



EU Type Examination Certificate CML 19ATEX2328 Issue 4

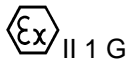
- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **Casella VAPex Personal Air Sampling Pump**
- 3 Manufacturer **Casella Holdings Limited**
- 4 Address **Regent House, Wolseley Road
Kempston, Bedford, MK42 7JY
United Kingdom**
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, 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 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 Annex II to the Directive.

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 conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.
- 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 60079-11:2012

- 10 The equipment shall be marked with the following:



II 1 G

Ex ia IIC T4 Ga

Ta= -20°C to +45°C





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11 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:

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

Variation 1

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

Variation 2

This variation introduces the following modifications:

- i. Alternative CTI's for all PCB's
- ii. Change to IC's to incorporate alternatives
- iii. Change to transistors to all for alternatives
- iv. Changes to component references in the BoM
- v. Inclusion of updated Label drawings with UKEX details

Variation 3

This variation introduces the following modifications:

- i. Update to Applicant/Manufacturer name.



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12 Certificate history and evaluation reports

| Issue | Date | Associated report | Notes |
|-------|-------------|-------------------|---|
| 0 | 14 Aug 2019 | R12106A/00 | Issue of Prime Certificate |
| 1 | 27 Feb 2020 | R13095A/00 | Introduction of Variation 1 |
| 2 | 31 May 2022 | R15331A/00 | Introduction of Variation 2 |
| 3 | 26 Oct 2022 | R15790A/00 | Introduction of Variation 3 |
| 4 | 11 Apr 2023 | - | Correction of marking and removal of "X" designation from certificate number. |

Note: Drawings that describe the equipment or component 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 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.

14 Specific Conditions of Use

None

Certificate Annex

Certificate Number CML 19ATEX2328
Equipment Casella VAPex Personal Air Sampling Pump
Manufacturer Casella Holdings Limited



The following documents describe the equipment or component defined in this certificate:

Issue 0

| Drawing No | Sheets | Rev | Approved date | Title |
|------------------|--------|-----|---------------|---|
| 03-214000D/IS-01 | 1 of 1 | 1 | 14 Aug 2019 | VAPEX/IS Case Body G/A |
| 03-214044C/IS-01 | 1 of 1 | 1 | 14 Aug 2019 | VAPEX/IS Battery Case Body G/A |
| 93-214013B/IS-01 | 1 of 1 | 1 | 14 Aug 2019 | VAPEX/IS Battery Pack – Schematic |
| 05-214015B/IS-01 | 1 of 1 | 1 | 14 Aug 2019 | VAPEX/IS Battery Pack PCB – Parts List |
| 05-214015B/IS-01 | 1 of 1 | 1 | 14 Aug 2019 | VAPEX/IS Battery Pack PCB – Component Layout |
| 02-214014C/IS-02 | 1 of 1 | 2 | 14 Aug 2019 | VAPEX/IS Battery Pack PCB – Profile & Drilling |
| 93-214007D/IS-01 | 1 to 2 | 1 | 14 Aug 2019 | VAPEX/IS Main Board – Schematic |
| 05-214009C/IS-01 | 1 of 1 | 1 | 14 Aug 2019 | VAPEX/IS Main Board PCB – Component Layout |
| 05-214009C/IS-01 | 1 to 2 | 1 | 14 Aug 2019 | VAPEX/IS Main Board PCB – Parts List |
| 02-214008C/IS-02 | 1 of 1 | 2 | 14 Aug 2019 | VAPEX/IS Main Board PCB – Profile & Drilling |
| 93-214010B/IS-01 | 1 of 1 | 1 | 14 Aug 2019 | VAPEX/IS Display Board – Schematic |
| 05-214012B/IS-01 | 1 of 1 | 1 | 14 Aug 2019 | VAPEX/IS Display Board PCB – Component Layout |
| 05-214012B/IS-01 | 1 of 1 | 1 | 14 Aug 2019 | VAPEX/IS Display Board PCB – Parts List |
| 02-214011B/IS-02 | 1 of 1 | 2 | 14 Aug 2019 | VAPEX/IS Display Board PCB – Profile & Drilling |
| 93-214021C/IS-01 | 1 of 1 | 1 | 14 Aug 2019 | VAPEX/IS 1-Way Charging Unit – Circuit Diagram |
| 04-214020B/IS-01 | 1 of 1 | 1 | 14 Aug 2019 | VAPEX/IS 1-Way Charging Unit GA |
| 05-214023B/IS-01 | 1 of 1 | 1 | 14 Aug 2019 | VAPEX/IS 1-Way Charging Unit PCB – Component Layout |
| 05-214023B/IS-01 | 1 of 1 | 1 | 14 Aug 2019 | VAPEX/IS 1-Way Charging Unit PCB – Parts List |
| 02-214022B/IS-02 | 1 of 1 | 2 | 14 Aug 2019 | VAPEX/IS 1-Way Charging Unit PCB – Profile & Drilling |
| 93-214025C/IS-01 | 1 of 1 | 1 | 14 Aug 2019 | VAPEX/IS 5-Way Charging Unit – Circuit Diagram |
| 04-214024C/IS-01 | 1 of 1 | 1 | 14 Aug 2019 | VAPEX/IS 5-Way Charging Unit GA |

