



1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 11ATEX1130X** Issue: **0**

4 Equipment: **ULTIMA MOS-5**

5 Applicant: **Mine Safety Appliances Company**

6 Address: **1000 Cranberry Woods Drive
Cranberry TWP, PA16066
USA**

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

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, 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 the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 50014:1997 (amendments A1 & A2) EN 50018:2000 (amendment A1)

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 EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 2 G
EEx d IIB+H₂ T5
(Ta = -40°C to +70°C)

Project Number 24678

This certificate and its schedules may only be reproduced in its entirety and without change.

C Ellaby
Deputy Certification Manager

Sira Certification Service

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

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Issue 0

13 DESCRIPTION OF EQUIPMENT

The ULTIMA MOS-5 Intelligent Gas Sensor is intended to detect the presence of hydrogen sulphide gases in air. It comprises a two-part rectangular enclosure and a Universal Gas Sensor as detailed in Certificate No. Sira 00ATEX1039U. The main enclosure is manufactured from cast aluminium alloy and consists of a base, with mounting lugs on its two longer sides, and a flanged cover. The main enclosure contains the equipment electronics and a seven-segment display. The cover is attached to the base by four M6 recessed socket head cap screws and contains a glass window to allow the display to be viewed. The base has three female M20 x 1.5 and one female 3/4" - 14 NPT cable entry holes tapped into its side walls; the 3/4" - 14 NPT containing the Universal Gas Sensor. The ULTIMA MOS-5 has the following electrical parameters:

U_{nom} 24 V dc; U_i 35 V dc; P_i 7 W.

The Universal Gas Sensor is manufactured from stainless steel and are cylindrical in shape with a hexagonal shoulder in the middle. One end has a 250 μ m sinter fused into the enclosure to allow gas penetration to be detected by the internal equipment, the other end contains a setting compound through which the equipment wiring passes. A 3/4" - 14 NPT thread form allows it to be mounted into the main enclosure.

Design options:

- Other certified detector elements may be used, but only at remote locations via a suitable cable entry device and when mounted in accordance with the requirements detailed in their respective certificates and local installation requirements.
- A wire lanyard retaining assembly may be fitted between the main enclosure base and cover.
- The cover may be manufactured without the viewing window.
- The alternative cable entry threadforms 3/4"-14 NPT and PG 13.5 x 18 are included.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	11 April 2011	R24678A/00	The release of the prime certificate.

15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

- 15.1 When alternative detector elements are utilised, they shall only be mounted remotely in a suitably certified enclosure in accordance with the requirements of their respective certificates and relevant local requirements. The associated cable shall be connected to the Intelligent Gas Sensors using a suitably certified, cable entry device with a 3/4" - 14 NPT thread form.

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

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SCHEDULE

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17 CONDITIONS OF CERTIFICATION

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.
- 17.3 The certification of this equipment relies on the following previously-certified product. When used as part of the Gas Sensor the key attributes listed in the table below shall still be maintained by their original certificate.

Description	Certificate No.	Key Attributes
General Monitors, Universal Gas Sensor	Sira 00ATEX1039U	EEx d IIC (-40°C to +120°C)

- 17.4 Any non-isometric entries shall be clearly marked with their threadform.

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Certificate Annexe

Certificate Number: Sira 11ATEX1130X
Equipment: ULTIMA MOS-5
Applicant: Mine Safety Appliances Company



Issue 0

Drawing	Sheets	Rev	Date (Sira stamp)	Title
910001	1 of 1	A	11 Apr 11	Nameplate MSA ULTIMA MOS-5

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