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Schema di certificazione
CESI-ATEX

[1] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE**

[2] **Component intended for use on/in equipment or protective system
intended for use in potentially explosive atmospheres
Directive 2014/34/EU**

[3] Supplementary EU-Type Examination Certificate number:

CESI 01 ATEX 066U / 04

[4] Component: Gas detectors series NET

[5] Manufacturer: N.E.T. S.r.l.

[6] Address: Via Legnano, 2 – 20010 Cornaredo - MI - Italy

[7] This supplementary certificate extends EC-Type Examination Certificate CESI 01ATEX066U, to apply to products designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

[8] CESI, notified body n. 0722 in accordance with Article 17 of the Directive 2014/34/EU of the Parliament and Council of 26 February 2014, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report n. EX-B6013432.

[9] In accordance with Article 41 of Directive 2014/34/EU, EC-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. Supplementary certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016

[10] The sign "U" placed after the certificate number indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.

[11] This EU-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified component in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this component. These are not covered by this certificate.

[12] The marking of the component shall include the following:

Ex II 2G Ex db IIC Gb

Ex II 2GD Ex db IIC Gb Ex tb IIIC Db - IP65

(detectors type NET2 and NET3 equipped with device for the dust ingress protection)

This certificate may only be reproduced in its entirety and without any change, schedule included.

Date 23.06.2016 - Translation issued the 23.06.2016

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CESI S.p.A.

Testing & Certification Division
Business Area Certification
Il Responsabile



PRD N. 018B
Membro degli Accordi di Mutuo
Riconoscimento EA, IAF e ILAC
Signatory of EA, IAF and ILAC
Mutual Recognition Agreements

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Schedule

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 01ATEX066U / 04**

[15] **Description of the variations to the component**

Variation 1.1

Conformity to EN 60079-0 (2012) + A11 (2013), EN 60079-1 (2014) and EN 60079-31 (2014) Standards.

Variation 1.2

Constructional modifications:

- a) On type NET3 detector body a grounding terminal has been implemented.
- b) Gk thread has been removed.

Variation 1.3

Added a new version of type NET3 detector with elongated body of 5 mm, and consequent updating of the identification code. The internal free volume remains $\leq 10 \text{ cm}^3$.

Variation 1.4

Updating of electrical characteristics. The values of the maximum power dissipated inside the sensor head have been aligned to those declared for similar devices subject of other certification.

Variation 1.5

Updating of marking.

Details of the admitted variations are specified in the descriptive documents annexed to this supplement.

Description of the component

Gas detectors series NET are components used for the detection of flammable or toxic gases.

They are manufactured with a flameproof enclosure inside which are installed the sensing element and any electronic circuitry for the signal amplification or transmission.

The gas detectors type NET2 and Type NET3 can be equipped with a device for the dust ingress protection of the sintered element. In this configuration the category 2GD is assigned to the gas detector.

The different types of sensing elements and / or electronic circuitry installed within the flameproof enclosure are given in the descriptive documents annexed to the certificate.

The devices installed within the flameproof enclosure must comply with the defined electrical/dimensional limits specified in the descriptive documents in order to ensure compliance with the maximum temperature rise declared for the component.

Gas detectors series NET are provided with an additional plate on which, in addition to electrical parameters of the devices installed within the enclosure, are also specified the type of gas for which they are used.

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Schedule

[14] SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 01ATEX066U / 04

Identification of the component

The various types of gas detector series NET are identified by the following code:

NET	* * *		<p>Type of the detector body: 1, 2 or 3</p> <p>External thread connection: 2= 3/4" NPT; 3=1" NPT; 4=M20 x 1.5; 5=M25 x 1.5</p> <p>Detector body version and material: A = aluminium, standard version; S = stainless steel AISI 303, standard version; 1 = stainless steel AISI 303, perforated cap version (NET3); 2 = stainless steel AISI 316L, standard version (NET3); 3 = stainless steel AISI 316L, perforated cap version (NET3); 4 = stainless steel AISI 303, round, small version (NET2); 5 = aluminium, round, small version (NET2); 6 = stainless steel AISI 303, round version (NET1 – NET2); 7 = aluminium, round version (NET1 – NET2); 9 = aluminium, prolonged version (NET3); B = stainless steel AISI 303, prolonged version (NET3); C = stainless steel AISI 316L, prolonged version (NET3).</p>
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Electrical characteristics

- Maximum supply voltage:	30 Vdc
- Maximum absorbed current:	400 mA
- Maximum dissipated power:	0.7 W (type NET1 and NET2) 1.4 W (type NET3)

Marking

The gas detectors type NET shall be marked as follows:

⊕ Ex	II 2G Ex db IIC Gb	
⊕ Ex	II 2GD Ex db IIC Gb	Ex tb IIIC Db
	IP65	<i>(detectors type NET2 and NET3 equipped with device for the dust ingress protection)</i>

[16] Report n. EX-B6013432

Routine tests

The manufacturer shall carried out the routine tests prescribed at par. 27 of EN 60079-0 Standard and at par. 16 of EN 60079-1 Standard.

The gas detectors series NET are exempted from the routine overpressure test since the internal volume is less than to 10 cm³.

