
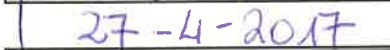




IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.:	IECEX CES 17.0010X	issue No.:	0	Certificate history:
Status:	Current			
Date of Issue:	2017-04-27	Page 1 of 3		
Applicant:	Sensitron S.r.l. Viale della Repubblica, 48 I- 20010 Cornaredo (MI) Italy			
Equipment:	Gas detector, series ST/**/EL**/** <i>Optional accessory:</i>			
Type of Protection:	Flameproof enclosures 'd', Intrinsic Safety "ib", Dust ignition protection by enclosure 't'			
Marking:	Ex db [ib] ib IIC T6 Gb Ex tb IIIC T85°C Db IP 65 (only model with GD adapter)			
Approved for issue on behalf of the IECEx Certification Body:	Mirko Balaz			
Position:	Head of IECEx CB			
Signature: (for printed version)	 <hr/>			
Date:	 <hr/>			

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:

CESI
Centro Elettrotecnico
Sperimentale Italiano S.p.A.
 Via Rubattino 54
 20134 Milano
 Italy

CESI

CESI S.p.A.

Testing & Certification Division
Business Area Certification

Il Responsabile

(Roberto Piccin)



PAD B7010319 (2370900) - USO AZIENDALE

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Manufacturer: **Sensitron S.r.l.**
Viale della Repubblica, 48
I- 20010 Cornaredo (MI)
Italy

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 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition: 7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-11 : 2011 Edition: 6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-31 : 2013 Edition: 2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

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:

[IT/CES/ExTR17.0011/00](#)

Quality Assessment Report:

[IT/CES/QAR07.0006/09](#)

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The gas detectors series ST*/EL*/ are devices used to detect the concentration of toxic gases or oxygen. The detectors are composed by a sensor head containing the sensitive element (electrochemical sensor) coupled with an enclosure with type of protection Ex-d containing the electronic circuits for the elaboration/memorisation of signals. These electronic circuits also provide the galvanic insulation and the sensor head's supply for the type of protection Ex-ib. The flameproof enclosure is subject of a separate certification as component.

The sensor head may be equipped with a device for the dust ingress protection (GD adapter). In this configuration the gas detectors are marked with EPL Db. The different types of sensing elements within the sensor head and / or electronic circuitry installed within the flameproof enclosure are given in the descriptive documents.

Cable entries

The accessories used for the cable entries and to close the unused holes, shall be subject of a separate certification and shall guarantee the same type of protection and degree of protection (IP) foreseen for the equipment. Moreover the accessories shall be suitable to be use in the ambient temperature range assigned to the equipment. If cylindrical threads are used, the coupling between the accessories and the enclosure shall be provided with block to prevent loosening.

For further information see Annex.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The installation, the operating, the maintenance and the repair of the ST / * * / EL* / * * equipment shall be in according to the safety instructions supplied by the Manufacturer.
- Only the version with the GD adapter mounted on the sensor head are suitable to be used in presence of combustible dusts.
- Membrane filter of GD adapter must not be damaged, drilled or removed. Moreover it must never be touched with bare hands in order to avoid to damage of the filter.
- For the gas detectors type ST/7W / * and ST/8W / * , with enclosures in epoxy coated aluminium, the risk of electrostatic charges has to be considered: the cleaning of the equipment must be done only with a damp cloth or antistatic products.

A small, handwritten signature or mark in the bottom left corner of the page.



IECEX Certificate of Conformity

CESI

Prot: B7010319

Annex to certificate:

IECEX CES 17.0010X Issue No.:0 of 2017-04-27

Applicant:

Sensitron S.r.l.

Viale della Repubblica, 48, I-20010 Cornaredo (MI), Italy

Electrical Apparatus:

Gas detectors, Series ST/**/EL**/*

Description of equipment

The gas detectors series ST/**/EL**/* are devices used to detect the concentration of toxic gases or oxygen. The detectors are composed by a sensor head containing the sensitive element (electrochemical sensor) coupled with an enclosure with type of protection Ex-d containing the electronic circuits for the elaboration/memorisation of signals. These electronic circuits also provide the galvanic insulation and the sensor head's supply for the type of protection Ex-ib.

The devices installed within the flameproof enclosure must comply with defined electrical/dimensional limits specified in the descriptive documents in order to ensure the maximum temperature-rise declared and the schedule of limitations assigned to the enclosure.

The gas detectors series ST/**/EL**/* are provided with a supplementary plate on which, in addition to the electrical parameters of circuits within the enclosure, is also specified the type of gas for which they are used.

The various type of gas detector series ST/**/EL**/* are identified by the following code: **ST/ [1] / [2] / [3]**

Where:

[1]: Enclosure type: 7B; 7W; 8B; 8W; 8K; 8Z

[2]: Contents / electronics:

EL1 = with electronic "Smart 3 GD-IS"

EL2 = with electronic "Smart 3 G+-IS"

EL3 = with electronic "Smart SSS-IS"

EL4 = with electronic "Smart SIR-IS"

[3]: Sensor Head type:

SI = Intrinsic Safety

SIGD = Intrinsic Safety with the dust ingress protection device

The complete codes and the gas detectors characteristics are reported in the Manufacturer's documents. The identification code is reported on the plate fixed on the enclosure containing the electronic circuits.

Electrical characteristics

- Maximum supply voltage: 24 Vdc
- Maximum absorbed current: 500 mA
- Maximum absorbed power: 4.5 W ^[1]
- Maximum voltage [Um]: 30 V

[1] The total power absorbed by the device is the sum of the power absorbed by the sensor head and the power absorbed by the electronic circuit inside the connection enclosure as specified in the Manufacturer's documents.

Ambient temperature range: -20°C ÷ +50 °C

Cable entries

The accessories used for the cable entries and to close the unused holes, shall be subject of a separate certification and shall guarantee the same type of protection and degree of protection (IP) foreseen for the equipment. Moreover the accessories shall be suitable to be use in the ambient temperature range assigned to the equipment. If cylindrical threads are used, the coupling between the accessories and the enclosure shall be provided with block to prevent loosening.

Warning label

"Warning - Do not open when energized"

Marking

The gas detectors series ST/**/EL**/* shall be marked as follows:

Ex db [ib] ib IIC T6 Gb

Ex tb IIIC T85°C Db (gas detectors with sensor head equipped with device for the dust ingress protection)

IP65

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