



## UNITED KINGDOM CONFORMITY ASSESSMENT

### 1 UK TYPE EXAMINATION CERTIFICATE

2 Equipment Intended for use in Potentially Explosive Atmospheres  
UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

3 Certificate Number: CSAE 22UKEX1387 Issue: 0

4 Product: Universal Air Sampling Pumps

5 Manufacturer: SKC Limited

6 Address: 11 Sunrise Park  
Higher Shaftesbury Road  
Blandford Forum  
Dorset DT11 8ST  
UK

7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Testing UK Limited, Approved Body number 0518, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products 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 14.2.

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 EN 60079-11:2012

Except in respect of those requirements listed at Section 16 of the schedule to this certificate. The above standards may not appear on the UKAS Scope of Accreditation, but have been added through flexible scope of accreditation, which is available on request.

10 If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This UK TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of this product shall be in accordance with Regulation 41 and include the following:



II 1G  
Ex ia IIC T4 Ga

Name: Michelle Halliwell  
Title: Director of Operations



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Certificate No. CSAE 22UKEX1387  
CSA Group Testing UK Ltd., Unit 6 Hawarden Industrial Park, Hawarden, CH5 3US, UK  
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## SCHEDULE

### UK TYPE EXAMINATION CERTIFICATE

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Issue 0

#### 13 DESCRIPTION OF PRODUCT

The air sampling pump provides a mechanism by which an amount of pollutant can be determined for a given volume of air. The equipment comprises a battery-operated motor with pump and filter attachment, a detachable encapsulated NiCd battery pack (containing current-limiting components and a charging socket) and an encapsulated electronic circuit. The circuitry is mounted within a plastic enclosure. The equipment uses the pump to draw air through the filter mechanism, the pump rotation being calibrated to provide a controlled flow rate. The duration of the sample period is also monitored.

The charging socket is the only external connection, but charging is not permitted in the hazardous area.

##### Amendments

##### Amendment 1

- i. The introduction of the 224-44TX Air Sampling Pump.

##### Description of 224-44TX Air Sampling Pump

The 224-44TX air sampling pump provides a mechanism by which an amount of pollutant can be determined for a given volume of air. The equipment comprises a battery-operated motor with pump and filter attachment, a detachable encapsulated NiCd battery pack (containing current limiting components and a charging socket) and an encapsulated electronic circuit. The circuitry is mounted within a plastic enclosure. The equipment uses the pump to draw air through the filter mechanism, the pump rotation being calibrated to provide a controlled flow rate. Unlike the Universal Air sampling Pump, the duration of the sample period cannot be monitored, as there is no LCD display.

The charging socket is the only external connection, but charging is not permitted in the hazardous area.

##### Amendment 2

- i. The use of GP GP200SCK, 2.0 Ah nominal, nickel cadmium (NiCd) batteries was recognised as replacements for the original, Energiser Ultramas, 1.8 Ah nominal, NiCd cells, this is a retrospective modification and applies to all NiCd Battery Packs.
- ii. For clarification, it was confirmed that the two, Universal Air Sampling Pumps detailed in the original schedule were the types 224-PCTX4 and 224-PCTX8.
- iii. The introduction of new versions of the of the Universal 224-44TX, 224-PCTX4 and 224-PCTX8 Air Sampling Pumps, these are designated the Universal 224-44MTX, 224-PCMTX4 and 224-PCMTX8 respectively.
- iv. The nickel cadmium (NiCd) batteries used in Battery Pack Part Number P22418TX may be replaced by nickel metal-hydride (NiMH) ones. The new battery packs are designated as either Part Number P22418MTX or Part Number P22419MTX. The P22418MTX Battery Pack can be used in all versions of the Universal 224-44TX, 224-PCTX4 and 224-PCTX8 Air Sampling Pumps and the P22419MTX Battery Pack can be used in all versions of the Universal 224-44MTX, 224-PCMTX4 and 224-PCMTX8 Air Sampling Pumps.
- v. The introduction of Robnor Resin RX/HX700K in place of the original PX/HX700K.
- vi. The pump assembly drawings were re-drawn.
- vii. The label drawings were rationalised in line with the above changes.

