1. UNITED KINGDOM CONFORMITY ASSESSMENT
UK-TYPE EXAMINATION CERTIFICATE

2. **Equipment or Protective systems intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended) – Schedule 3A, Part 1**

3. **UK-Type Examination Certificate No:** **FM21UKEX0026X**

4. **Equipment or protective system: (Type Reference and Name)** **329000-*, 329001-*,Ultima OPIR-5 Open Path Gas Detector**

5. **Name of Applicant:** **MSA Innovation LLC dba MSA - The Safety Company**

6. **Address of Applicant** **1000 Cranberry Woods Drive, Cranberry Township, Pennsylvania 16066, United States of America**

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

8. FM Approvals Ltd, Approved Body number 1725, 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), 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.

   The examination and test results are recorded in confidential report number:

   3042476EC - RR229755 dated 12th January 2022

9. Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

   EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-29-4:2010, EN 60079-31:2014, EN 60529:1991+A1:2000+A2:2013

10. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.

11. This UK-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance with the Regulations. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

Certificate issued by:

6 August 2024

Victor Aluko-Oginni
Certification Manager, FM Approvals Ltd.

Date

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UKAS PRODUCT CERTIFICATION
0259

12. The marking of the equipment or protective system shall include:

II 2 G Ex db IIB+H_2 T4 Gb Ta = -55°C to +65°C
II 2 D Ex tb IIIC T135°C Db Ta = -55°C to +65°C
EN 60079-29-4

13. **Description of Equipment or Protective System:**

The ULTIMA OPIR-5; part numbers, 329000-a, 329001-a is a fixed open path gas detector, comprising of a Source and Receiver module operating over a distance of 5-150 meters. The operating temperature range is -55°C to +65°C and the power consumption is as follows: for the Source = 12W and for the Receiver = 10W. The enclosures are manufactured from 316L stainless steel. Field accessories comprise of Attenuation plate P/N 329113-1, Pan-Tilt Base assembly P/N 329071-1, Pan- Tilt Arm assembly P/N 329073-1, Pan-Tilt Basic Arm assembly P/N 329123-1, Long Range Alignment Kit P/N 329082 and gas filter kits P/N 329083 & 329084. Depending on the model selected, the system communications are Dual Modbus or Single Modbus with HART. Each variation comes complete with (2) 4-20mA outputs for detection of Propane with measurement ranges of 0-1 LEL•m and 0-2000ppm•m and Methane with measurement ranges of 0-5 LEL•m and 0-5000ppm•m, with minimum alarm set point of 10% FSD and repeatability of ±6% FSD.
The equipment enclosures have an ingress protection rating of IP66/67.
ULTIMA OPIR-5 Receiver:
329000-a
a: Output & Terminals -17 through -24
ULTIMA OPIR-5 Source:
329001-a
a: Range & Terminals 3, 4, 7, 8, 11, 12, 15 and 16
Specifications - The manufacturer's specifications are as follow:

Operating Temperature:	-55°C to +65°C
Relative Humidity:	10 to 95% (Non- condensing)
Supply Parameters:	+24 V nominal, 20-36 VDC
Measurement Signal:	4-20mA
Calibration:	Units are supplied factory calibrated for the specified target gas or gases. Units should not require recalibration in service.

14. **Specific Conditions of Use:**

1. Consult the manufacturer for dimensional information on the flameproof joints for repair.
2. Parts of the equipment and the painted surface of the OPIR-5 Source or OPIR-5 Receiver may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the parts and the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in EN TR50404 and IEC TR60079-32-1 (in preparation). Cleaning of the parts and painted surface should only be done with a damp cloth.

15. **Essential Health and Safety Requirements:**

    The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

16. **Test and Assessment Procedure and Conditions:**

    This UK-Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

    Whilst this certificate may be used in support of a manufacturer's claim for UKCA Marking, FM Approvals Ltd accepts no responsibility for the compliance of the equipment against all applicable Regulations in all applications.

    This Certificate has been issued in accordance with FM Approvals Ltd's UKCA Certification Scheme.

17. **Schedule Drawings**

    A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Approved Body.

18. **Certificate History**

    Details of the supplements to this certificate are described below:

Date	Description
9 February 2022	Original Issue.
6 August 2024	Supplement 1: Report Reference: RR241686 dated 9 July 2024. Description of the Change(s): Editorial changes to Manual and label and change of 1 component which does not affect original evaluation.Also company name has changed from 'Mine Safety Appliances' to 'MSA Innovation LLC dba MSA.

Blueprint Report

MSA Innovation LLC dBA MSA - The Safety Company (1000001671)

Class No 6325

Original Project I.D. 3042476

Certificate I.D. FM21UKEX0026X

Drawing No.	Revision Level	Drawing Title	Last Report	Electronic Drawing
3042476	4/19/11	PLA/TA agreement-3042476	3042476	Yes (pdf)
3048009	2/12/13	PLA/TA agreement-3048009	3048009	Yes (pdf)
910006	M	Nameplate MSA, Ultima OPIR-5 Receiver	RR241686	Yes (pdf)
910007	L	Nameplate MSA, Ultima OPIR-5 Source	RR241686	Yes (pdf)
MANIR5500_OPIR-5	R	IR5500/OPIR-5 Instruction Manual	RR241686	Yes (pdf)
MANOPIR5 REV 1	1	MANOPIR5 REV 1.pdf	3048009	Yes (pdf)
MANOPIRSAFETY	B	Safety Manual IR5500 & IR5000	3040176	Yes (pdf)