



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 13ATEX1347** Issue: **0**

4 Equipment: **Model 5100-28-IT Combustible Gas Sensor Module**

5 Applicant: **Sierra Monitor Corporation**

6 Address: **1991 Tarob Court
Milpitas, California
95035
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 60079-0:2012

EN 60079-1:2007

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 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

Ex d IIB+H₂ T6 Gb

Ta = -20°C to +60°C

Project Number 31246

C Ellaby
Deputy Certification Manager

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



SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 13ATEX1347
Issue 0

13 DESCRIPTION OF EQUIPMENT

The Model 5100-28-IT Combustible Gas Sensor Module comprises a transmitter electronics enclosure and a sensor, connected together to form an assembly.

There are two models, the 5100-28-IT-AL which comprises a cast aluminum transmitter enclosure and the 5100-28-IT-SS which comprises a 316 Stainless Steel transmitter enclosure. Both enclosures are equipped with three entries and an enclosure cover with a viewing window. Entries may be either 3/4" NPT or M20, for use with suitably ATEX certified Ex d IIB+H₂ Gb entry devices. The internal transmitter electronics assembly consists of one printed circuit board assembly mounted to standoffs under a cover plate. Wiring connections for power and signal interface are located on the rear of the display.

The sensor comprises a 316 Stainless Steel enclosure containing the gas sensor and a wiring harness for connection to the transmitter electronics. The sensor enclosure threads into one of the 3/4" NPT hubs of the main enclosure and the sensor consists of a potted printed circuit board assembly which is held in place by the lower part of the housing and a spacer. The sensor additionally is externally threaded to allow connection of a rain-shield or calibration gas delivery fitting.

Internal and external earthing facilities are provided.

The ratings are as follows:

Input: 24Vdc Nominal: 10-30 Vdc, 5 Watts Max.

Relay Contacts: 0.25A @ 110Vac/dc)

Signal Output: 4-20mA

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	28 November 2013	R31246A/00	The release of the prime certificate.

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

15.1 None

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.

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.

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Certificate Annexe

Certificate Number: Sira 13ATEX1347
Equipment: Model 5100-28-IT Combustible Gas Sensor
Module
Applicant: Sierra Monitor Corporation



Issue 0

Drawing	Sheets	Rev.	Date (Sira Stamp)	Title
A13045	1 of 1	B	21 Nov 13	Model 5100-28-IT, Assy, SMC IR Comb. Module
A21806	1 of 1	7	13 Nov 13	Assy, PCA -28 IR Sensor SMC
A21808	1 of 1	A	13 Nov 13	Assy -28-IT Sensor Interface
A22114	1 of 1	A2	13 Nov 13	Sensor -28 SMC Design Assy, Housing
A22118	1 of 1	A1	13 Nov 13	Assy, Housing -28 Sensor SMC IR Combustible
C21806	1 to 6	7	13 Nov 13	Model 5100-28-IT IR Schematic
C21808	1 of 1	A	13 Nov 13	IR Sensor Interface
C21818	1 of 1	B1	13 Nov 13	IR Sensor Signal
F32193	1 of 1	A	13 Nov 13	Model, 5100-28 Housing Sensor SS SMC IR Combust.
F32194	1 of 1	A	13 Nov 13	Fab, Body Housing -28 SS Sensor SMC IR
F32195	1 of 1	A1	13 Nov 13	Model, 5100-28 Enclosure Seal IR Comb Sensor SS
F39190	1 of 1	2	13 Nov 13	Fab, Disk Sintered
F39202	1 of 1	2	13 Nov 13	Fab, Washer OD 1.12", ID 0.82", Thick 0.094"
H35484	1 of 1	A	13 Nov 13	Model 5100-28-IT Label, ATEX/CE marking
H35990	1 of 1	A	13 Nov 13	Model 5100-XX-IT-XX Label, Serial #

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