



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx LCI 11.0007

Issue No: 5

Certificate history:

Status: **Current**

Issue No. 5 (2017-07-28)

Issue No. 4 (2016-06-29)

Date of Issue: **2017-07-28**

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Issue No. 3 (2014-06-06)

Issue No. 2 (2011-11-22)

Applicant: **SpectraSensors, Inc.**
11027 Arrow Route
Rancho Cucamonga, CA 91730
United States of America

Issue No. 1 (2011-10-10)

Issue No. 0 (2011-03-01)

Equipment: **TDL Gas analyzer / Type : SS2100I-2**

Optional accessory:

Type of Protection: **Ex d**

Marking:

Ex d IIB+H2 T4 Gb

*Approved for issue on behalf of the IECEx
Certification Body:*

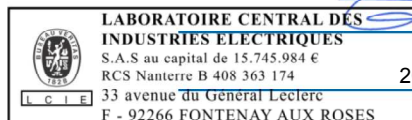
Julien GAUTHIER

Position:

Certification Officer

*Signature:
(for printed version)*

Date:



1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

Laboratoire Central des Industries Electriques (LCIE)
33 Avenue du General Leclerc
FR-92260 Fontenay-aux-Roses
France





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Manufacturer: **SpectraSensors, Inc.**
SpectraSensors Inc.
11027 Arrow Route
Rancho Cucamonga, CA 91730
United States of America

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-1 : 2007-04 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:6

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

[FR/LCI/ExTR11.0006/00](#)

[FR/LCI/ExTR11.0006/01](#)

[FR/LCI/ExTR11.0006/02](#)

[FR/LCI/ExTR11.0006/03](#)

[FR/LCIE/ExTR16.0042/00](#)

[FR/LCIE/ExTR17.0050/00](#)

Quality Assessment Report:

[FR/LCI/QAR10.0011/06](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The gaz analyzer SS2100i-2 is made of two flameproof stainless steel enclosures (which are already certified separately). One of these enclosures contains the electronics equipment: power supply, regulation, automatics. The other one contains the gas analyzer itself and a regulated heater to maintain the temperature inside the enclosure at a stable predetermined level.

The volumes of the two enclosures are totally independent. The entries into the enclosures can be equipped with certified accessories (such as blanking elements, cable glands, flame arrestors...) according to the intended use of the product.

The enclosures can only be connected with cable glands with filling compound as mentioned in the manufacturer technical file.

The equipment is made of several equipment and components which are already certified. The list of products included in the gas analyzer SS2100i-2 is given in the annex.

SPECIFIC CONDITIONS OF USE: NO



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 01:

Addition of the 0.1 meter sample cell.

Issue 02:

Addition of possibility to use a new flame arrestor.

Issue 03:

Normative update according to standard IEC 60079-0 Ed. 6.
Minor update of technical file.

Issue 04:

Addition of a new power supply, model 6EP1331-1SH03, manufactured by Siemens.

Issue 05:

Change of internal components.
Minor update of technical file.

Annex:

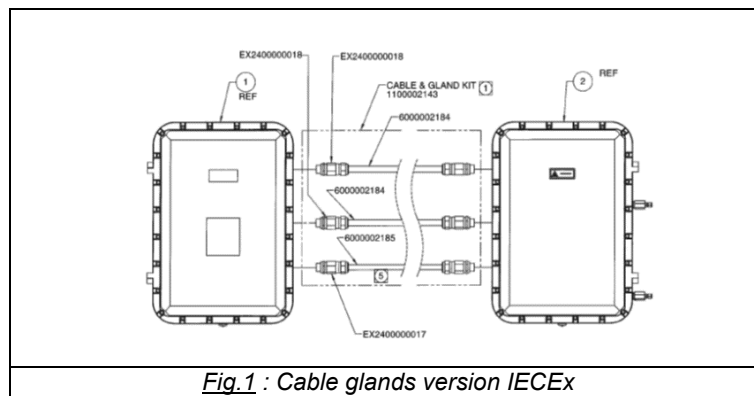
[IECEX LCI 11.0007 issue 05_annex.pdf](#)

FULL EQUIPMENT DESCRIPTION

The equipment is made of two flameproof stainless steel enclosures (which are already separately certified as Ex components). One of these enclosures contains the electronic equipment: power supply, regulation, automatics. The other one contains the gas analyzer itself and a regulated heater to maintain the temperature inside the enclosure at a stable predetermined level. The volumes of the two enclosures are totally independent. The entries into the enclosures can be equipped with certified accessories (such as blanking elements, cable glands, flame arrestors...) according to the intended use of the product.

The protection mode of the equipment is ensured by the use of already certified Ex d equipment and components.

The enclosures can only be connected with cable glands with filling compound as mentioned in the manufacturer technical file (Refer to figure 1).



The equipment is made of several equipment and components which are already certified. The list of products included in the gas analyzer SS2100i-2 is given in the following table:

Products	Type	Manufacturer	IECEX certificate	IEC standards
Analyser Flameproof enclosure	EJB 63AS 10111003	Nuova ASP s.r.l	IECEX INE 13.0079U	IEC 60079-0 Ed. 6.0 IEC 60079-1 Ed. 6
Cell Flameproof enclosure	EJB 63AS 10111002	Nuova ASP s.r.l	IECEX INE 13.0079U	IEC 60079-0 Ed. 6.0 IEC 60079-1 Ed. 6
Cable gland	PX2K	CMP Products limited	IECEX SIR 13.0027X	IEC 60079-0 Ed. 6.0 IEC 60079-1 Ed. 6
Blanking element	747	CMP Products limited	IECEX SIR 13.0094X	IEC 60079-0 Ed. 6.0 IEC 60079-1 Ed. 6
Flame arrestors	AR-81	Artidor Explosion safety b.v.	Accepted during issue No. 02 of IECEx CoC IEC 60079-0 Ed. 5 (*) IEC 60079-1 Ed. 6	
Flame arrestors	KB1FA25	Killark Electric	IECEX CSA 10.0007U	IEC 60079-0 Ed. 4.0 according to IECEx CSA 10.0007U IEC 60079-0 Ed. 5 and IEC 60079-1 Ed. 6 according to CA/CSA/ExTR10.0007/00 (*)
Breather/Drains	CT...	RAXTON	IECEX ITS 13.0018X	IEC 60079-0 Ed. 6.0 IEC 60079-1 Ed. 6
Reducer	737 series	CMP Products limited	IECEX SIR 13.0094X	IEC 60079-0 Ed. 6.0 IEC 60079-1 Ed. 6

(*) No major technical changes introduced by new standards.



Annex 01 to Certificate IECEx LCI 11.0007 issue 05



MARKING

SpectraSensors, Inc.
Address: ...
Type: SS2100i-2
Serial number: ...
Year of construction: ...
Ex d IIB+H2 T4 Gb
 $-20^{\circ}\text{C} \leq T_{\text{amb}} \leq +60^{\circ}\text{C}$
IECEx LCI 11.0007

RATINGS

$U_n = 120 \text{ to } 240 \text{ VAC (50/60 Hz)}$
 $P_n = 300 \text{ W max.}$

FULL CONDITIONS OF CERTIFICATION

None.

ROUTINE TESTS

None.