Certificate Annex

Certificate Number CML 19ATEX2328
Equipment Casella VAPex Personal Air Sampling Pump
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| Drawing No | Sheets | Rev | Approved date | Title |
|--------------------------|--------|-----|---------------|---|
| 05-214027C/IS-01 | 1 of 1 | 1 | 14 Aug 2019 | VAPEX/IS 5-Way Charging Unit PCB – PCB Layout |
| 05-214027C/IS-01 | 1 of 1 | 1 | 14 Aug 2019 | VAPEX/IS 5-Way Charging Unit PCB – Parts List |
| 02-214026C/IS-02 | 1 of 1 | 2 | 14 Aug 2019 | VAPEX/IS 5-Way Charging Unit PCB – Profile & Drilling |
| 13-214053A/IS (CMLEX)-01 | 1 of 1 | 1 | 14 Aug 2019 | Certification Label |
| 13-214054A/IS (CMLEX)-01 | 1 of 1 | 1 | 14 Aug 2019 | Certification Label |

Issue 1

| Drawing No. | Sheets | Rev | Approved date | Title |
|------------------|--------|-----|---------------|---------------------------|
| 03-214044C/IS-02 | 1 of 1 | 2 | 27 Feb 2020 | VAPEX/IS Battery Pack G/A |

Issue 2

| Drawing No | Sheets | Rev | Approved date | Title |
|------------------|--------|-----|---------------|---|
| 05-214015B/IS-02 | 1 of 1 | 02 | 31 May 2022 | Vapex/IS Low Flow Pump Battery Pack PCB S/A |
| 02-214011B/IS-03 | 1 of 1 | 03 | 31 May 2022 | Vapex/IS low Flow Pump Display PCB Profile & Drilled |
| 02-214008C/IS-03 | 1 of 1 | 03 | 31 May 2022 | Vapex/IS Low Flow Pump Main PCB Profile and Drilled |
| 02-214014C/IS-03 | 1 of 1 | 03 | 31 May 2022 | Vapex/IS Low Flow Pump Battery Pack PCB Profile and Drilled |
| 05-214009C/IS-02 | 1 of 1 | 02 | 31 May 2022 | Vapex/IS Low Flow Pump Main PCB S/A |
| 05-214009C/IS-02 | 1 to 2 | 02 | 31 May 2022 | Vapex/IS Low Flow Pump Main PCB S/A |
| 05-214012B/IS-02 | 1 of 1 | 02 | 31 May 2022 | Vapex/IS Low Flow Pump – Display PCB S/A |
| 05-214012B/IS-02 | 1 of 1 | 02 | 31 May 2022 | Vapex/IS Low Flow Pump Display PCB S/A |
| 93-214010B/IS-02 | 1 of 1 | 02 | 31 May 2022 | Vapex/IS Low Flow Pump Display PCB Circuit Diagram |
| 93-214007D/IS-02 | 2 of 2 | 02 | 31 May 2022 | Vapex/IS Low Flow Pump PSU & Motor Drive CCT |

Certificate Annex

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| | | | | |
|---------------------------|--------|----|-------------|---|
| 93-214013B/IS-02 | 1 of 1 | 02 | 31 May 2022 | Vapex/IS Low Flow Pump Battery Pack Circuit Diagram |
| 93-214007D/IS-02 | 1 of 2 | 02 | 31 May 2022 | Vapex/IS Low Flow Pump μ PRO & Peripherals CCT |
| 05-214015B/IS-02 | 1 of 1 | 02 | 31 May 2022 | Vapex/IS Low Flow Pump Battery Pack PCB S/A |
| 13-214053A/IS(cmlEX) - 02 | 1 of 1 | 02 | 31 May 2022 | Vapex/IS – Information/SN Label (RH) |
| 13-214054A/IS(cmlEX) – 02 | 1 of 1 | 02 | 31 May 2022 | Vapex/IS – Information Label (LH) |

Issue 3

No documents introduced

Issue 4

No documents introduced