



1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 16ATEX2292** Issue: **9**

4 Equipment: **ALTAIR 4XR Multi Gas Detector**

5 Applicant: **MSA – The Safety Company**

6 Address: **1000 Cranberry Woods Dr.
Cranberry Township, PA 16066-5296 USA**

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

8 CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 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 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

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

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

11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall 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



Signed: Michelle Halliwell

Title: Director of Operations

Project Number 80171533

This certificate and its schedules may only be reproduced in its entirety and without change
CSA Group Netherlands B.V. Utrechtseweg 310, Building B42, 6812AR Arnhem, The Netherlands



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 16ATEX2292
Issue 9

13 DESCRIPTION OF EQUIPMENT

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)

Variation 1 - This variation introduced the following change:

- i. Issued to recognise a new label drawing.

Variation 2 - This variation introduced the following change:

- i. It was recognised that the products conform to the performance testing requirements of EN 60079-29-1:2016, consequently:
 - The introduction of Standard EN 60079-29-1:2016 to the list of Assessment Standards.
 - The introduction of performance marking "EN 60079-29-1" on the label.
 - The introduction of a new label drawing

Variation 3 - This variation introduced the following changes:

- i. Sira 16ATEX2291 and Sira 16ATEX2292 have been merged into Sira 16ATEX2292. The ATEX certificate Sira 16ATEX2291 will be suspended.
- ii. The detector was allowed to be used for mining applications; as a consequence, the following marking was recognised:

With XCell Ex Sensor



I 1M
Ex ia I Ma
Ta = -40°C to +60°C

Without XCell Ex Sensor



I 1M
Ex ia I Ma
Ta = -40°C to +60°C



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 16ATEX2292
Issue 9

Variation 4 - This variation introduced the following changes:

- i. The existing Methane (0-100% LFL) version using the XCell Ex sensor (catalytic bead sensor) performance temperature range was extended to include +60°C maximum ambient. The new performance temperature range: -20°C to +60°C and additional instructions were included in revised Marking and Instructions Approval Drawing; SK3098-1413.
- ii. Introduction of new Propane (0-100% LFL) and n-Pentane (0-100% LFL) versions with performance temperature range: -20°C to +60°C.
- iii. The Product Description section was amended to call out all versions; Methane, Propane and n-Pentane; and confirmation of their performance temperature range: -20°C to +60°C.
- iv. "EN 60079-29-1" was removed from the marking for the Without XCell Ex Sensor version; as the "EN 60079-29-1" is only associated with the XCell Ex Sensor (for Group II only) version.
- v. The Product Description section was corrected "The ALTAIR 4XR Multi Gas Detector complies with EN 50271 (clause 4.8, safety integrity assessment excluded from the assessment)".

Variation 5 - This variation introduced the following changes:

- i. Recognises a correction to the marking; from "I 1M" to "I M1".

Variation 6 - This variation introduced the following changes:

- i. Recognise an update to the firmware (R 2.27) within the Altair 4XR; the firmware change confirmed as having no effect on the gas measuring functions or safety aspects of the instrument.
- ii. Introduction of a new resin material for the calibration cap, RTP 2599 X 133889, to replace the obsolete resin material RTP 2599 X 97420D.
- iii. Introduction of an alternate sensor filter material, Cobetter PFOY-T1DT, to replace the obsolete filter material Versapor 1200R Hydrophobic.
- iv. Recognise an update to the firmware (R 2.28) within the Altair 4XR; the firmware change confirmed as having no effect on the gas measuring functions or safety aspects of the instrument; product description has been updated accordingly.
- v. Update of performance standard EN 60079-29-1:2016 to EN 60079-29-1:2007, due to typographical error at Issue 2.

Variation 7 - This variation introduced the following changes:

- i. Following appropriate assessment for the existing product, standard EN 60079-0:2012/A11:2013 was replaced by EN IEC 60079-0:2018.
- ii. Following appropriate assessment for the existing product, standard EN 60079-29-1:2007 was replaced by EN 60079-29-1:2016.
- 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).
- vi. The Product Description was revised to call out the Bluetooth as optional; as per the introduced Non-Bluetooth option.

