



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: **IECEX SIR 11.0063X** issue No.:4

Status: **Current**

Date of Issue: **2013-01-14** Page 1 of 4

Applicant: **Casella CEL**
Regent House
Wolseley Road
Kempston
Bedford MK42 7JY
United Kingdom

Certificate history:
Issue No. 4 (2013-1-14)
Issue No. 3 (2012-7-16)
Issue No. 2 (2011-12-15)
Issue No. 1 (2011-9-5)
Issue No. 0 (2011-5-24)

Electrical Apparatus: **CEL-35X/IS dBadge Series Noise Dosimeter and Brüel & Kjær Type 4448 x 002 Noise Dose Meter**
Optional accessory:

Type of Protection: **Intrinsic Safety**


Marking: **Ex ia I Ma**
Ex ia IIC T2 (222°C) Ga

Approved for issue on behalf of the IECEx Certification Body: **C Ellaby**

Position: **Deputy Certification Manager**

Signature:
(for printed version)

Date:



2013-01-14

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 the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

SIRA Certification Service
Rake Lane
Eccleston
Chester
CH4 9JN
United Kingdom

sira
CERTIFICATION



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Manufacturer: **Casella CEL**
Regent House
Wolseley Road
Kempston
Bedford MK42 7JY
United Kingdom

Additional Manufacturing location(s):

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 electrical apparatus 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 : 2007-10 Explosive atmospheres - Part 0: Equipment - General requirements
Edition: 5
IEC 60079-11 : 2006 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition: 5
IEC 60079-26 : 2006 Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga
Edition: 2

*This Certificate **does not** indicate compliance with electrical 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 Report:

[GB/SIR/ExTR11.0110/01](#)
[GB/SIR/ExTR12.0322/00](#)

[GB/SIR/ExTR11.0224/01](#)

[GB/SIR/ExTR11.0311/00](#)

Quality Assessment Report:

[GB/SIR/QAR10.0002/01](#)

[GB/SIR/QAR10.0002/02](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The CEL-35X/IS *dB*Badge Series Noise Dosimeter aka Brüel & Kjær Type 4448 x 002 Noise Dose Meter is a miniature, fully integrated Noise Dosimeter used for the measurement of personal noise exposure. The series covered by this certificate are CEL-35X/IS, where X is any number from 0 to 9, and 'Type 4448 x 002, where x is any letter A, B, ...'. The product is designed to be worn using a range of fixing methods, alternatively it may be mounted on a hard hat.

The device comprises a plastic enclosure that contains two printed circuit boards, an LCD display and rechargeable cells. Two rubber keys located on the sides of the product are used to control the instruments operation. Power to the device is provided from two, internal and non-removable ½-AAA, cylindrical, nickel metal hydride cells. Two exposed contacts are located on the rear of the product for connection to a purpose designed, drop in, charger system. The charge contacts are protected from reverse current flow by three blocking diodes. The unit is not to be charged within a hazardous area. Battery charging is only permitted using charger model number CEL-6362 aka ZG-0860'.

Noise is monitored using a screw on, ½" back, electret microphone, this is a high impedance capacitive type sensor, which can be removed for replacement or product testing. Measured noise data is downloaded to a PC (in the non-Hazardous area) using an infrared cable free communication link.

Conditions of manufacture

The Manufacturer shall comply with the following:

1. When the 250 mAh cells are soldered to the PCB, the manufacturer shall ensure that the segregation between positive and negative of ≥ 0.5 mm through solid insulation and ≥ 1.5 mm creepage is maintained on the positive terminal.

CONDITIONS OF CERTIFICATION: YES as shown below:

1. The CEL-35X/IS *dB*Badge Series Noise Dosimeter aka Brüel & Kjær Type 4448-x-002 Noise Dose Meter shall not be used in areas where a layer of coal dust may be deposited on the enclosure.
2. The microphone shall not be removed in the hazardous area.
3. The CEL-35X/IS *dB*Badge Series Noise Dosimeter aka Brüel & Kjær Type 4448-x-002 Noise Dose Meter shall only be recharged in a safe area with the chargers specified in the description.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1 – this Issue introduced the following changes:	
1	The introduction of an alternative label in the name of Brüel & Kjær of Denmark was approved, the product will be known as a Type 4448 Personal Sound Exposure Badge when supplied using this label. The description and conditions are amended to reflect this model.
2	The Limited was removed from the company name in line with the QAR listing.
Issue 2 – this Issue introduced the following change:	
1	The recognition that when the product is sold by Brüel & Kjær of Denmark it will now be called a Brüel & Kjær Type 4448 x 002 Noise Dose Meter instead of a Type 4448 Personal Sound Exposure Badge, the description and conditions were amended accordingly.
Issue 3 – this Issue introduced the following change:	
1	Reports GB/SIR/ExTR11.0110/01 and GB/SIR/ExTR11.0224/01 replaced GB/SIR/ExTR11.0110/00 and GB/SIR/ExTR11.0224/00 respectively to recognise administrative changes to the associated Sira Free Reference Reports.
Issue 4 – this Issue introduced the following changes:	
1.	The use of Shenzhen Grepow H250 ½ AAA 250mAh cells as an alternative to the existing Shenzhen Euni H-½ AAA 250mAh cells was approved, the Condition of Manufacture was amended to reflect this