



# Certificate of Compliance

**Certificate:** 2072894

**Master Contract:** 167534

**Project:** 80156179

**Date Issued:** 2023-04-06

**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:** Peter Do  
Peter Do

## **PRODUCTS**

CLASS 4828 01 - SIGNAL APPLIANCES - Combustible Gas Detection Instruments - For Hazardous Locations  
CLASS 4828 81 - SIGNAL APPLIANCES - Combustible Gas Detection Instruments - For Hazardous Locations -  
CERTIFIED TO U.S. STANDARDS

**Class I, Groups A, B, C and D T4/T3\***

**Ex ia IIC T4/T3\* Ga**

**Class I, Zone 0 AEx ia IIC T4/T3\* Ga**

Combustible gas detector, Model Altair 5, portable, battery operated, intrinsically safe when used with rechargeable Lithium-Ion battery pack p/n 10090521 (temperature code T4) or alkaline battery pack p/n 10083507 with 3 Duracell MN1500 cells (temperature code T4) or 3 Energizer E91 cells (temperature code T3)\*; Ambient temperature range -20 Deg. C to +50 Deg. C.



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Combustible gas detector, Model Altair 5iR, portable, battery operated, intrinsically safe when used with rechargeable Lithium-Ion battery pack p/n 10088522; temperature code T4\*; Ambient temperature range -20 Deg. C to +50 Deg. C.

#### **CONDITIONS OF ACCEPTABILITY**

1. The rechargeable battery pack shall be charged only in a safe area, the charge voltage (Um) and current (Im) shall not exceed 6.7 Vdc and 1.7 Adc.
2. For alkaline battery pack part numbers, only Duracell MN1500 and Energizer E91 AA size alkaline cells can be used in the apparatus.

CLASS 4828 01 - SIGNAL APPLIANCES - Combustible Gas Detection Instruments - For Hazardous Locations

**Class I, Groups A, B, C and D T4/T3\***  
**Ex ia IIC T4/T3\* Ga**

Combustible gas detector, Model Altair 5X, portable, battery operated, intrinsically safe when used with rechargeable Lithium-Ion battery pack p/n 10114835 (temperature code T4) or alkaline battery pack p/n 10114837 with 3 Duracell MN1500 cells (temperature code T4) or 3 Energizer E91 cells (temperature code T3)\*; Intrinsic Safety Tamb. -40 Deg. C to +50 Deg. C. Performance (C22.2 No. 152) Tamb. -20 Deg. C to +50 Deg. C.

- "NOTE: WIRELESS COMMUNICATION IS INTENDED FOR USE AS A SECONDARY REMOTE ALARM STATUS NOTIFICATION ONLY. PRIMARY ALARMING OF COMBUSTIBLE GAS HAZARDS IS PROVIDED LOCALLY BY DETECTOR".

Combustible gas detector, Model Altair 5XiR, portable, battery operated, intrinsically safe when used with rechargeable Lithium-Ion battery pack p/n 10114839 or 10114840; temperature code T4\*; Intrinsic Safety Tamb. -40 Deg. C to +50 Deg. C. Performance (C22.2 No. 152) Tamb. -20 Deg. C to +50 Deg. C.

- "NOTE: WIRELESS COMMUNICATION IS INTENDED FOR USE AS A SECONDARY REMOTE ALARM STATUS NOTIFICATION ONLY. PRIMARY ALARMING OF COMBUSTIBLE GAS HAZARDS IS PROVIDED LOCALLY BY DETECTOR".

#### **CONDITIONS OF ACCEPTABILITY**

1. The rechargeable battery pack shall be charged only in a safe area, the charge voltage (Um) and current (Im) shall not exceed 6.7 Vdc and 1.7 Adc.
2. For alkaline battery pack part numbers, only Duracell MN1500 and Energizer E91 AA size alkaline cells can be used in the apparatus.



