



# 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](http://www.iecex.com)

Certificate No.: **IECEX CML 19.0100**

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Certificate history:

Status: **Current**

Issue No: 4

Issue 3 (2022-11-16)

Issue 2 (2022-05-31)

Issue 1 (2020-02-27)

Issue 0 (2019-08-14)

Date of Issue: 2024-11-21

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

Equipment: **Casella VAPex Personal Air Sampling Pump**

Optional accessory:

Type of Protection: **Intrinsic Safety "ia"**

Marking: Ex ia IIC T4 Ga  
Ta = -20°C to +45°C

Approved for issue on behalf of the IECEx  
Certification Body:

**Stelios Roumbedakis**

Position:

**Certification Manager**

Signature:  
(for printed version)

*S. Roumbedakis*

Date:  
(for printed version)

2024-11-21

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

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

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/ExTR19.0127/00](#)  
[GB/CML/ExTR22.0242/00](#)

[GB/CML/ExTR20.0043/00](#)  
[GB/CML/ExTR24.0114/00](#)

[GB/CML/ExTR22.0103/00](#)

### Quality Assessment Report:

[GB/SIR/QAR10.0002/14](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The Casella VAPex Pump is a personal air sampling pump typically used to take samples of gases or vapours. It is a body-worn, battery-powered self-contained device housed within a polycarbonate anti-static enclosure. The pump is designed to provide a stable and controlled flow rate of 20 to 500 ml/min such that a known volume of gas is passed through a sorbent tube. Gases and vapour samples are collected on a sorbent tube and are subjected to mass or chemical analysis in a laboratory in order to establish a worker's exposure to potentially hazardous gases. Such sampling pumps are typically worn on the user's belt and are connected to the sorbent tube via a short length of tube.

**Refer to Certificate Annex for full Product Description and Conditions of Manufacture.**

**SPECIFIC CONDITIONS OF USE: NO**



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

### Issue 1

This issue introduces the following change:

1. To permit the use of Samsung INR18650-25R cells in place of the Samsung ICR18650-26F cells, within the battery pack.

### Issue 2

This issue introduces the following changes:

1. Alternative CTI's for all PCB's.
2. Change to IC's to incorporate alternatives.
3. Change to transistors to all for alternatives.
4. Changes to component references in the BoM.

### Issue 3

This issue introduces the following change:

1. Update to Applicant/Manufacturer name.

### Issue 4

This issue introduces the following modifications:

1. Change of the cell type and quantity (two cells are used, where previously there was one).
2. Addition of poly-fuses to the battery pack PCB, connected to the positive terminal of each cell.
3. Introduction of a replacement Bluetooth module on the display PCB.
4. Introduction of an alternative connector option on the display and main PCBs. The existing connector may still be used.
5. Change to the conformal coating used on the display and main PCBs.
6. Addition of components to the display, main and battery pack PCBs.
7. Changes to the main, display and battery pack PCBs, and battery pack assembly, to accommodate the above modifications.
8. Identification of components which are not fitted on the certified product.
9. Introduction of the option to omit some circuit components which are not safety related.

## Annex:

[Certificate Annex IECEx CML 19.0100, Issue 4\\_1.pdf](#)

**Annexe to:** IECEx CML 19.0100, Issue 4  
**Apparatus:** Casella VAPex Personal Air Sampling Pump  
**Applicant:** Casella Holdings Limited



## Description

The Casella VAPex Pump is a personal air sampling pump typically used to take samples of gases or vapours. It is a body-worn, battery-powered self-contained device housed within a polycarbonate anti-static enclosure. The pump is designed to provide a stable and controlled flow rate of 20 to 500 ml/min such that a known volume of gas is passed through a sorbent tube. Gases and vapour samples are collected on a sorbent tube and are subjected to mass or chemical analysis in a laboratory in order to establish a worker's exposure to potentially hazardous gases. Such sampling pumps are typically worn on the user's belt and are connected to the sorbent tube via a short length of tube.

The equipment shall only be recharged in the safe area using either:

1. VAPex Pump Five Way Charger
2. VAPex Pump Single Way Charger

The chargers must be supplied from a SELV source with  $U_m = 63V$

These chargers shall have an output not exceeding:

$U_m = 6.95V$   
 $I_{max} = 850mA$

The equipment may be connected via the USB port, to other external equipment in the safe area only. The external equipment shall have an output not exceeding:

$U_m = 5.9V$   
 $I_{max} = 85mA$

## 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.

## Specific Conditions of Use

None.



Certificate Annex IECEx  
Version: 10.0 Approval: Approved



**Eurofins E&E CML Limited**  
Newport Business Park, New Port Road  
Ellesmere Port, CH65 4LZ, UK