IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx CES 12.0009X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 2	Issue 1 (2016-07-30) Issue 0 (2012-06-15)
Date of Issue:	2022-10-24		

Applicant: **N.E.T. S.r.l.**
Via Campania 5,
I-20006 Pregnana Milanese (MI)
Italy

Equipment: **Gas detectors, Series NETC***

Optional accessory:

Type of Protection: **Flameproof enclosures 'd', Dust ignition protection by enclosure 't'**

Marking: **Ex db IIC T6, T5 Gb**
Ex tb IIIC T85°C, T100°C Db (only model NETC2 and NETC3 with GD Adapter)

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

Position: **Deputy Head of IECEx CB**

Signature: (for printed version)

Date: (for printed version) 2022.10.24

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Certificate issued by:

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

IECEx Certificate of Conformity

Certificate No.: **IECEx CES 12.0009X**

Date of issue: 2022-10-24

Issue No: 2

Manufacturer: **N.E.T. S.r.l.**
Via Campania 5,
I-20006 Pregnana Milanese (MI)
Italy

Manufacturing locations: **N.E.T. S.r.l.**
Via Campania 5,
I-20006 Pregnana Milanese (MI)
Italy

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 equipment 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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

This Certificate **does not** indicate compliance with 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 Reports:

IT/CES/ExTR12.0009/00 IT/CES/ExTR12.0009/01 IT/CES/ExTR12.0009/02

Quality Assessment Report:

IT/CES/QAR08.0001/16

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Gas detectors series NETC are devices used for the detection of flammable or toxic gases.

All the models are provided with a multi-core cable permanently connected to (non-detachable) that through a sealed bushing allows connection to external circuits for supply/measure.

The gas detectors types NETC1, NETC2 and NETC3 are manufactured with a flameproof enclosure equipped with a sintered element; inside the enclosure are installed the sensing element and any electronic circuitry for the signal amplification or transmission.

The type NETC2 and type NETC3 may be equipped with a device (GD adapter) for the dust ingress protection of the sintered element. In this configuration the Db Equipment Protection Level is assigned to the gas detectors.

For further information see Annex.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The supply cable of the gas detector must be protected against mechanical damages caused by impact or friction.
- User side connection of the supply cable must be in a safe area or be protected by one of the types of protection listed in IEC 60079-0 standard.
- The installation of the gas detector shall guarantee the equipotential bonding and metal continuity of the enclosure.
- The gas detectors series NETC are designed for stationary installation and shall not be used for portable applications.
- 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 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 by the user.
- The Gas detectors NETC2 and NETC3 can guarantee the degree of protection IP65 only if supplied with the GD Adapter mounted according to the safety instructions.
- 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.

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DETAILS OF CERTIFICATE CHANGES (for Issues 1 and above)
Variation 2.1:

Change of company address from *Via Legnano 2, I-20010 Cornaredo (MI) - Italy* to *Via Campania 5, I-20006 Pregnana Milanese (MI), Italy*.

Variation 2.2:

The **Gas detectors NETC***** originally assessed in compliance with IEC 60079-0:2011 have been re-assessed on the basis of the new edition of IEC 60079-0:2017 Standard.

Variation 2.3:

Removal of types NETC6, NETC7 and NETC8.

Variation 2.4:

Update of technical documents due to editorial corrections and minor changes.

Unchanged the other constructional characteristics of **Gas detectors NETC***** series.

Annex:

N.E.T. S.r.l. - IECEx CES 12.0009X Issue 2 - ANNEX - Gas detectors NETC.pdf

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Prot: C2011126

Annex to certificate: **IECEx CES 12.0009X Issue No: 2** of 2022-10-24

Applicant: **N.E.T. S.r.l.**
Via Campania 5, I-20006 Pregnana Milanese MI, Italy

Electrical Apparatus: **Gas detectors NETC***

Description of the equipment

Gas detectors series NETC are devices used for the detection of flammable or toxic gases.
All the models are provided with a multi-core cable permanently connected to (non-detachable) that through a sealed bushing allows connection to external circuits for supply/measure.
The gas detector types NETC1, NETC2 and NETC3 are manufactured with a flameproof enclosure equipped with a sintered element; inside the enclosure are installed the sensing element and any electronic circuitry for the signal amplification or transmission.
The type NETC2 and type NETC3 may be equipped with a device (GD adapter) for the dust ingress protection of the sintered element. In this configuration the Db Equipment Protection Level is assigned to the gas detectors.
The different types of sensing elements and / or electronic circuitry installed within the flameproof enclosure are detailed in the Manufacturer's documents.
The devices installed within the flameproof enclosure must comply with defined electrical/dimensional limits specified in in the Manufacturer's documents in order to ensure the temperature class assigned to the equipment.
Gas detectors series NETC are provided with a plate (main or supplementary) on which, in addition to electrical parameters of the sensing element, is also specified the type of gas for which they are used.
The Rated ambient temperature ranges above reported represent the upper and lower limits of the applicable temperature range, considering the constructional and functional characteristics of the gas detectors, as specified in the in the Manufacturer's documents.

Model Identification

The gas detector types NETC1, NETC2 and NETC3 are identified by the following code:

NETC * * *

Type of the detector body:
1= NETC1 with non-detachable cable
2= NETC2 with non-detachable cable
3= NETC3 with non-detachable cable

External thread connection:
2= ¾" NPT (Standard).
3=1" NPT.
4=M20x1.5 (only for detectors type NETC3).
5=M25x1.5 (only for detectors type NETC3).

Detector body version and material:
A = aluminium, standard version.
S = stainless steel AISI 303, standard version.
1 = stainless steel AISI 303, perforated cap version (NETC3).
2 = stainless steel AISI 316L, standard version (NETC3).
3 = stainless steel AISI 316L, perforated cap version (NETC3).
4 = stainless steel AISI 303, round, small version (NETC2).
5 = aluminium, round, small version (NETC2).
6 = stainless steel AISI 303, round version (NETC1 – NETC2).
7 = aluminium, round version (NETC1 – NETC2).
8 = stainless steel AISI 316L, long version, perforated cap (NETC3).

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Annex to certificate: **IECEx CES 12.0009X Issue No: 2** of 2022-10-24

Applicant: **N.E.T. S.r.l.**
Via Campania 5, I-20006 Pregnana Milanese MI, Italy

Electrical Apparatus: **Gas detectors NETC***

Electrical characteristics

- Maximum supply voltage: 30 Vdc
- Maximum absorbed current: 400 or 500 mA (depending on the type)
- Maximum dissipated power: 0.7 W (types NETC1 and NETC2)
  1.4 W (types NETC3 – long version excluded)
  2.5 W (type NETC3*8 – long version)
- Ambient temperature: -40 /-30 /-20 ÷ +45 / +50 /+55 / +60°C

In the following table are reported the temperature class (for EPL Gb) and the maximum surface temperature (for EPL Db) in function of the maximum ambient temperature and of the power dissipated within the enclosure of the gas detector.

Gas detector type	Maximum dissipated power [W]	Maximum ambient temperature [°C]	Temperature class (Gb)	Maximum surface temperature (Db)
NETC1	0.7	60	T6	--
NETC2	0.7	50	T6	T85 °C
		55	T6	T85 °C
		60	T5	T100 °C
NETC3	1.4	55	T6	T85 °C
		60	T5	T100 °C
NETC3 long version	2.5	45	T6	T85 °C
		50	T5	T85 °C
		60	T5	--

The marking nameplate shows the temperature class and the ambient temperature range assigned to the equipment.