



(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:

PTB 04 ATEX 2005

Issue: 1

(4) Product: Acceleration sensor, type ASA-02X

(5) Manufacturer: Brüel & Kjær Vibro GmbH

(6) Address: Leydheckerstraße 10, 64293 Darmstadt, Germany

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

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 17 of the 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 PTB Ex 21-21009.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN IEC 60079-0:2018 **EN 60079-11:2012**

(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.

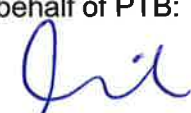
(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:

 **II 2 G Ex ia IIC T6...T1 Gb** or
II 2 D Ex ia IIIC T85°C...T145°C Db

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, March 12, 2021


Dr.-Ing. F. Lienesch
Direktor und Professor



(13)

SCHEDULE

(14) **EU-Type Examination Certificate Number PTB 04 ATEX 2005, Issue: 1**

(15) Description of Product

The Acceleration Sensor, type ASA-02X is an Acceleration Sensor for measuring mechanical vibrations and monitoring the bearing condition of machines.

It is used inside explosion hazardous areas.

Electrical Data:

Voltage supply		type of protection Intrinsic Safety Ex ia IIC only for connection to a certified intrinsically safe circuit	
Maximum values: $U_i = 28 \text{ V}$ $I_i = 70 \text{ mA}$ $P_i = 500 \text{ mW}$ $L_i = 0,2 \text{ mH}$ $C_i = \text{ see table below}$		Maximum values: $U_i = 28 \text{ V}$ $I_i = 95 \text{ mA}$ $P_i = 665 \text{ mW}$ $L_i = 0,2 \text{ mH}$ $C_i = \text{ see table below}$	
Temperature class	Permissible range of the ambient temperature	Temperature class	Permissible range of the ambient temperature
T6	- 20 ... + 70 °C	T6	- 20 ... + 65 °C
T5	- 20 ... + 80 °C	T5	- 20 ... + 80 °C
T4	- 20 ... + 115 °C	T4	- 20 ... + 115 °C
T3, T2, T1	- 20 ... + 125 °C	T3, T2, T1	- 20 ... + 125 °C

Voltage supply		type of protection Intrinsic Safety Ex ia IIIC only for connection to a certified intrinsically safe circuit	
Maximum values: $U_i = 28 \text{ V}$ $I_i = 70 \text{ mA}$ $P_i = 500 \text{ mW}$ $L_i = 0,2 \text{ mH}$ $C_i = \text{ see table below}$		Maximum values: $U_i = 28 \text{ V}$ $I_i = 70 \text{ mA}$ $P_i = 500 \text{ mW}$ $L_i = 0,2 \text{ mH}$ $C_i = \text{ see table below}$	

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EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

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Permissible range of the ambient temperature	Maximum surface temperature	Permissible range of the ambient temperature	Maximum surface temperature
- 20 ... + 70 °C	90 °C	- 20 ... + 65 °C	85 °C
- 20 ... + 80 °C	100 °C	- 20 ... + 80 °C	100 °C
- 20 ... + 115 °C	135 °C	- 20 ... + 115 °C	135 °C
- 20 ... + 125 °C	145 °C	- 20 ... + 125 °C	145 °C

For relationship between type of sensor, length of connecting cables and effective total capacitance C_i , reference is made to the following table:

Type of sensor	Cable length [m]	C_i [nF]
ASA-022/050/0	5	33
ASA-022/100/0	10	33
ASA-022/150/0	15	35
ASA-022/200/0	20	36
ASA-022/250/0	25	38
ASA-022/300/0	30	40
ASA-022/350/0	35	41
ASA-022/400/0	40	43
ASA-022/450/0	45	44
ASA-022/500/0	50	46

Changes with respect to previous editions:

- Adaptation to the current state of standards
- Addition of the maximum surface temperatures for dust
- Extension of the marking for dust explosion hazardous areas by the range of maximum surface temperatures
- Revision of the type label regarding the dust marking
- Revision of the operating instructions regarding the updated state of standards
- Alternative potting material "Delomonopox GE725" or „Aremco-Bond 526N-ALOX“ (black or white)
- Alternative adhesive "EP310N"

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(16) Test Report PTB Ex 21-21009

(17) Specific conditions of use

none

(18) Essential health and safety requirements

Met by compliance with the aforementioned standards.

According to Article 41 of Directive 2014/34/EU, EC-type examination certificates which have been issued according to Directive 94/9/EC prior to the date of coming into force of Directive 2014/34/EU (April 20, 2016) may be considered as if they were issued already in compliance with Directive 2014/34/EU. By permission of the European Commission supplements to such EC-type examination certificates and new issues of such certificates may continue to hold the original certificate number issued before April 20, 2016.

Konformitätsbewertungsstelle: Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, March 12, 2021


Dr.-Ing. F. Lienesch
Direktor und Professor

