



# Certificate of Compliance

**Certificate:** 70110604

**Master Contract:** 167534

**Project:** 80171532

**Date Issued:** 2023-11-09

**Issued To:** MSA - The Safety Company  
1000 Cranberry Woods Dr  
Cranberry Township, Pennsylvania, 16066-5296  
United States

**Attention:** Craig Gestler

*The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.*

**Issued by:**   
William E. Miller



## **PRODUCTS**

**CLASS - C482801** - SIGNAL APPLIANCES Combustible Gas Detection Instruments-For Hazardous Locations

**CLASS - C482881** - SIGNAL APPLIANCES Combustible Gas Detection Instruments - For Hazardous Location - Certified to U.S. Standards

**IS Class I, Division 1, Groups A, B, C, & D T3, Class II, Division 1 Groups E, F, & G, Class III;**

**Ex da ia IIC T3 Ga – With XCell Ex Sensor**  
**Class I, Zone 0, AEx da ia IIC T3 Ga – With XCell Ex Sensor**

**(Non-Combustible option)**  
**Ex ia IIC T3 Ga – Without XCell Ex Sensor**  
**Class I, Zone 0, AEx ia IIC T3 Ga – Without XCell Ex Sensor**



**Certificate:** 70110604  
**Project:** 80171532

**Master Contract:** 167534  
**Date Issued:** 2023-11-09

Combustible multi gas detector, model ALTAIR 4XR, portable, powered by a rechargeable Lithium Ion Polymer Battery Cell, Sony model US503759A8H, rated 3.8 V (nominal), 1400 mAh (nominal), MSA battery pack part number 10083913 or Lithium Ion Polymer Battery Cell, Inventus Model IP583548, rated 3.8 V (nominal), 1435mAh (nominal), MSA battery pack part number 10242458. Ambient temperature range  $-40^{\circ}\text{C} \leq T_a \leq 60^{\circ}\text{C}$ . For combustible gas detection performance the ambient temperature range is  $-20^{\circ}\text{C} \leq T_a \leq 60^{\circ}\text{C}$ . IP68 (2 m, 1 hour)

Note: The Altair 4XR has not been assessed by CSA Group for Oxygen / Toxic Gas performance.

### **APPLICABLE REQUIREMENTS**

CAN/CSA C22.2 No. 60079-0:19	Explosive atmospheres – Part 0: Equipment – General requirements
CAN/CSA-C22.2 No. 60079-1:16	Explosive atmospheres — Part 1: Equipment protection by flameproof enclosures “d”
CAN/CSA-C22.2 No. 60079-11:14 (R2018)	Explosive atmospheres – Part 11: Equipment protection by intrinsic safety “i”
CAN/CSA-C22.2 No. 60079-29-1:17	Explosive atmospheres – Part 29-1: Gas detectors – Performance requirements of detectors for flammable gases
CAN/CSA-C22.2 No. 61010-1-12 <i>Third Edition</i>	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements
ANSI/UL 60079-0-2020 <i>Seventh Edition</i>	Explosive atmospheres – Part 0: Equipment – General requirements
ANSI/UL 60079-1-2009 <i>Sixth Edition (April 10, 2009)</i>	Explosive Atmospheres – Part 1: Equipment Protection by Flameproof Enclosures “d”
ANSI/UL 60079-11-2018 <i>Sixth Edition</i>	Explosive Atmospheres – Part 11: Equipment Protection by Intrinsic Safety “i”
ANSI/UL 60079-29-1-2019 <i>Second Edition</i>	Explosive atmospheres – Part 29-1: Gas detectors – Performance requirements of detectors for flammable gases
ANSI/UL 913-2015 <i>Eighth Edition</i>	Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, and III, Division 1, Hazardous (Classified) Locations
ANSI/UL 61010-1-2012 <i>Third Edition (May 11, 2012)</i>	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use — Part 1: General Requirements

### **MARKINGS**

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.



**Certificate:** 70110604  
**Project:** 80171532

**Master Contract:** 167534  
**Date Issued:** 2023-11-09

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

**Nameplate adhesive label material approval information:**

The following markings are provided on a UL Recognized to Canadian requirements (PGJI8) and UL Recognized (PGJI2) adhesive nameplate, used with the printer and ribbon specified in the Listing, and is suitable for indoor and outdoor use on clear polycarbonate at a maximum service temperature of 50°C or higher. Nameplate is affixed to the unit exterior.

