



1 **TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres 2014/34/EU

3 Certificate Number: **Sira 09ATEX4307X** Issue: **1**

4 Equipment: **Air Sensors - MM60005, MM60013, MM80005/ EXP and MM80013/ EXP**  
**Gas Sensors - MM60006, MM60008, MM60011, MM60012, MM60014, MM80006/ EXP,**  
**MM80008/ EXP, MM80011/ EXP, MM80012/ EXP and MM80014/ EXP**

5 Applicant: **Autoflame Engineering Limited**

6 Address: Unit 1-2 Concorde Business Centre  
Airport Industrial Estate  
Wireless Road  
Biggin Hill  
Kent TN16 3YN  
UK

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

8 Sira Certification Service certifies that this equipment has been found to comply with the Essential Health and Safety Requirements that relate to the design of Category 3 equipment, which is intended for use in potentially explosive atmospheres. These Essential Health and Safety Requirements are given in Annex II to European Union Directive 2014/34/EU of the European Parliament and of the Council, 26 February 2014.

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 of this certificate, has been assessed by reference to:

EN60079-0: 2006

EN60079-15: 2005

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

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 Type Examination Certificate relates only to the design of the specified equipment, and not to specific items of equipment subsequently manufactured.

12 The marking of the equipment shall include the following:



II 3G  
Ex nA IIC T4 Gc  
(Ta = -20°C to 40°C)

Project Number 70111246

C Ellaby  
Deputy Certification Manager

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**SCHEDULE**

**TYPE EXAMINATION CERTIFICATE**

**Sira 09ATEX4307X  
 Issue 1**

**13 DESCRIPTION OF EQUIPMENT**

The devices are pressure transducers that are used to indicate the pressure of air or gas media in supply lines for industrial burners; the MM60005 and MM60013 are Air Sensors, the MM60006, MM60008, MM60011, MM60012, and MM60014 are Gas Sensors. An analogue output voltage is used in both the Air Sensors and the Gas Sensors to indicate a range of pressures between 0 to 60 psi depending on the type of pressure transducer (manufactured by Honeywell) that is fitted. The sensors are fitted with 'Ex e' approved cable glands and 1.5 m of integral PVC cable for external electrical connection.

**Variation 1** - This variation introduced the following changes:

- i. The following MK8 Series Gas/Air Sensors have been introduced to replace the MK6 Series Gas/Air Sensors:

Gas Sensors - MM80006/EXP, MM80008/EXP, MM80011/EXP, MM80012/EXP and MM80014/EXP.

Air Sensors - MM80005/EXP and MM80013/EXP.

The construction of MK8 Series Gas/Air Sensors enclosure is the same as approved for MK6 Series Gas/Air Sensors but the PCB has been updated with new components due to obsolescence. The Conditions of Manufacture were amended.

- ii. Additional Specific Conditions Of Use were introduced.

**14 DESCRIPTIVE DOCUMENTS**

**14.1 Drawings**

Refer to Certificate Annexe.

**14.2 Associated Sira Reports and Certificate History**

Issue	Date	Report no.	Comment
0	05 January 2010	R52A18755A	The release of the prime certificate.
1	11 August 2017	R70111246A	This Issue covers the following changes: <ul style="list-style-type: none"> <li>• Type Examination Certificate in accordance with 94/9/EC updated to EU-Type Examination Certificate in accordance with Directive 2014/34/EU. <i>(In accordance with Article 41 of Directive 2014/34/EU, Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such Type Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)</i></li> <li>• The introduction of Variation 1.</li> </ul>

**15 SPECIFIC CONDITIONS OF USE**

15.1 The area in which the equipment is used should be a minimum of Pollution degree 2 as defined in IEC 60664-1, i.e. the environment should not contain conductive pollution and the equipment shall be installed in an indoor or sheltered location.

15.2 Do not open, maintain or service in an area where an explosive atmosphere may be present.

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**Sira Certification Service**

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## SCHEDULE

### TYPE EXAMINATION CERTIFICATE

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Issue 1

15.3 Transient voltage protection shall be provided that is set at a level not exceeding 140% of the peak rated voltage of the equipment.

15.4 The equipment must be mounted on metallic frame that has earth bonding facility.

#### 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 reports listed in Section 14.2.

#### 17 **CONDITIONS OF MANUFACTURE**

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of Type Examination Certificates are required to comply with the production control requirements defined in Article 13 of Directive 2014/34/EU.

17.3 Routine electrical strength tests shall be undertaken, (without breakdown or flashover) in accordance with EN 60079-15:2005 clause 34.2, on 100% of all production of completely assembled Air Sensors (MM80005/EXP, MM80013/EXP) and Gas Sensors (MM80006/EXP, MM80008/EXP, MM80011/EXP, MM80012/EXP, MM80014/EXP). The test should be conducted between all electrical connections short circuited together and the case. One of the following voltages should be used:

- 500 V r.m.s. (+5%, -0%) for 60 seconds
- 700 V d.c. (+5%, -0%) for 60 seconds

Alternatively, the test may be undertaken for a period of 100 ms at a test voltage of 1.2 times the values specified above.

# Certificate Annexe

**Certificate Number:** Sira 09ATEX4307X  
**Equipment:** Air Sensors and Gas Sensors – refer to Section 4.  
**Applicant:** Autoflame Engineering Limited



## Issue 0

Drawing No:	Sheets	Rev.	Date (Sira Stamp)	Description
3219	1 of 1	3	15 Dec 09	MK6 VPS Sensor PCB Issue 6 - Schematic
7458	1 of 1	1	15 Dec 09	General arrangement drawing of the Air and Gas sensors – complete assembly
3300	1 of 1	2	15 Dec 09	General arrangement drawing of the Air and Gas sensors – internal parts
3737	1 of 1	6	15 Dec 09	General arrangement drawing of the Air and Gas sensors – pressure sensor housing
6.0005	1 to 4	1	15 Dec 09	GAS/AIR SENSOR Burner Management System Part No. MM60005,MM60006,MM60008 MM60011, MM60012, MM60013, MM60014 Bill of Material
1.0005	1 of 1	1	04 Jan 10	ATEX Ex 'n' Label drawing (MM60005 and MM60013)
1.0006	1 of 1	1	04 Jan 10	ATEX Ex 'n' Label drawing (MM60006/8/11/12/14)

## Issue 1

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
7728	1 of 1	2	27 Jul 17	Schematic Gas/ Air Sensor MEMS Technology
7728	1 of 1	5	27 Jul 17	Bill of Material Gas/ Air Sensor MEMS Technology
7982-1	1 of 1	2	27 Jul 17	General arrangement drawing of the Air and Gas sensors – complete assembly
7982-2	1 of 1	1	27 Jul 17	General arrangement drawing of the Air and Gas sensors – internal parts
7982-3	1 of 1	1	27 Jul 17	General arrangement drawing of the Air and Gas sensors – lid
9060-1	1 to 2	2	27 Jul 17	Marking Gas/Air Sensor ATEX Ex n Label
9060-2	1 of 1	2	27 Jul 17	Marking Gas/Air Sensor Label

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