1 # EU - TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**

3 EU - Type Examination Certificate Number: **Baseefa17ATEX0133X – Issue 2**

3.1 In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

4 Product: **PZ Series Vibration Transducer**

5 Manufacturer: **Sensonics Limited**

6 Address: **Northbridge Road, Berkhamstead, Hertfordshire, HP4 1EF**

7 This re-issued certificate extends EC Type Examination Certificate No. Baseefa17ATEX0133X to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

8 SGS Fimko Oy, Notified Body number 0598, 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.

8.1 The original certificate was issued by SGS Baseefa Ltd (UK Notified Body 1180). It, and any supplements previously issued by SGS Baseefa Ltd have been transferred to the supervision of SGS Fimko Oy (EU Notified Body 0598). The original certificate number is retained.

The examination and test results are recorded in confidential Report No. **See Certificate History**

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

EN IEC 60079-0:2018 **EN 60079-11:2012**

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:

See Schedule

SGS Fimko Oy Customer Reference No**. 0957** Project File No. **21/0340**

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13 # Schedule

14 ## Certificate Number Baseefa17ATEX0133X – Issue 2

15 Description of Product

The PZ Series Vibration Transducer is designed to convert a mechanical vibration into an electrical output signal (mV or 4-20mA).

It comprises a piezoelectric crystal and various electronic components (depending on the variant) mounted on two printed circuit boards, encapsulated as an inner assembly within a metal enclosure which may differ in mounting arrangement. Electrical connections are made to the free-end of an integral cable or a 2-pin connector.

The variants and their outputs covered by this certificate are as follows:
PZS 100mV/g Accelerometer
PZV 4mV/mm.s^{-1} Velocity Transducer
PZDC 4-20mA Velocity Transducer

Each variant may be enclosed within a 3-point mounting base enclosure, captive mounting bolt enclosure or threaded base enclosure.

The marking of the product shall include the following:

II 1 GD	**Ex ia IIC T4 Ga**	**(-40°C ≤ Ta ≤ +120°C)**
	Ex ia IIIC T130°C Da	**(-40°C ≤ Ta ≤ +120°C)**
1 M1	**Ex ia I Ma**	**(-40°C ≤ Ta ≤ +120°C)**

Input parameters

PZS

			Connector			Integral cable
U_i	=	28.5V	C_i =	30nF	C_i*[1] =	30nF + 220pF/m
I_i	=	114mA	L_i =	0	L_i =	0 + 0.83µH/m
P_i	=	0.66W				

PZV / PZDC

			Connector			Integral cable
U_i	=	28.5V	C_i =	4.7nF	C_i*[1] =	4.7nF+ 220pF/m
I_i	=	114mA	L_i =	0	L_i =	0 + 0.83µH/m
P_i	=	0.66W				

*[1] Subject to the following limits:

Group IIC	78nF
Group IIB / IIIC	627nF
Group IIA	2.05µF
Group I	3.6µF

16 Report Number

See Certificate History

17 Specific Conditions of Use

1. The flying lead terminations, where applicable, must be afforded a degree of protection of at least IP20.

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:

Clause	Subject	Compliance
1.2.7	LVD type requirements	Manufacturer responsibility
1.2.8	Overloading of equipment (protection relays, etc.)	User/Installer responsibility
1.4.1	External effects	User/Installer responsibility
1.4.2	Aggressive substances, etc.	User/Installer responsibility

19 Drawings and Documents

New drawings submitted for this issue of certificate:

Number	Sheet	Issue	Date	Description
045-2280A	1	3	3/9/2021	ATEX & IECEx Certification Label Details – PZ Vibration Transducers

Current drawings which remain unaffected by this issue:

Number	Sheet	Issue	Date	Description
045/2258A	1 of 1	1	20.03.2017	PZV / PZDC Shear Mode Velocity Transducer Inner PCB Fabrication
045/2259A	1 – 3	6	15.02.2018	PZDC Shear Mode Velocity Transducer PCB Fabrication
045/2262A	1 of 1	1	21.03.2017	PZS Main Inner Accelerometer PCB Fabrication
045/2263A	1 of 1	1	21.03.2017	PZS / PZV Transducer PCB Fabrication
045/2286A	1 & 2	1	04.12.2017	PZV 2, 3 or 4-wire TxD Interface PCB
046/6216A/1	1 of 1	4	29.08.2018	PZV Shear Mode Velocity Sensor Inner Main PCB Assembly
046/6216A/2	1 of 1	3	16.02.2018	PZDC Shear Mode Vibration Sensor Inner Main PCB Assembly
046/6217A	1 of 1	5	15.02.2018	PZDC Shear Mode Transducer Top Interface PCB Assembly
046/6218A	1 of 1	2	06.12.2017	PZ Series Vibration Transducer Range General Assembly
046/6221A	1 of 1	1	21.03.2017	PZS Accelerometer Main Inner PCB Assembly
046/6222A	1 of 1	1	21.03.2017	PZS / PZV Transducer Top Interconnection PCB
046/6287A	1 of 1	1	06.12.2017	PZV Transducer Top Interconnection PCB
047/1997B	1 of 1	1	20.03.2017	PZV / PZDC Shear Mode Velocity Transducer Inner PCB Circuit Diagram
047/1998B	1 of 1	6	15.02.2018	PZDC Shear Mode Velocity Transducer Termination PCB Circuit Diagram
047/2000B	1 of 1	1	21.03.2017	PZS Accelerometer PCB Main Inner PCB, Circuit Diagram
047/2001B	1 of 1	1	21.03.2017	PZS / PZV 2, 3 or 4-wire TxD Termination PCB Assembly Circuit Diagram
047/2035B	1 of 1	1	04.12.2017	PZV 2, 3 or 4-wire TxD Termination PCB Circuit Diagram
EA3781A	1 of 1	1	20.03.2017	PZV / PZDC Shear Mode Velocity Transducer SMT Main Inner PCB Assy
EA3782A	1 of 1	6	15.02.2018	PZDC Shear Mode Velocity Transducer Termination PCB Assembly
EA3785C	1 of 1	3	16.02.2018	PZ Series Vibration Sensors General Assembly
EA3786A	1 of 1	1	21.03.2017	PZS Accelerometer Main Inner PCB Assy
EA3787A	1 of 1	1	21.03.2017	PZS Series Accelerometer Top Interface PCB
EA3830A	1 of 1	1	06.12.2017	PZV Series Termination PCB Assembly

These drawings are common to, and held with, IECEx BAS 17.0109X.

20 Certificate History

Certificate No.	Date	Comments
Baseefa17ATEX0133X	2 February 2018	The release of the prime certificate. The associated test and assessment against the requirements of EN 60079-0:2012+A11:2013 & EN 60079-11:2012 is documented in Test Report No. GB/BAS/ExTR17.0292/00. Project File No. 17/0318.
Baseefa17ATEX0133X Issue 1	10 October 2018	To permit minor electrical and mechanical changes. The input parameters have been amended to reflect a change in Ci to 4.7nF (PZV/PZDC). Test Report No. GB/BAS/ExTR18.0235/00. Project File No. 18/0562.
Baseefa17ATEX0133X Issue 2	14 October 2021	This issue of the certificate confirms the current design meets the requirements of EN IEC 60079-0:2018 and allows minor changes to the marking label. Test Report No. GB/BAS/ExTR21.0174/00. Project File No. 21/0340.
For drawings applicable to each issue, see original of that issue.		