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## **APPLICABLE REQUIREMENTS**

CAN/CSA C22.2 No. 61010-1-12 + Amd 1 – 18	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 1: General Requirements
CAN/CSA C22.2 No. 60079-0:19	Explosive atmospheres – Part 0: Equipment – General requirements
CAN/CSA C22.2 No. 60079-11:14 (R2018)	Explosive atmospheres – Part 11: Equipment protection by intrinsic safety “i”
CSA C22.2 No. 30-M1986 (Reaffirmed 2007)	Explosion-Proof Enclosures for Use in Class I Hazardous Locations
CSA C22.2 No. 152-M1984 (Reaffirmed 2016)	Combustible Gas Detection Instruments
ANSI/UL 61010-1-2018 <i>Third Edition</i>	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use — Part 1: General Requirements
ANSI/UL 913 (Eighth Edition)	Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II and III, Division 1, Hazardous Locations
ANSI/UL 60079-0-2020 <i>Seventh Edition</i>	Explosive atmospheres – Part 0: Equipment – General requirements
ANSI/UL 60079-11-2018 <i>Sixth Edition</i>	Explosive Atmospheres – Part 11: Equipment Protection by Intrinsic Safety “i”
ANSI/ISA–12.13.01–2000	Performance Requirements for Combustible Gas Detectors

## **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.

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.



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**Altair 5 and 5iR:**

- Manufacturer's name: "MSA - The Safety Company", or CSA Master Contract Number "167534", adjacent to the CSA Mark in lieu of manufacturer's name.
- Model designation: As specified in the PRODUCTS section, above.
- Ambient temperature rating: As specified in the PRODUCTS section, above.
- Manufacturing date, or serial number, traceable to year and month of manufacture.
- The CSA Mark, with or without the "C" and "US" indicators, as shown on the Certificate of Conformity.
- The designation "CSA 09CA2072894X".
- Hazardous Location designation: As specified in the PRODUCTS section, above. The word "Class" may be abbreviated "CL", the word "Division" may be abbreviated "DIV", and the word "Groups" may be abbreviated "GRP" or "GP".
- Method of Protection markings (Ex – markings): As specified in the PRODUCTS section, above. The word "Class" may be abbreviated "CL", the word "Zone" may be abbreviated "ZN".
- Temperature code: As specified in the PRODUCTS section, above.
- the words, INTRINSICALLY SAFE
- the symbol, "Exia" (May be combined as part of protection method)
- the designation, "C22.2 No. 152"
- the words "WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY" and "AVERTISSEMENT: LA SUBSTITUTION DE COMPOSANTS PEUT COMPROMETTRE LA SECURITE INTRINSEQUE"
- the words "WARNING: UNDERSTAND MAUAL BEFORE OPERATING" and "AVERTISSEMENT: COMPRENDRE MAUAL AVANT DE COMMENCER"
- the statement (for Altair 5), "USE ONLY Li-Ion PACK p/n 10090521 OR ALKALINE PACK P/N 10083507 WITH DURACELL MN1500 OR ENERGIZER E91" and "UTILISER UNIQUEMENT PACK Li-Ion p / n 10090521 OU PACK ALCALIN P / N 10083507 AVEC DURACELL MN1500 OU ÉNERGISEUR E91"
- the statement (for Altair 5iR), "USE ONLY Li-Ion PACK p/n 10088522" and "UTILISER UNIQUEMENT PACK Li-Ion p / n 10088522"



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**Altair 5X and 5XiR:**

- Manufacturer's name: "MSA - The Safety Company", or CSA Master Contract Number "167534", adjacent to the CSA Mark in lieu of manufacturer's name.
- Model designation: As specified in the PRODUCTS section, above.
- Ambient temperature rating: As specified in the PRODUCTS section, above.
- Manufacturing date, or serial number, traceable to year and month of manufacture.
- The CSA Mark, as shown on the Certificate of Conformity.
- The designation "CSA 09CA2072894X".
- Hazardous Location designation: As specified in the PRODUCTS section, above. The word "Class" may be abbreviated "CL", the word "Division" may be abbreviated "DIV", and the word "Groups" may be abbreviated "GRP" or "GP".
- Method of Protection markings (Ex – markings): As specified in the PRODUCTS section, above.
- Temperature code: As specified in the PRODUCTS section, above.
- the words, INTRINSICALLY SAFE
- the symbol, Exia
- the designation, C22.2 No. 152
- C22.2 NO. 152 PERFORMANCES:  $-20^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$
- the words "WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY" and "AVERTISSEMENT: LA SUBSTITUTION DE COMPOSANTS PEUT COMPROMETTRE LA SECURITE INTRINSEQUE"
- the words "WARNING: UNDERSTAND MAUAL BEFORE OPERATING" and "AVERTISSEMENT: COMPRENDRE MAUAL AVANT DE COMMENCER"
- the statement (for Altair 5X), "USE ONLY Li-Ion PACK p/n 10114835 (T4) OR ALKALINE PACK P/N 10114837 WITH DURACELL MN1500 (T4) OR ENERGIZER E91(T3)" and "UTILISER UNIQUEMENT PACK Li-Ion p / n 10114835 (T4) OU PACK ALCALIN P / N 10114837 AVEC DURACELL MN1500 (T4) OU ÉNERGISEUR E91 (T3)".
- the statement (for Altair 5XiR), "USE ONLY Li-Ion PACK p/n 10114839 or 10114840 (T4)" and "UTILISER UNIQUEMENT PACK Li-Ion p / n 10114839 ou 10114840 (T4)"