- Manufacturer's name: "MSA - THE SAFETY COMPANY", trademark or CSA master contract number "167534" adjacent to the CSA Mark.
- The characters "CSA 17.70110604", designating the certification body, followed by the last two digits of the year of report issue, followed by a period, followed by the original report number.
- The CSA Mark, with or without the "C" and/or "US" indicators, as shown on the Certificate of Conformity.
- Hazardous Location designation and/or Method of Protection (Ex) markings: As specified in the PRODUCTS section above.
- Temperature code: As specified in the PRODUCTS section above.
- Model number: As specified in the PRODUCTS section above.
- Battery pack details: As specified in the PRODUCTS section above. Due to product size marking may be provided in the manual.
- Ambient temperature rating: As specified in the PRODUCTS section above.
- Enclosure rating: IP68 (2 m, 1 hour).
- Serial number X... & Date code, which is comprised of a letter for month, two digit year, E0=no extended warranty and E1=extended warranty
- The following or equivalent wording:
  - "Exia".
  - "INTRINSICALLY SAFE" and "SÉCURITÉ INTRINSÈQUE";
  - "60079-29-1" (only for the Class I, Zone 0, AEx/Ex da ia IIC T4 T3 Ga (Zone 0) – With XCell Ex Sensor configuration)
  - "WARNING: UNDERSTAND MANUAL BEFORE OPERATING" and "AVERTISSEMENT: LIRE ATTENTIVEMENT LES INSTRUCTIONS AVANT DE METTRE EN MARCHÉ."
- The following or equivalent warning markings (Due to product size marking may be provided in the manual):
  - "WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY" and "AVERTISSEMENT: LA SUBSTITUTION DE COMPOSANTS PEUT COMPROMETTRE LA SÉCURITÉ INTRINSÈQUE"



**Certificate:** 70110604  
**Project:** 80171532

**Master Contract:** 167534  
**Date Issued:** 2023-11-09

- “WARNING: USE ONLY BATTERY PACK P/N 10083913” and “ATTENTION: UTILISEZ UNIQUEMENT BATTERIE P/N 10083913”
  - § Alternative - “WARNING: USE ONLY BATTERY PACK P/N 10242458” and “ATTENTION: UTILISEZ UNIQUEMENT BATTERIE P/N 10242458”
- “WARNING: BATTERIES MUST ONLY BE CHANGED OR CHARGED IN AN AREA KNOWN TO BE NONHAZARDOUS.” and “AVERTISSEMENT: NE CHANGER OU CHARGER LES BATTERIES QUE DANS DES EMPLACEMENTS DESIGNES NON DANGEREUX.”
- “WARNING: UNDERSTAND MANUAL BEFORE OPERATING” and “AVERTISSEMENT: LIRE ATTENTIVEMENT LES INSTRUCTIONS AVANT DE METTRE EN MARCHE.”
- "CAUTION — OFF-SCALE READINGS MAY INDICATE EXPLOSIVE CONCENTRATION." and "ATTENTION - LES LECTURES HORS ÉCHELLE PEUVENT INDIQUER UNE CONCENTRATION EXPLOSIVE."

**Notes:**

Products certified under Class C482801, C482881 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). [www.scc.ca](http://www.scc.ca)





## *Supplement to Certificate of Compliance*

**Certificate:** 70110604

**Master Contract:** 167534

*The products listed, including the latest revision described below,  
are eligible to be marked in accordance with the referenced Certificate.*

### **Product Certification History**

---

<b>Project</b>	<b>Date</b>	<b>Description</b>
80171532	2023-11-09	Update report 70110604 to include functional safety evaluation of the firmware to handle the LCD driver concern (FS project 80142606) and addition of soft features (FS Project 80171531), construction review of alternate battery tested under project 80160074, assess revision of PCB, performance testing required to support the above. (Unpowered Storage, Calibration curve, Alarm Set Points, Response Time, Battery capacity).
80156178	2023-04-06	Update markings section to include verbiage on accepted label materials in Report 70110604 (MSA ALTAIR 4XR).
80096951	2022-02-07	Update of report 70110604 of the MSA ALTAIR® 4XR to add an alternate PCB to support alternate footprints of U17 and U19. This project report also allows for the selective population of Bluetooth module (U18) and support microprocessor (U16) for both PCB options. CSA C22.2 No 157 was removed as one of the Applicable Requirements. CSA C22.2 No 152 was replaced with CSA C22.2 No. 60079-29-1:17. Report also updated to CSA C22.2 No 60079-0:19, ANSI/UL 60079-0-2020 Seventh Edition, ANSI/UL 60079-29-1-2019 Second Edition, and CSA C22.2 No.0:20. Descriptive Documents SK3098-1360 and 10175895 were changed. Gas performance temperature range increased to $-20^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$ .
80032665	2020-04-30	Update to Report 70110604 to include evaluation of a revised sensor filter material for the Altair 4XR, and (per 80033114) to include evaluation of the impact of the firmware change for the Altair 4XR.
80022729	2019-11-21	Update to Report 70110604 to include revised drawing.
80002959	2019-07-22	Update to report 70110604 to include French version of firmware.
70110604	2017-03-03	Original certification of the ALTAIR 4XR.