex....

(5) of the manufacturer:

E.L.B.-Füllstandsgeräte Bundschuh GmbH + Co.

(6) Address:

-An der Hartbrücke 6 64625 Bensheim Germany

Order number:

8000555805 (original order number 7512PX16880)

Date of issue:

2010-01-21

(original EC-Type Examination Certificate: 1998-09-25)

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

- (8) The TÜV NORD CERT GmbH, notified body No. 0044 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 No. 98/PX16880.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50 014:1997

EN 50 020:1994

- (10) If the sign "U" is placed after the certificate number, it indicates that this certificate must not be confounded with an EC-Type Examination Certificate which is destined for an equipment or protective system. This partial certificate must only be used as a basis for an EC-Type Examination 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 component must include the following:

(Ex) II (1) G [EEx ia] IIC

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 and TÜV Hannover/Sachsen-Anhalt e.V. Ident. Nr. 0032

The head of the certification body

Schwedt

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

This certificate may only be reproduced without any change, schedule included. Excerpts or changes shall be allowed by the TÜV NORD CERT GmbH



## (13) SCHEDULE

## (14) EC-Type Examination Certificate No. TÜV 98 ATEX 1357

## (15) Description of component

The Protective Relays type KR-163/A/Ex... are used as signal amplifiers for a galvanically safe separation of intrinsically safe and non-intrinsically safe circuits.

The maximum permissible ambient temperature is 60 °C.

## Electrical data

Input circuit ...... in type of protection intrinsic safety EEx ia IIC/IIB (Terminals E1 and E0) resp. EEx ib IIC/IIB

Maximum values:  $U_0 = 12.6 \text{ V}$   $I_0 = 16.1 \text{ mA}$  $P_0 = 51 \text{ mW}$ 

Characteristic line: linear

The effective internal inductance and capacitance are negligibly small.

EEx ia resp. EEx ib	IIC	IIB
Maximum permissible external inductance	120 mH	480 mH
Maximum permissible external capacitance	1.15 μF	7.4 µF

The intrinsically safe input circuit is galvanically safe separated from the non-intrinsically safe circuits up to a peak crest value of the voltage of 375 V.

(16) Test documents are listed in the test report No. 98/PX16880.



Schedule EC-Type Examination Certificate No. TÜV 98 ATEX 1357

(17) Special conditions for safe use none

(18) Essential Health and Safety Requirements no additional ones



#### Translation

## 1. SUPPLEMENT

to Certificate No.

**TÜV 98 ATEX 1357** 

Equipment:

Protective Relays type KR-163/A/Ex....

Manufacturer:

E.L.B.-Füllstandsgeräte Bundschuh GmbH + Co.

Address:

An der Hartbrücke 6 64625 Bensheim

Germany

Order number:

8000347976

Date of issue:

2009-06-07

Amendments:

A new type is added which is suitable for a different supply voltage. The additional type may be manufactured and operated according to the test documents listed in the test report. The standards used for assessment had also been updated, the marking changes accordingly.

All other details remain unchanged, the efectrical data are supplemented as follows:

#### Electrical data

Supply circuit...... U = 24 V d.c.,  $U_m = 26.4 \text{ V d.c.}$  (Connections A1 and A2)

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 marking changes as follows:

- (€x) II (1) G [Ex ia] IIC
- (16) The test documents are listed in the test report No. 09 203 347976.
- (17) Special conditions for safe use

none



## 1. Supplement to Certificate No. TOV 98 ATEX 1357

## (18) Essential Health and Safety Requirements

no additional ones

TOV 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 TOV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the certification body

Schwedt

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#### **Translation**

## 2. SUPPLEMENT

to Certificate No.

**TÜV 98 ATEX 1357** 

Equipment:

Protective Relays type KR-163/A/Ex....

Manufacturer:

E.L.B. Füllstandsgeräte Bundschuh GmbH & Co. KG

Address:

An der Hartbrücke 6 64625 Bensheim

Germany

Order number:

8000406487

Date of issue:

2012-02-15

Amendments:

In the future the Protective Relays type KR-163/A/Ex... may also be manufactured and operated according to the test documents listed in the test report.

The equipment was evaluated according to the newest standards.

All other data apply unchanged for this supplement.

The device will then be labeled as follows:

 $\langle \varepsilon_x \rangle$ 

## II (1) G [Ex ia Ga] IIC

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

EN 60079-0:2009

EN 60079-11:2012

EN 60079-26:2007

- (16) Test documents are listed in the test report No. 12 203 099323.
- (17) Special conditions for safe use

none

(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

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