



[1] **EU-TYPE EXAMINATION CERTIFICATE - Translation**

[2] Equipment or protective systems intended for use in potentially explosive atmospheres, Directive 2014/34/EU

[3] EU-type examination certificate number **IBExU11ATEX1015** | Issue 2

[4] Product: **Ultrasonic measuring device**
Type: FLUXUS a7bbcc-A20de, PIOX a7bbcc-A20de, FLUXUS a7bbcc-A2 and PIOX a7bbcc-A2

[5] Manufacturer: FLEXIM Flexible Industriemesstechnik GmbH

[6] Address: Boxberger Straße 4
12681 Berlin
GERMANY

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] IBExU Institut für Sicherheitstechnik GmbH, Notified Body number 0637 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 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 test report IB-20-3-0054.

[9] Compliance with the essential health and safety requirements has been assured by compliance with: EN IEC 60079-0: 2018 EN 60079-11:2012 EN 60079-15:2010 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 of 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 product. These are not covered by this certificate.

[12] The marking of the product shall include the following:

 II 2D Ex tb IIIC T 120 °C Db
 II 3G Ex nA nC ic IIC T4 Gc
-40 °C ≤ T_a ≤ +60 °C

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By order

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- Seal -
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Certificates without signature and seal are not valid. Certificates may only be duplicated completely and unchanged. In case of dispute, the German text shall prevail.

Freiberg, 2020-09-04

[13] **Schedule**

[14] **Certificate number IBExU11ATEX1015 | Issue 2**

[15] **Description of product**

The ultrasonic measuring devices are designed for the measurement of the flow rate of fluids (liquid or gaseous) in pipes. They are stationary measuring devices intended for use in processing facilities. The energy emitted by the connected ultrasonic transducers is limited by the ultrasonic measuring devices.

Technical data

Nominal voltage U_N	100...230 V AC, 20...32 V DC or 10...16 V DC
Max. r.m.s AC or DC voltage U_m	250 V (for 100...230 V AC), 36 V (for 20...32 V DC) or 18 V (10...16 V DC)
Power input P_N	max. 15 W
Ambient temperature	-40 °C up to +60 °C
<u>Connection for ultrasonic transducer</u>	
Output voltage	≤ 85 V (0.15...4 MHz)
Output power	< 1 W

Type code for a7bbcc-A20de

- a: Flow class: F = Fluid, G = Gas, H = Hydrocarbon, S = Ultrasonic Analyzer
- bb: Function: 21 or 22
- cc: Application, any two letter combination from AA, AB, AC through ZY, ZZ
- d: number of measurement channels: 1 or 2
- e: enclosure material, A = Aluminum, S = Stainless steel

Type code for a7bbcc-A2

- a: Flow class: F = Fluid, G = Gas, H = Hydrocarbon, S = Ultrasonic Analyzer
- bb: Function: 04, 05 or 06
- cc: Application, any two letter combination from AA, AB, AC through ZY, ZZ

Outputs:

- Current 0/4mA...20 mA (nominal) active and passive
- Current 0/4mA...20 mA (nominal) with HART mode active and passive
- Voltage
- Frequency
- Binary (Reed relays, open collector, optical)

Inputs:

- Current 0/4mA...20 mA (nominal) active and passive
- Voltage
- Temperature (Pt100 and Pt1000)
- Binary (Reed relays, open collector, optical)

FLUXUS a7bbcc-A20de

PIOX a7bbcc-A20de

Interfaces:

- Ethernet
- BACnet MS/TP
- BACnet IP
- Modbus RTU
- Modbus TCP
- HART
- RS485
- Profibus PA

- Foundation Fieldbus H1
- M-Bus (not for use in explosive Atmospheres)
- USB (not for use in explosive Atmospheres)

FLUXUS a7bbcc-A2
PIOX a7bbcc-A2

Interfaces:

- BACnet MS/TP
- Modbus RTU
- HART
- RS485
- Foundation Fieldbus H1
- RS232 (not for use in explosive Atmospheres)
- M-BUS (not for use in explosive Atmospheres)
- USB (with adapter not for use in explosive Atmospheres)

All types are approved for use ambient pressures < 800 mbar, in particular up to heights of 5000 m above sea level.

Variations compared to issue 1 of this certificate:

- Nomenclature change
- Addition of types a722cc-A20de, 721cc-A20dA and a722cc-A20dA
- Design changes
- IEC 60079-0:2018 tested

All other parameters are unchanged.

[16] Test report

The test results are recorded in the confidential test report IB-20-3-0054 of 2020-09-03.
The test documents are part of the test report and they are listed there.

Summary of the test results

The ultrasonic measuring devices of the types FLUXUS a7bbcc-A20de, PIOX a7bbcc-A20de, FLUXUS a7bbcc-A2 and PIOX a7bbcc-A2 fulfil the requirements of type of protection protection by enclosure for Equipment Group II, Explosion Group IIIC and Category 2D. They fulfil also the requirements for non-sparking devices, sealed devices and intrinsically safe circuits of Category 3G.

[17] Specific conditions of use

None

[18] Essential health and safety requirements

In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item [9], the following are considered relevant to this product, and conformity is demonstrated in the test report: none

[19] Drawings and Documents

The documents are listed in the test report.

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