



1. EU-TYPE EXAMINATION CERTIFICATE

2. Equipment or Protective systems intended for use in Potentially Explosive Atmospheres - Directive 2014/34/EU

3. EU-Type Examination Certificate No: FM11ATEX0013X

4. Equipment or protective system: 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 Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

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

3042476EC dated 13th May 2011

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 EU-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

Certificate issued by:



Digitally signed
by Richard
Zammit
Location: Ireland
Foxit PDF Editor
Version: 13.1.2

Certification Manager, FM Approvals Europe Ltd.

Date 15 July 2024

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

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



II 2 G Ex d IIB+H₂ T4 Gb Ta = -55°C to +65°C; IP66/67

II 2 D Ex tb IIIC T135°C Db Ta = -55°C to +65°C; IP66/67

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.

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, 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.

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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 EU-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 CE Marking, FM Approvals Europe Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

This Certificate has been issued in accordance with FM Approvals Europe Ltd's ATEX 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 Notified Body.

18. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
16 May 2011	Original Issue.
5 April 2013	<u>Supplement 1:</u> Report Reference: – 3048009 dated 12 th February 2013. Description of the Change: Addition of pan tilt arm and minor listing change.
12 January 2017	<u>Supplement 2:</u> Report Reference: – 3058657 dated 27th December 2016. Description of the Change: Modify hardware and firmware, update drawings to reflect these changes. Updated Standards. Updated to EU format certificate.
8 April 2019	<u>Supplement 3:</u> Description of the Change: Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809
24 February 2021	<u>Supplement 4:</u> Report Reference: – RR226370 dated 23rd February 2021. Description of the Change: Documentation Update and correction of EN 60079-0:2012+A11:2013 to 2018 edition that was examined under RR224491
25 August 2021	<u>Supplement 5:</u> Report Reference: – RR227059 dated 29th July 2021. Description of the Change: Documentation Update to update label

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Date	Description
20 January 2022	<u>Supplement 6:</u> Report Reference: – RR229755 dated 12th January 2022. Description of the Change: Update to add UKEX to label.
15 July 2024	<u>Supplement 7:</u> Report Reference: RR241686 dated 09 July 2024. Description of the Changes: Editorial changes for CSA certificate update 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'.

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Blueprint Report

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

Class No 6325

Original Project I.D. 3042476

Certificate I.D. FM11ATEX0013X

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>	<u>Last Report</u>
3042476	4/19/11	PLA/TA agreement-3042476	3042476
3048009	2/12/13	PLA/TA agreement-3048009	3048009
910006	M	Nameplate MSA, Ultima OPIR-5 Receiver	RR241686
910007	L	Nameplate MSA, Ultima OPIR-5 Source	RR241686
MANIR5500_OPIR-5	R	IR5500/OPIR-5 Instruction Manual	RR241686
MANOPIR5 REV 1	1	MANOPIR5 REV 1.pdf	3048009
MANOPIR5AFETY	B	Safety Manual IR5500 & IR5000	3040176