Translation

(1) # EU-Type Examination Certificate

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

(3) **Certificate Number** **TÜV 11 ATEX 076877 X** **issue:** 00

(4) for the product: Level Switch Type LBFS xxxx x (x)

(5) of the manufacturer: **Baumer A/S**

(6) Address: Runetoften 19
8210 Aarhus V
Denmark

Order number: 8000461083

Date of issue: 2017-03-28

(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. 17 203 182609.

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

EN 60079-0:2012 **EN 60079-11:2012** **EN 60079-31:2014**

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 1 G Ex ia IIC T5/T4 Ga resp.
II 1 D Ex ta IIIC T100°C Da

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 deputy head of the notified body

Roder

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**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) **EU-Type Examination Certificate No. TÜV 11 ATEX 076877 X issue 00**

(15) Description of product

The product is used for measuring the level of a fluid or powder media.

The measuring principle is based on the DK value of the media. A signal transmitted from the tip of the sensor is swept from approximately 100 to 180 MHz, and is detected by the capacitance measured from sensor tip to the nearest tank or pipe wall.
An internal inductor in series with the measured capacitance forms resonance circuit. The resonance frequency of this circuit is used to determine if a media is present.

The product contains a PCB mounted with electrical components. This contains the electronic circuit necessary for the products functionality.

The PCB is mounted in a stainless steel housing and sealed in top and bottom to achieve an IP protection degree of IP 67. The shape of the steel housing may vary, but will always fully enclose the PCB and sensor. The connection is done via an M12 plug or a permanent cable.

The sensor electrode is encapsulated, and thereby insulated, by the material of PSU or PEEK and has no electrical connection to the media.

Type key:
LBFS 1xxx x (C) Ex ia - Gas version
LBFS 2xxx x (C) Ex ta - Dust version
LBFS 4xxx x (C) Ex ia & Ex ta – combined Gas and Dust version

Technical data:
For LBFS 1xxx x (C) and LBFS 4xxx x (C) version:

Supply and Signal circuit: [Brown, Blue, White/Black]	only for connection to an intrinsically safe circuit with the following maximum values: U_i = 30 VDC I_i = 100 mA P_i = 0.75 W C_i = 43 nF L_i = 10 uH

For LBFS 2xxx x (C) version

Supply and Signal circuit: [Brown, Blue, White/Black]	only for connection to a circuit with the following maximum values: U_n = 30 VDC I_n = 20 mA

Permissible range of ambient temperature:
-40 °C up to 74 °C T5
-40 °C up to 85 °C T4 resp. T100°C

Schedule to EU-Type Examination Certificate No. TÜV 11 ATEX 076877 X issue 00

(16) Drawings and documents are listed in the ATEX Assessment Report No. 17 203 182609

(17) Specific Conditions for Use

1. The dielectric strength test of 500 V r.m.s is not satisfied for the level switch. The maximum insulation voltage between housing and intrinsically safe housing is 40 V. The user must take special care during installation.

2. The sensor can be delivered with factory mounted M12 plug connector. The sensor can alternatively be delivered without the M12 plug connector. In case delivery is without plug connector a connector meeting ingress protection IP 67 must be chosen.

(18) Essential Health and Safety Requirements

no additional ones

- End of Certificate -