##### Amendment 3

- i. To permit the use of an alternative Main PCB Assembly on the Universal Pump, Universal 224-PCTX4/8 and Universal 224-PCMTX4/8 Air Sampling Pumps.



## SCHEDULE

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Issue 0

#### Amendment 4

- i. The use of an alternative, plastic case material (Staroy NH-1000T) was recognised.

#### Amendment 5

- i. The use of Robnor PX804C as an alternative encapsulation material was endorsed.

#### Amendment 6

- i. To introduce an alternative epoxy resin, Robnor Resins PX804C-1, for the encapsulation of the battery pack and PCB assembly.

#### Amendment 7

- i. Recognise minor drawing modifications.
- ii. Recognise label drawing with modified marking as per EN IEC 60079-0:2018.
- iii. Removal of warning for electrostatic hazard.

### 14 DESCRIPTIVE DOCUMENTS

#### 14.1 Drawings

Refer to Certificate Annexe.

#### 14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	05 December 2022	R80125208A	The release of the prime certificate.

### 15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

None

### 16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS (REGULATIONS SCHEDULE 1)

In addition to the Essential Health and Safety Requirements covered by the standards listed in Section 9, all other requirements are demonstrated in the relevant reports.

### 17 PRODUCTION CONTROL

- 17.1 Holders of this certificate are required to comply with production control requirements defined in Schedule 3A, as applicable, and CSA Group Testing UK Regulations for Certificate Holders.
- 17.2 Faulhaber micromotors covered by SKC drawing Sira-13, shall have the dc resistance of their winding checked before assembly into the pump stack. The dc resistance of the winding shall be in excess of 5  $\Omega$ .
- 17.3 The battery pack charging circuit shall not be supplied from, nor contain, a source of potential greater than 250 Vac.



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## Certificate Annexe

Certificate Number: CSAE 22UKEX1387  
Product: Universal Air Sampling Pumps  
Manufacturer: SKC Limited

### Issue 0

Drawing	Sheets	Rev.	Date (Stamp)	Title
0203P011	1 of 1	2	18 Oct 22	Universal pumps PCB layout 224-44 series
7954V3a	1 of 1	6	18 Oct 22	BOM Main PCB
Sira-3	1 of 1	5	24 Oct 22	Pump assembly 224-44EX/TX/MTX
Sira 4	1 of 1	6	18 Oct 22	Pump Assembly 224-PCEX4/8, 224-PCTX4/8, 224-PCMTX4/8
SKC-IS-0002	1 of 1	8	18 Oct 22	NiMH battery pack
SKC-IS-0012	1 of 1	2	27 Oct 22	Circuit Schematic-Main PCB Assembly Universal Pumps
SKC-IS-0006	1 of 1	4	23 Oct 20	Main PCB Assembly Universal 44EX-TX-MTX Pumps
SKC-IS-0015	1 of 1	4	23 Oct 20	Main PCB Assembly Universal PCEX-TX-MTX Pumps – 7953 Iss 7
Sira-1	1 of 1	6	10 Aug 09	NiCd Battery Pack Assembly – Universal series pumps
SKC-IS-0007	1 of 1	1	24 Nov 08	Main PCB Assembly Universal 224-PCEX4/8 PCTX4/8 PCMTX4/8 Pump
0203C011	1 of 1	1	04 Jul 93	Schematic – 224-44TX
0201C011	1 of 1	1	03 Jul 93	Universal pump SKC 7953 Ver 3a Certification Drawing [Schematic Part 1]
0201C021	1 of 1	1	03 Jul 93	Universal Pump SKC 7953 Ver 3a Certification Drawing [schematic part2]
Sira 13	1 of 1	2	03 Oct 01	Micro Motor for Airchek & Universal Pumps
SKC-IS-0013	1 of 1	1	17 Mar 09	PCB layout- Main PCB Assembly Universal pumps
SKC-IS-0014	1 & 2	1	17 Mar 09	Parts List – Main PCB Assembly Universal pumps
0201P011	1 of 1	1	03 Jul 93	7953 pcb layout
Sira-7	1 to 2	8	30 Nov 22	Label drawing



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