**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*

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

### **Product Certification History**

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<b>Project</b>	<b>Date</b>	<b>Description</b>
80156179	2023-04-06	Update markings section to include verbiage on accepted label materials in Report 2072894 (MSA Altair 5X and 5XiR).
80116423	2022-05-09	Evaluation for revision to CSA report 2072894 to add alternate layout of Bluetooth PCB to accommodate alternate chip package and replaced CSA C22.2 No. 157 with CSA C22.2 No. 60079-0 and CSA C22.2 No. 60079-11.
80057459	2020-10-29	Evaluation to update CSA Report 2072894 to address drawing changes and include firmware update.
80037001	2020-06-19	Update to Report 2072894 to include evaluation of a revised sensor filter material for the Altair 5X and 5XiR.
80023908	2019-12-13	Evaluation for update of report 2072894 (last update 70221620) to include alternate field effect transistors due to obsolescence of current part.
70221630	2019-05-03	Evaluation for update of report 2072894 (last update 70123414) to update firmware to Version 2.19.
70123414	2017-03-28	Update to report 2072894 to make the foam and coating optional in the construction of the LCD display assembly.
70043086	2015-08-20	Update report 2072897 to revise the firmware version 2.16.1 to 2.17.01 to show blank out the gas reading on Bluetooth connection.
70028719	2015-07-14	Update to Report 2072894 to include RFID Tag and add new Bluetooth module for wireless connection, revise man down IC and some obsolete component changes.
70013697	2014-12-04	Evaluation for update of report 2072894 to include Altair 5X Firmware revision, Version 1.30.12.
2700087	2014-03-11	Update to Report 2072894 to include updated descriptive documents list.



2632662	2013-11-27	Update to Report 2072894 to cover alternative color Liquid Crystal Display.
1q2664079	2013-10-18	Update report 2072894 to include firmware change on the Combustible GAS Detector Altair5X/5XiR from 1.17.5 to 1.27.6 per ACR490615
2654594	2013-08-21	Update to report to add alternate Lithium -Ion cell to the Altair5/5iR battery pack.
2633478	2013-06-10	Update to report 2072894 to include the addition of alternate Lithium-Ion cell for the Altair5X and Altair5XiR.
2563857	2012-10-02	Update to Report 2072894 to cover updating the Altair5X and Altair5XiR Manual per ACR490531.
2474424	2011-11-11	Update report 2072894 to include updated descriptive document SK3098-1178 to Rev 2 per ACR490372.
2460096	2011-09-22	Update report 2072894 to include updated descriptive document SK3098-1178 to Rev 1 per ACR 490344
2441186	2011-07-20	Update report 2072894 to show manual revised to Rev 3 as per customer ACR 490322.
2437669	2011-07-15	Update report 2072894 to include increased value and power rating of R94 per ACR 490314
2393607	2011-07-07	Update to report 2072894 to include models Altair 5X and Altair 5XiR.
2357650	2010-10-14	Update of report 2072894 to include revised construction per ACR 490191.
2308808	2010-06-17	Update of report 2072894 to include new pump vender part number per ACR 490130.
2230757	2009-12-11	Update of report 2072894 to revised construction and documentation per ACR 490061.
2194049	2009-07-02	Update to report 2072894 to cover revised drawing per ACR 490013.
2164981	2009-05-06	Addition of Altair 5iR model
2072894	2009-02-04	Original Certification