Project Number 80171533

This certificate and its schedules may only be reproduced in its entirety and without change
CSA Group Netherlands B.V. Utrechtseweg 310, Building B42, 6812AR Arnhem, The Netherlands



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 16ATEX2292
Issue 9

- vii. Scheduled drawing was revised to include the introduction of making non-Bluetooth an option and the introduction of an alternate PCB with UQFN package: Altair 4XR CSA schedule drawing.
- viii. Update of Addendum A to Altair 4X Operating Manual to include updated standards (EN IEC 60079-0:2018 and EN 60079-29-1:2016).

Variation 8 - 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.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	25 October 2016	R70071650A	The release of the prime certificate.
1	23 December 2016	R70071668A	The introduction of Variation 1.
2	06 October 2017	R70112838A	The introduction of Variation 2
3	21 March 2018	R70163962A	The introduction of Variation 3.
4	20 June 2018	R70178194A	The introduction of Variation 4.
5	15 April 2019	R80000779A	The introduction of Variation 5.
6	31 October 2019	0442	Transfer of certificate Sira 16ATEX2292 from Sira Certification Service to CSA Group Netherlands B.V.
7	11 June 2020	R80032666A	The introduction of Variation 6.
8	28 January 2022	R80096953A	The introduction of Variation 7.
9	21 November 2023	R80171534A	The introduction of Variation 8.

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

None

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 CONDITIONS OF MANUFACTURE

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of CSA Group Netherlands B.V. certificates.

Project Number 80171533

This certificate and its schedules may only be reproduced in its entirety and without change
CSA Group Netherlands B.V. Utrechtseweg 310, Building B42, 6812AR Arnhem, The Netherlands



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 16ATEX2292
Issue 9

- 17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.
- 17.3 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 Sira of any modifications to the device that may impinge upon the explosion safety design of the ALTAIR 4X.

Project Number 80171533

This certificate and its schedules may only be reproduced in its entirety and without change
CSA Group Netherlands B.V. Utrechtseweg 310, Building B42, 6812AR Arnhem, The Netherlands

Certificate Annexe



Certificate Number: Sira 16ATEX2292
Equipment: ALTAIR 4XR Multi Gas Detector
Applicant: MSA – The Safety Company

Issue 0

Drawing	Sheets	Rev.	Date (Sira Stamp)	Description
SK3098-1360	1 to 21	0	02 Sep 16	ALTAIR 4XR schedule drawing
SK3025-1109	1 to 2	0	04 Oct 16	ATEX Approvals Label, ALTAIR 4XR

Issue 1

Drawing no.	Sheets	Rev.	Date (Sira Stamp)	Description
SK3025-1109*	1 to 2	1	14 Dec 16	ATEX Approvals Label, ALTAIR 4XR

Issue 2

Drawing	Sheets	Rev.	Date (Sira Stamp)	Title
SK3098-1413*	1 to 4	0	21 Sep 17	ATEX Marking and Instructions Approval Drawing, ALTAIR 4XR Gas Detector

*Note Drawing SK3098-1413 replaces Drawing SK3025-1109

Issue 3

Drawing	Sheets	Rev.	Date (Sira Stamp)	Title
SK3098-1413	1 to 4	1	15 Mar 18	ATEX Marking and Instructions Approval Drawing, ALTAIR 4XR Gas Detector

Issue 4

Drawing	Sheets	Rev.	Date (Sira Stamp)	Title
SK3098-1413	1 to 5	2	4 June 18	Marking and Instructions Approval Drawing

Issue 5

Drawing	Sheets	Rev.	Date (Sira Stamp)	Title
SK3098-1413	1 to 5	2	07 Apr 19	Marking and Instructions Approval Drawing

Issue 6 – No new drawings were introduced.

Issue 7

Drawing	Sheets	Rev.	Date (Sira Stamp)	Title
SK3098-1360	1 to 21	3	09 June 2020	Altair 4XR CSA schedule drawing

Issue 8

Drawing	Sheets	Rev.	Date (Stamp)	Title
SK-3098-1360	1 to 27	04	10 Jan 22	Altair 4XR CSA schedule drawing
10175895	1 to 10	08	10 Jan 22	Addendum A to Altair 4X Operating Manual

Issue 9

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

Project Number 80171533

This certificate and its schedules may only be reproduced in its entirety and without change
CSA Group Netherlands B.V. Utrechtseweg 310, Building B42, 6812AR Arnhem, The Netherlands