



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEX CML 16.0006X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 4	Issue 3 (2022-11-16)
Date of Issue:	2023-06-29		Issue 2 (2022-02-09)
Applicant:	Casella Holdings Limited Regent House, Kempston, Bedfordshire MK42 7JY United Kingdom		Issue 1 (2020-06-19)
Equipment:	dBADGE2		Issue 0 (2016-02-23)
Optional accessory:	Docking Station 207107B		
Type of Protection:	Ex ia		
Marking:	Ex ia IIC T4 Ga Ex ia IIIC T135°C Da Ex ia I Ma Ta = -20°C to +45°C		

Approved for issue on behalf of the IECEx
Certification Body:

Ben Trafford

Position:

Certification Officer

Signature:
(for printed version)

Date:
(for printed version)

2023-06-29

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

Eurofins E&E CML Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom





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Date of issue: 2023-06-29

Issue No: 4

Manufacturer: **Casella Holdings Limited**
Regent House,
Kempston,
Bedfordshire MK42 7JY
United Kingdom

Manufacturing
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[GB/CML/ExTR16.0006/00](#)
[GB/CML/ExTR22.0242/00](#)

[GB/CML/ExTR20.0129/00](#)
[GB/CML/ExTR23.0059/00](#)

[GB/CML/ExTR22.0002/00](#)

Quality Assessment Report:

[GB/SIR/QAR10.0002/12](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The dBadge2 is an intrinsically safe, personal sound exposure meter (Dosimeter) for the measurement and recording of personal noise exposure.

The dBadge2 is intended to be carried on the person. It contains an internal rechargeable battery pack that is charged in the safe area only using the dedicated Docking Station part number 207107B. The Docking Station also includes a USB interface for downloading data from the dBadge2.

Refer to certificate annex for full description.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Refer to certificate Annex for Specific Conditions of Use.



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Issue No: 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1

This issue introduced the following modifications:

1. Changes to charging circuit.
2. Updating of standard to IEC 60079-0 2017 Ed.7.

Issue 2

This issue introduced the following modifications:

1. Change to charger Circuit.
2. Change to Clamping circuit.
3. Alternative CTI for all PCB's.
4. Alternative mechanical size for potting box.
5. Change to IC's to incorporate alternatives.
6. Changes to component references in the BoM.

Issue 3

Update to Applicant/Manufacturer name.

Issue 4

This issue introduced the following modifications:

1. Introduction of a non-safety related component

Annex:

[Certificate Annex IECEx CML 16.0006X Iss4.pdf](#)

Annexe to: IECEx CML 16.0006X Issue 4
Applicant: Casella Holdings Limited
Apparatus: dBadge2

Description

The dBadge2 is an intrinsically safe, personal sound exposure meter (Dosimeter) for the measurement and recording of personal noise exposure.

The dBadge2 is intended to be carried on the person. It contains an internal rechargeable battery pack that is charged in the safe area only when the dBadge2 is placed in the dedicated Docking Station part number 207107B. The Docking Station also includes a USB interface for downloading data from the dBadge2.

The dBadge2 provides measurement and status information on an OLED, and, action and alarm annunciation using LED's. The equipment is operated by 2 switches located on the side of the case.

The enclosure consists of a 2 part case manufactured from polycarbonate ABS. The top case has an acrylic window for viewing the internal OLED and a through case mounting for an Electret Condenser Microphone used for the noise measurement. An encapsulated rechargeable battery pack is located in a partition located in the bottom case. The case has contact pins for connecting the Charging and USB circuits when the equipment is located in the dedicated associated safe area Docking Station. A silicone gasket provides sealing between the top and bottom cases and for the two switches. The dBadge2 enclosure meets the environmental rating of IP 65.

The dBadge2 enclosure houses 2 PCB's, namely the PS PCB and Processor PCB. The PS PCB provides the connection between the safe area charger circuit and the battery pack, the case mounted switches, and, to the USB interface. The battery pack output is connected to an encapsulated power supply that provides limited power to the dBadge2 circuits during battery operation. The Processor PCB includes the Processor, Microphone Interface, Bluetooth and OLED interface circuits. Intrinsic safety is achieved in the dBadge2 by limiting energy storage and discharge.

The Docking Station is an intrinsically safe accessory that provides energy limitation to the dBadge2 during battery charging and data downloading when connected in the safe area only.

Rating:

Docking Station (207107B)	
Charging and USB	Um = 60 V

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Marking

Identification	dBADGE2 and Docking Station 207107B
IECEX Certificate number	IECEX CML 16.0006X
Code	Ex ia IIC T4 Ga Ex ia IIIC T135°C Da Ex ia I Ma
Ambient	-20 °C to +45 °C

Conditions of Manufacture

- i. Where the product incorporates certified parts or safety critical components, the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.

Specific Conditions of Use

- i. No precautions against electrostatic discharge are necessary for portable equipment that has an enclosure made of plastic, metal or a combination of the two, except where a significant static-generating mechanism has been identified. Activities such as placing the item in a pocket or on a belt, operating a keypad or cleaning with a damp cloth, do not present a significant electrostatic risk. However, where a static-generating mechanism is identified, such as repeated brushing against clothing, then suitable precautions shall be taken, e.g. the use of anti-static footwear.
- ii. Do not charge the batteries or download data from the instrument in a hazardous area.
- iii. The dBadge2 must only be charged using Docking Station, Casella part number 207107B connected to a PELV/SELV power adapter that meets the requirements for the rated Um (i.e. Casella part number PC18 or equivalent).
- iv. The dBadge2 data must only be downloaded using Docking Station Casella part number 207107B. The USB circuit must only be connected to a safety extra low-voltage circuit (SELV) or protective extra low-voltage circuit (PELV).
- v. Do not remove the microphone in hazardous area.