



Standards Compliance Certifications

ALTAIR io 4

Gas Detection Wearable



Order No.:

Print Spec:

CR:

Contents

1	Device Cleaning	3
1.1	Routine Cleaning	3
1.2	Dust and Dirt Exposure	3
1.3	Chemical Exposure	3
1.4	Water Exposure	3
2	Notices	4
2.1	Bluetooth SIG Statement	4
2.2	Conditions for Safe Usage	4
2.3	Radio Information	4
2.4	Ingress Protection (IP)	5
2.5	Charging	5
3	Certifications and Markings	6
3.1	Certifications	6
3.2	Calibration Certification	7
3.3	Conformance Statement	7
3.4	Markings Contained on Label	7

1 Device Cleaning

Cleaning of the device is recommended following environmental exposure, to ensure optimal performance.

1.1 Routine Cleaning

Clean the exterior of the device regularly using only a damp cloth. Do not use cleaning agents, as many contain silicone or alcohol, which can damage the sensors.

1.2 Dust and Dirt Exposure

Use a dry, soft bristled brush to remove any dust or dirt that has accumulated on the device, especially at the sensor openings. If there is a buildup of dust or dirt particles remaining in the sensor area after brushing, use a vacuum to remove remaining particles, but maintain at least a 1/2 inch (1.3 cm) distance from the gas detector.

1.3 Chemical Exposure

If the device is likely to come into contact with aggressive substances, for example acidic liquids or gases that may attack metals or solvents that may affect polymeric materials, then it is the responsibility of the user to take suitable precautions that prevent the device from being adversely affected thus ensuring that the type of protection is not compromised.

1.4 Water Exposure

If the device is exposed to water, turn the device sensor side down and gently shake water off the sensor area. Any remaining water can be removed with a clean dry cloth. In the event that the device is immersed in water, allow the sensor inlets time to dry before retesting and returning to service. Drying time is dependent upon humidity conditions and the duration of immersion.

2 Notices

WARNING!

Repair or alteration of the device beyond the procedures described in the user guide or by anyone other than a person authorized by MSA, could cause the unit to fail to perform properly. Use only genuine MSA replacement parts when performing any maintenance procedures described in the user guide. Substitution of components can seriously impair performance of the unit, alter intrinsic safety characteristics or void agency approvals.

Failure to follow this warning can result in serious personal injury or death.

2.1 Bluetooth SIG Statement

The design is listed as “Industrial Portable Gas Monitoring Equipment”, Declaration ID D048399

<https://launchstudio.bluetooth.com/ListingDetails/97535>

2.2 Conditions for Safe Usage

WARNING!

- Combustible Gas Sensor Overrange: When the combustible gas sensors reading reaches its maximum range, to protect the sensor the device enters a locked alarm state, the sensor shuts down and user-interface displays overrange in the combustible sensor tile. This state can be reset by turning the device off and on in a fresh-air environment. Keep the device in the fresh air environment until readings have stabilized and then zero sensors.
- The RF radiation power used to activate the RFID tag antenna shall not exceed 6 Watts for EPL Group I applications or 2 Watts for EPL Group IIC applications.

Failure to follow this warning can result in serious personal injury or death.

2.3 Radio Information

NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Canada: CAN ICES-003(B) / NMB-003(B)

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

English:

This device complies with RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

French:

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

FCC ID: P9R-10214785

Contains Transmitter Module FCC ID: XPY2AGQN4NNN or XPYUBX18ZO01, QOQBT121

IC: 324C-10214785

Contains Transmitter Module IC: 8595A-2AGQN4NNN or 8595A-UBX18ZO01, 5123A-BGTBT121

Radio	Power	Frequency Range
Bluetooth	≤ 8.5 dBm	2.400 GHz - 2.4835 GHz
RFID	≤ 7 dBm	13.56 MHz
Cellular	≤ 23 dBm	699 MHz - 787 MHz
	≤ 23 dBm	814 MHz - 862 MHz
	≤ 33 dBm	824 MHz - 850 MHz
	≤ 33 dBm	880 MHz - 915 MHz
	≤ 30 dBm	1.710 GHz - 1.785 GHz
	≤ 30 dBm	1.850 GHz - 1.980 GHz

To access the FCC and ISSED on the ALTAIR io 4:

- (1) Navigate to the Menu.
- (2) Select the Device Info option.
- (3) Select Regulatory and Legal Info.

2.4 Ingress Protection (IP)

IP ratings do not imply that the equipment will detect gas during and after exposure to those conditions.

Follow the recommendations as described in the ALTAIR io 4 User Guide (P/N 10225884) to determine appropriate calibration interval and maintenance requirements if exposed to conditions representative of the IP Rating.

The IP rating is self-declared by MSA.

2.5 Charging

Do not charge the device in hazardous areas, as it may create a risk of explosion.

3 Certifications and Markings

See device label on your specific device for applicable certification markings. Label examples included in this document are for demonstration purposes only and may not accurately depict the current product certification status.

Information common to all labels:

Manufacturer MSA - The Safety Company
1000 Cranberry Woods Drive
Cranberry Township, PA 16066
USA

Product ALTAIR io 4
Gas Detection Wearable

Serial Number and Date On the ALTAIR io 4, refer to the Device Info menu, and select the "About" screen for the instrument serial number and month/year of manufacture.
The date of manufacture is also encoded in the serial number found on the ALTAIR io 4 label.



3.1 Certifications

Location	Certificate	Applicable Standards	Ambient Temperature Range
North America (USA and Canada)	UL Certificate Number:	UL 913, 8th Edition	$-40^{\circ}\text{C} \leq T_a \leq 60^{\circ}\text{C}$
		CAN/CSA C22.2 No 60079-0	
		CAN/CSA C22.2 No. 60079-1	
		CAN/CSA C22.2 No. 60079-11	
		CAN/CSA C22.2 No. 61010-1	
		UL 60079-0	
		UL 60079-1	
		UL 60079-11	
ATEX and UK	EC-Type Examination Certificate: DEMKO 21 ATEX 2539 UK Examination Certificate: UL	EN 60079-0:XXXX	$-40^{\circ}\text{C} \leq T_a \leq 60^{\circ}\text{C}$ Temperature Code: T4
		EN 60079-1:XXXX	
		EN 60079-11:XXXX	

Location	Certificate	Applicable Standards	Ambient Temperature Range
	21 UKEx 2141		
IEC	Certificate Number: IECEX UL 21.0030	IEC 60079-0 X IEC 60079-1 X IEC 60079-11 X	-40°C ≤ Ta ≤ 60°C Temperature Code: T4

3.2 Calibration Certification

All applicable inspections, testing, and calibrations were performed using NIST traceable equipment, where available, in accordance with MSA's ISO 9001 Certified Quality System.

3.3 Conformance Statement

MSA certifies that the materials, components, and/or instruments delivered in this shipment conform to all applicable specifications. The items delivered have been processed through the appropriate approved document-controlled procedures for receiving, manufacturing, and inspection. The materials, components and/or instruments were inspected, tested, and calibrated, as applicable, per the associated drawings, standards requirements, and/or specifications, and were deemed acceptable by appropriate authorized personnel.

3.4 Markings Contained on Label

NOTE: Labels may vary based on geographic location. The label below is an example, and the label on the device may differ from the example based upon local requirements.



