1 **UNITED KINGDOM CONFORMITY ASSESSMENT**

UK TYPE EXAMINATION CERTIFICATE

2 **Product Intended for use in Potentially Explosive Atmospheres**
UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1

3 Type Examination Certificate Number: **ExVeritas 22UKEX1264X** Issue: **0**

4 Product: ALTAIR 5XiR Multigas Detector

5 Manufacturer: MSA – The Safety Company

6 Address: 1000 Cranberry Woods Drive,
Cranberry Twp,
PA 16066, USA

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

8 ExVeritas Limited Approved Body number 2585, 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 by UKSI 2019:696), 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.

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

EN IEC 60079-0: 2018	**EN 60079-1:2014**	**EN 60079-11:2012**
EN 60079-29-1:2016	**EN50104:2019**	**EN 50271:2018**
EN 50303:2000		

Except in respect of those requirements listed at section 16 of the schedule to this certificate.

10 If the sign “X” is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This 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.

12 The marking of the equipment shall include the following:

I M1 Ex ia I Ma
II 1 G Ex da ia IIC T3 Ga

UKAS PRODUCT CERTIFICATION
No. 8613

On behalf of ExVeritas

S Clarke CEng MSc FIET
Managing Director

Schedule

13 Description of Product

The ALTAIR 5XiR is a portable, battery operated, hand-held device designed to monitor gases in ambient air and in the workplace via an internal sample draw pump. The sensors have own Ex component certificates. The equipment consists of four PCBs with display, three buttons and two charging pins. All PCBs with display are mounted inside a static dissipative moulded plastic enclosure. If the gas concentration reaches the alarm set points, a visual alarm, an audible alarm and a tactile alarm is given. The equipment is supplied by an encapsulated secondary Li-Ion cell and includes one passive RFID tag.

Applied Ex components:

Catalytic sensor MSA XCell Ex Ex da ia IIC Ga, Ex ia Ma	ExVeritas 22UKEX1269U
El.chem. sensor MSA XCell eChem Ex ia IIC Ga, Ex ia Ma	ExVeritas 22UKEX1270U

Parameters:

Charging Contacts entity parameters:	Um ≤6.7V (for rechargeable battery)
Ambient temperature range:	-40°C to +50°C for explosion safety
Degree of protection by enclosure:	IP65

Battery: Panasonic CGR18650DA or Panasonic/Sanyo UR18650A

Performance approvals for temperature range: -20°C to +50°C
Gas CH_4 in range 0-100% LFL for Group I by catalytic sensor.
Gases CH_4, C_3H_8, H_2, C_4H_{10}, C_5H_{12} in range 0-100% LFL for Group II by catalytic sensor.
Gases C_4H_{10} in range 0-25% (v/v), in CH_4 0-100% v/v for Group II by infrared sensor.
Gas O_2 in range 0-25% (v/v) for inertization purposes only for Group I and II by electrochemical sensor.
Firmware version v2.20.1

14 Descriptive Documents

14.1 Associated Report and Certificate History:

Report Number	Cert Issue Date	Issue	Comment
R3961/A/1	2022-11-10	0	Initial issue of the Prime Certificate

14.2 Compliance Drawings:

Title:	Drawing No.:	Rev. Level:	Date:
ADDENDUM Standards Compliance Certifications	10223097	2	-
FTZU Approvals	SK3098-1184	12	14 Jan 2022
LABEL, ATEX APPROVALS, ALTAIR5XiR	SK3098-1196	2	05-July-2022

Schedule

15 Specific Conditions of Use

15.1 Special Conditions for Safe Use

- The equipment shall only be charged by manufacturer's chargers in an ambient temperature from 0°C to +45°C and opened in a non-hazardous area.
- The warm-up time for oxygen is up to 180 seconds.
- In event of combustible sensor overrange the apparatus shall be exposed to fresh air for 20 minutes minimum and then the fresh air setup procedure shall be done.
- The pressure range is 90kPa to 120kPa for gas CH4 in range 0-100% (v/v) for IR sensor.
- The alarm set points are not applied for measuring oxygen inertization and it shall be taken into account.
- The equipment enclosure includes accessible metal parts. The end user shall determine suitability in the specific application. The measured capacitance of the equipment on the item: D-ring is 33pF and on the item: Pin for charging is 24pF.
- The antenna used for activation of the internal RFID tag with the RF radiation power shall not exceed 6W for Group I and 2W for Group IIC.
- The EMC evaluation according to standard EN 50270:2015 is on manufacturer's responsibility.

15.2 Routine tests

- None

16 Essential Health and Safety Requirements (Regulations Schedule 1)

Essential Health and Safety Requirements are addressed by the standards listed in section 9 and where required the report listed in section 14.1

The manufacturer shall inform ExVeritas of any modifications to the design of the product described by this schedule.