CESI S.p.A.
Via Rubattino 54
I-20134 Milano - Italy
Tel: +39 02 21251
Fax: +39 02 21255440
e-mail: info@cesi.it
www.cesi.it

CERTIFICATE

[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 /05

[4] Component: **Gas detectors series NET**

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

[6] Address: **Via Campania, 5, 20006 Pregnana Milanese (MI) – Italia**

[7] This supplementary certificate extends EC–Type Examination Certificate **CESI 01 ATEX 066U** 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-C2003751**.

[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:

I M2	**Ex db I Mb**	*» (only for detectors made of stainless steel)*
	or	
II 2G	**Ex db IIC Gb**	*» (all models)*
	or	
II 2GD	**Ex db IIC Gb** *and* **Ex tb IIIC Db IP65**	*» (only for detectors type NET2 and NET3 equipped with device for the dust ingress protection)*

Date 21/04/2022 - Translation issued the 21/04/2022

Prepared	**Verified**	**Approved**
Adrián Lucas Vagni	Alessandro Fedato	Roberto Piccin

[13] # Schedule

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 01 ATEX 066U /05**

[15] **Description of the variation**

Variation 5.1: Change of company address to Via Campania, 5, 20006 Pregnana Milanese MI, Italy.

Variation 5.2: The components **Gas detectors series NET** previously assessed in compliance to the standard EN 60079-0:2012/A11:2013 were re-assessed on the basis of the Standards bring in the paragraph **[18]**.

Variation 5.3: The Gas detectors series NET, were tested and upgraded to Group I executions.

Variation 5.4: Minor changes and update of annexed documents.

Description of component

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

Models identification

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

NET * * *

Type of the detector body:
1 = NET1 with wires connection
2 = NET2 with wires connection
3 = NET3 with wires connection

External thread connection:
2 = ¾" NPT (Standard);
3 =1" NPT;
4 =M20x1.5 (only for detectors type NET3);
5 =M25x1.5 (only for detectors type NET3).

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).

[13] # Schedule

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 01 ATEX 066U /05**

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)

[16] **Report n.** EX-C2003751.

Routine tests

The Gas detectors series NET are exempted from the routine overpressure test since the internal volume is less than to 10 cm^3.

[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 ≤ 0,7W	Power ≤ 1,4 W
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.

• 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 EN IEC 60079-0 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.

[13] # Schedule

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 01 ATEX 066U /05**

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

Compliance with the Essential Health and Safety Requirements is assured by compliance to the following harmonized standards:

EN IEC 60079-0:2018	Explosive atmospheres – Part 0: Equipment - General requirements
EN 60079-1:2014	Part 1: Equipment protection by flameproof enclosure "d"
EN 60079-31:2014	Part 31: Equipment dust ignition protection by enclosure "t"

[19] **Descriptive documents** (prot. EX-C2003755)

*MEEX2682N ATEX marking for NET3 (Pag. 6) Rev.4	dated	01/02/2022
*MEEX2681N ATEX marking for NET2 (Pag. 4) Rev.4	dated	01/02/2022
*MEEX2680N ATEX marking for NET1 (Pag. 3) Rev.3	dated	01/02/2022
*ASEX2788N NET2 head assembly Rev.2	dated	21/01/2022
*ASEX2782N NET3 head assembly (Pag. 2) Rev.2	dated	21/01/2022
*ASEX2599N Part list sensor (Pag. 3) Rev.6	dated	04/03/2022
*ASEX2600N Part list electronic circuits (Pag. 2) Rev.3	dated	19/01/2022
*MEEX2842N NET1 main body – Round version Rev.3	dated	01/12/2021
*ASEX2789N NET1 head assembly Rev.2	dated	01/12/2021
*MEEX4056 NET3 main body M20x1.5 alternative (Pag. 2) Rev.2	dated	30/11/2021
*MEEX2829N NET3 cover (perforated version) Rev.3	dated	30/11/2021
*MEEX2828N NET2 main body – Round version Rev.3	dated	30/11/2021
*MEEX2827N NET2 main body – Round, small version Rev.3	dated	30/11/2021
*MEEX2560N Sintered metal element 18x 3 mm Rev.1	dated	30/11/2021
*MEEX2559N Sintered metal element 32,5x 3 mm Rev.2	dated	30/11/2021
*ME1403N Passive PCB wire guide Rev.4	dated	30/11/2021
*MTEX4027 Safety instructions NET1/2/3 (Pag. 8) Rev.1	dated	25/11/2021
*NTEX4944 Technical Note Gas detector model: NETxxx (Pag. 11) Rev.0	dated	28/06/2021
*MEEX4055 NET3 main body M20x1.5 (Pag. 2) Rev.4	dated	16/04/2020
*MEEX2568N NET1 main body – Standard version Rev.3	dated	15/04/2020
*MEEX2452N NET3 main body Rev.4	dated	17/08/2018
*MEEX3733 NET3 main body (prolonged version) (Pag. 2) Rev.4	dated	17/04/2018
*MEEX2537N NET2 main body – Standard version Rev.3	dated	17/04/2018
*MEEX2453N NET3 cover Rev.3	dated	17/04/2018
*MEEX2339N NET3 GD cover Rev.3	dated	17/04/2018
*MEEX2338N NET2 GD adapter Rev.2	dated	17/04/2018

*Note: an * is included before the title of documents that are new or revised.*
One copy of all documents mentioned above is kept in CESI files.

Certificate history

Issue nr	Issue Date	Summary description of variation
00	17/09/2001	First Issue of the Certificate.
01	31/12/2004	Constructional modifications
02	03/08/2007	Constructional modifications, new electrical characteristic, new type with IR detector, new marking for use in the presence of combustible dust
03	06/08/2010	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
03 Rev.1	01/08/2011	Constructional modifications, new models, new electrical characteristics, update of the identification code and marking, conformity to new editions of Standard
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
05	21/04/2022	Change of company address. Update to the standard EN IEC 60079-0:2018. Upgrade to Group I applications. Minor changes and update of annexed documents