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[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 01ATEX066U / 04**

[17] **Schedule of limitations**

- Operating temperature range:
 -20 ÷ +130 °C for detectors with resin GPS type RE120+ CATALYST HA03;
 -40 ÷ +130 °C for detectors with resin Emerson & Cuming type STYCAST 2651+CATALYST9.
 -20 or -40°C (depending on type of resin) ÷ +70 °C for GD category detectors equipped with the device for the dust ingress protection (membrane GORE™).

The safety instructions provided with the component report a guidance for determining the operating temperature range in function of the type of resin used.

The gas detectors in subject shall be accompanied by a suitable documentation reporting the limit values of the operating temperature for the devices installed inside them.

- Maximum external temperature rise in function of the dissipated power by the component:

Type of detector	Power ≤ 0.7 W	Power ≤ 1.4W
NET 1	≤ 20 K	--
NET 2	≤ 25 K	--
NET 3	≤ 25 K	≤ 25 K

- The installation of the gas detector shall guarantee the equipotential bonding and metal continuity of the enclosure.
- The gas detectors series NET are designed for stationary installation and therefore are not subjected to the drop test.
- The flamepaths are specified in the manufacturer drawings. For information regarding the dimensions of the flameproof joints the manufacturer shall be contacted.
- The conditions of the installation of the equipment are included within the safety instructions. For a safe use these mounting instructions are to be followed precisely. In case of use with enclosure subject of a separate certification for a type of protection listed in EN60079-0 standard, the coupling enclosure/gas detector shall not affect the type of protection of the enclosure. The requested degree of protection IP shall be guaranteed.
- The sealed bushing of the gas detectors has been submitted to an overpressure test of 30 bar. The gas detectors can be coupled, without any supplementary test, to explosion-proof enclosures with a reference pressure not exceeding 20 bar.

[18] **Essential Health and Safety Requirements**

Compliance with the Essential Health and Safety Requirements is not affected by this variation and are assured by the compliance with the following Standards:

- EN 60079-0: 2012 + A11: 2013 - Explosive atmospheres - Part 0: Equipment - General requirements.
- EN 60079-1: 2014 - Explosive atmospheres – Part 1 - Equipment protection by flameproof enclosures “d”.
- EN 60079-31: 2014 – Explosive atmospheres – Part 31 - Equipment dust ignition protection by enclosures “t”.

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Schedule

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 01ATEX066U / 04**

[19] **Descriptive documents** (prot. EX-B6013440)

- Technical Note NTEX4025	(pg. 8)	dated	23.06.2016
- Safety Instructions MTEX 4027	(pg. 6)	dated	09.05.2016
- n. MEEEX2680 Rev. 2		dated	09.05.2016
- n. MEEEX2681N Rev. 3	(pg. 2)	dated	09.05.2016
- n. MEEEX2682N Rev. 3	(pg. 3)	dated	09.05.2016
- n. ASEX2789N Rev. 1		dated	22.06.2016
- n. ME10403N		dated	18.07.2011
- n. MEEEX2568N Rev. 1		dated	08.05.2015
- n. MEEEX2842N Rev. 2		dated	08.05.2015
- n. ASEX2788N Rev. 1		dated	22.06.2016
- n. MEEEX2338N Rev. 1		dated	08.05.2015
- n. MEEEX2537N Rev. 2		dated	08.05.2015
- n. MEEEX2827N Rev. 2		dated	08.05.2015
- n. MEEEX2828N Rev. 2		dated	08.05.2015
- n. ASEX2782N Rev. 1	(pg. 2)	dated	22.06.2016
- n. MEEEX2339N Rev. 2		dated	08.05.2015
- n. MEEEX2452N Rev. 2		dated	20.06.2016
- n. MEEEX2453N Rev. 1		dated	08.05.2015
- n. MEEEX2559N Rev. 1		dated	06.05.2015
- n. MEEEX2829N Rev. 1		dated	08.05.2015
- n. MEEEX3733 Rev. 1		dated	20.06.2016
- n. ASEX2599N Rev. 4	(pg. 5)	dated	23.06.2016
- n. ASEX2600N Rev. 2	(pg. 2)	dated	12.10.2015
- n. NTEX4082	(pg. 8)	dated	23.06.2016
- Attestation of conformity UE n. DCEX4028 (<i>fac-simile</i>)		dated	09.05.2016
- Attestation of conformity UE n. DCEX4029 (<i>fac-simile</i>)		dated	09.05.2016

One copy of all documents is kept in CESI files.

Certificate history

Issue N°	Issue Date	Summary description of variation
04	23/06/2016	Conformity to EN 60079-0 (2012) + A11 (2013), EN 60079-1 (2014) and EN 60079-31 (2014) Standards; constructional modifications, update of the electrical characteristics and marking (descriptive documents EX- B6013440).
03 rev.1	01/08/2011	Revision of the marking for type of protection “t” – minor editorial revision (descriptive documents EX-B1024629).
03	06/08/2010	Constructional modifications, new models, new electrical characteristics, update of the identification code and marking, conformity to new editions of Standard (descriptive documents EX-B0022706).
02	03/08/2007	Constructional modifications, new identification code, minimum operating temperature – 40°C for component of category 2G, change of the address, conformity to new editions of Standard (descriptive documents EX-A7022241).
01	31/12/2004	Constructional modifications, new electrical characteristic, new type with IR detector, new marking for use in the presence of combustible dust (descriptive documents EX-A4525571).
00	17/09/2001	First Issue of the Certificate (descriptive documents EX-A1/027173).

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