



## UNITED KINGDOM CONFORMITY ASSESSMENT

### 1 UK TYPE EXAMINATION CERTIFICATE

2 Equipment Intended for use in Potentially Explosive Atmospheres

3 UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

4 Certificate Number: CSAE 22UKEX1160 Issue: 1

5 Product: ALTAIR 4XR multi gas detector

6 Manufacturer: MSA - THE SAFETY COMPANY

7 Address: 1000 Cranberry Woods Dr. Cranberry Township, Pennsylvania 16066-5296 USA

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

9 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.

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

EN IEC 60079-0:2018 EN 60079-11:2012 EN 60079-1:2014 EN 60079-29-1:2016\*  
EN 50271 :2018 \*Applies to Group II only

11 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.

12 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.

13 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.

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

#### With XCell Ex Sensor



II 1G  
Ex da ia IIC T3 Ga  
EN 60079-29-1  
Ta = -40°C to +60°C



I M1  
Ex ia I Ma  
Ta = -40°C to +60°C

#### Without XCell Ex Sensor



II 1G  
Ex ia IIC T3 Ga  
Ta = -40°C to +60°C



I M1  
Ex ia I Ma  
Ta = -40°C to +60°C

Name: Michelle Halliwell

Title: Director of Operations

Certificate No. CSAE 22UKEX1160

CSA Group Testing UK Ltd., Unit 6 Hawarden Industrial Park, Hawarden, CH5 3US, UK  
This certificate and its schedules may only be reproduced in its entirety and without change

QD-1599 Issue 5 (2023-09-11)  
Page 1 of 3





## SCHEDULE

### UK TYPE EXAMINATION CERTIFICATE

CSAE 22UKEX1160  
Issue 1

#### 13 DESCRIPTION OF PRODUCT

The MSA ALTAIR® 4XR is a handheld battery operated Multi-gas Detector with Bluetooth capabilities (optional) that can measure between 1 and 4 gases using a combination of the following MSA XCell® Sensors: one catalytic-bead combustible cell, one oxygen electrochemical cell and one dual toxic electrochemical cell. The enclosure is rectangular in shape, includes an LCD display window, and is manufactured from a non-metallic material with an overmold. There is an external connection that is only used for charging the battery and shall only be connected when located in a non-hazardous location.

Powered by a rechargeable Lithium Ion Polymer Battery Cell, Sony model US503759A8H, rated 3.8 V (nominal), 1400 mAh (nominal). MSA assembly number 10083913, or rechargeable Lithium Ion Polymer Battery Cell, Inventus Model IP583548, rated 3.8 V (nominal), 1435mAh (nominal), MSA assembly number 10242458.

Performance tested for 0-100% LFL methane, 0-100% LFL propane and other gas(es): 0-100% LFL n-Pentane. Altair 4XR firmware version 2.30 (English) or version 4.23 (French) and XCell Ex sensor firmware version 2.0. Performance temperature range: -20°C to +60°C as specified in Altair 4XR Addendum A manual 10175895.

The ALTAIR 4XR Multi Gas Detector complies with EN 50271 (clause 4.8, safety integrity assessment excluded from the assessment)

#### Incorporated amendments:

The product description includes the following applicable amendments, only amendments directly applicable to UKCA certification have been included in this list.

- I. Introduction of a new resin material for the calibration cap, RTP 2599 X 133889, to replace the obsolete resin material RTP 2599 X 97420D.
- II. Introduction of an alternate sensor filter material, Cobetter PFOY-T1DT, to replace the obsolete filter material Versapor 1200R Hydrophobic.
- III. Introduction of a new non-Bluetooth option (both non-safety critical components U16 and U18 would not be populated on the PCB).
- IV. Introduction of creating an option to populate the PCB with either the VQFN package or the UQFN package for the non-safety critical components U17 and U19 (U17 and U19 are the same part made by the same manufacturer).
- V. Introduction of a new alternate PCB (P/N 10225260) to support the new alternate UQFN package for components U17 and U19 (as described above).

#### Variation 1 - This variation introduced the following changes:

- i. Incorporate FS evaluation of firmware updates per CSA projects 80142606 and 80171531.
- ii. Assess alternate construction of Altair 4XR to include:
  - a. New Li-Ion battery pack.
  - b. Minor change to PCB to accommodate selecting a different charging voltage.
- iii. Update markings to reflect a new Temperature Code.
- iv. Updated schedule drawing and instructions with updated information.
- v. Document Gas Performance Testing necessary for the above alterations.
- vi. Add EN 50271:2018 to approval standards





## SCHEDULE

### UK TYPE EXAMINATION CERTIFICATE

CSAE 22UKEX1160  
Issue 1

#### 14 DESCRIPTIVE DOCUMENTS

##### 14.1 Drawings

Refer to Certificate Annexe.

##### 14.2 Associated Reports and Certificate History

| Issue | Date             | Report number | Comment                               |
|-------|------------------|---------------|---------------------------------------|
| 0     | 08 June 2022     | R80123458A    | The release of the prime certificate. |
| 1     | 21 November 2023 | R80171534A    | The introduction of Variation 1.      |

#### 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 The ALTAIR 4XR incorporates previously certified sensors. It is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with this device. The manufacturer shall inform CSA of any modifications to the device that may impinge upon the explosion safety design of the ALTAIR 4X.





## Certificate Annexe

Certificate Number: CSAE 22UKEX1160  
Product: ALTAIR 4XR multi gas detector  
Manufacturer: MSA - THE SAFETY COMPANY

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### Issue 0

| Drawing      | Sheets  | Rev. | Date (Stamp) | Title  |
|--------------|---------|------|--------------|--|
| SK-3098-1360 | 1 to 27 | 04   | 10 Jan 22    | Altair 4XR CSA schedule drawing                |
| 10175895     | 1 to 11 | 09   | 03 May 22    | Addendum A to Altair 4X Operating Manual       |
| 10175896     | 1 to 11 | 05   | 03 May 22    | Operating Manual ALTAIR 4XR Multi gas Detector |

### Issue 0

| Drawing     | Sheets  | Rev. | Date (Stamp) | Title  |
|-------------|---------|------|--------------|--|
| SK3098-1360 | 1 to 27 | 6    | 31 Oct 23    | ALTAIR4XR CSA  |
| 10175895    | 1 to 10 | 10   | 06 Nov 23    | Addendum A - Standards Compliance Certifications for Altair 4XR Operating Manual |
| SK3098-1413 | 1 to 5  | 4    | 31 Oct 23    | ATEX Marking and Instructions Approval Drawing, ALTAIR 4XR Gas Detector          |
| 10175896    | 1 to 56 | 9    | 31 Oct 23    | Operating Manual ALTAIR® 4XR Multigas Detector                                   |

