

**Type Examination Certificate CML 21UKEX2112X Issue 1****United Kingdom Conformity Assessment**

- 1 Product or Protective System Intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended)
- 2 Equipment **XPR Series Eddy Current Probes**
- 3 Manufacturer **Sensonics Ltd.**
- 4 Address **Northbridge Road  
Berkhamsted  
HP4 1EF  
United Kingdom**

- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

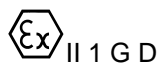
The examination and test results are recorded in the confidential reports listed in Section 12.

- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to specific conditions of use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This Type Examination certificate relates only to the design and construction of the specified equipment. Further requirements of the Regulations apply to the manufacturing process and supply of the product. These are not covered by this certificate.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018

EN 60079-11:2011

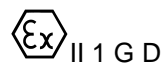
- 10 The equipment shall be marked with the following:

**Drivers/transmitters:**

Ex ia IIC T4 Ga

Ex ia IIIC T135°C Da

-40°C ≤ Ta ≤ +80°C

**Probe\*:**

Ex ia IIC T4/T2 Ga

Ex ia IIIC T135°C/ T300°C Da

-40°C ≤ Ta ≤ +80°C/+180°C

\* The probes are defined as 'small equipment', so reduced marking has been applied on the equipment. The temperature class and assigned maximum surface temperature of the probe are dependent on the upper ambient temperature, as defined in the Special Conditions for Safe Use; Section 14.





## 11 Description

The XPR Series Eddy Current Probes comprise a range of driver and transmitter assemblies, eddy current probes, and extension cables. The drivers and transmitters comprise an encapsulated electronics assembly mounted in a non-metallic or aluminium alloy enclosure with external connections for the detachable probe and for connection to remote power and control equipment. The probes comprise an encapsulated sensing coil mounted within a variety of metal housing types.

The drivers and transmitters are intended to be connected to two intrinsically safe sources located in the non-hazardous area. One source provides the power (nominal -24V for the XED and +24V for the DNX803x) and the other source is for connection to the equipment signal output. Three models of driver and transmitter are available. Each model has the following safety description:

XED Driver	DNX8031 Transmitter	DNX8033 Transmitter
U <sub>i</sub> = -27V	U <sub>i</sub> = 28V	U <sub>i</sub> = 28V
I <sub>i</sub> = 200mA	I <sub>i</sub> = 200mA	I <sub>i</sub> = 200mA
P <sub>i</sub> = 1W	P <sub>i</sub> = 1W	P <sub>i</sub> = 1W
C <sub>i</sub> = 21nF	C <sub>i</sub> = 0	C <sub>i</sub> = 0
L <sub>i</sub> = 270μH	L <sub>i</sub> = 0	L <sub>i</sub> = 0

Intrinsic safety is achieved by limiting energy storage and discharge, encapsulation, and by connecting to the non-hazardous area via intrinsically safe interface devices.

### Variation 1

This variation introduces the following changes:

- i. Component Value Changes
- ii. Additional Manufacturing Location (Sensonics (Shanghai) Co., Ltd.).

## 12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	26 Feb 2021	R13576B/00	Issue of Prime Certificate.
1	14 May 2024	R17555A/00	The introduction of Variation 1

Note: Drawings that describe the equipment are listed in the Annex.

## 13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

- i. Where the product incorporates certified parts or safety critical components, the manufacturer of the product defined on this certificate shall continually monitor these parts/components for any modifications introduced by the manufacturer(s) of these constituent parts. If the manufacturer of any constituent part introduces any changes which affect the compliance of the certified product that is the subject of this certificate, the manufacturer is required to have this certificate updated.



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#### 14 Specific Conditions of Use

The following conditions relate to safe installation and/or use of the equipment.

- i. The input voltage, current, and power parameters listed on this certificate are the combined totals from the two intrinsically safe sources connected to the equipment. The user/installer shall ensure that, when combined, the voltage, current, and power from the two sources do not exceed these values.
- ii. The user/installer shall ensure that, when combined, the voltage and current from the two sources is intrinsically safe and has the appropriate safety factor for the gas group and equipment protection level required.
- iii. The test socket on the XED transmitter/driver shall not be connected to any other equipment whilst a hazardous atmosphere is present.
- iv. The XED, DNX8031 and DNX8033 driver/transmitters shall be installed in a suitably certified enclosure providing a minimum degree of protection of IP54.
- v. The XPR probes have a temperature class/rating of T4/T135°C in an ambient temperature of +80°C and a temperature class/rating of T2/T300°C in an ambient temperature of +180°C
- vi. The equipment is not capable of withstanding the 500V insulation test required by Clause 6.3.12 of EN 60079-11. This shall be taken into account when installing the equipment.

## Certificate Annex

**Certificate Number** CML 21UKEX2112X  
**Equipment** XPR Series Eddy Current Probes  
**Manufacturer** Sensorics Ltd.



The following documents describe the equipment defined in this certificate:

### Issue 0

For drawings describing the equipment, refer to attached certificate CML 17ATEX2201X Iss 03 and the associated reports. In addition to the drawings associated with CML 17ATEX2201X Iss 03, the following drawings include the additional marking required for this UK Type Examination certification:

Drawing No	Sheets	Rev	Approved date	Title
045/2281A	1 of 1	3	26 Feb 2021	ATEX and IECEx Certification label Details for XPR Eddy current probe & Driver Range. Including DNX8031 and DNX8033 Transmitters. Sensorics Standard

### Issue 1

Drawing No	Sheets	Rev	Approved date	Title
046/6230A	1 to 2	4	14 May 2024	XED Driver PCB Assembly ATEX Certified Drawing (Parts List)