



[1] **EC-TYPE EXAMINATION CERTIFICATE**

[2] **Component intended for use on/in equipment or protective system  
intended for use in potentially explosive atmospheres  
Directive 94/9/EC**

[3] EC-Type Examination Certificate number:

**CESI 11 ATEX 039U**

[4] Component: Gas detectors series **IRNEX** and series **IRPEX**

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

[6] Address: Via Legnano, 2 – 20010 Cornaredo (Milano) - Italy

[7] This component and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] CESI, notified body n. 0722 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of components 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-B1017206.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN60079-0: 2009 EN60079-1: 2007 EN60079-11: 2007 EN50303: 2000**

[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 EC-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified component in accordance to the Directive 94/9/EC. 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:

**II 2G Ex d IIC Gb**

**I M2 Ex d I Mb**

**I M1 Ex d+ia I Ma**

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

**Date 27 May 2011 - Translation issued the 27<sup>th</sup> May 2011**

**Prepared**  
Enrico Radaelli

**Verified**  
Mirko Balaz

**Approved**  
Fiorenzo Bregani

**CESI S.p.A.**  
Testing & Certification Division

[13]

## Schedule

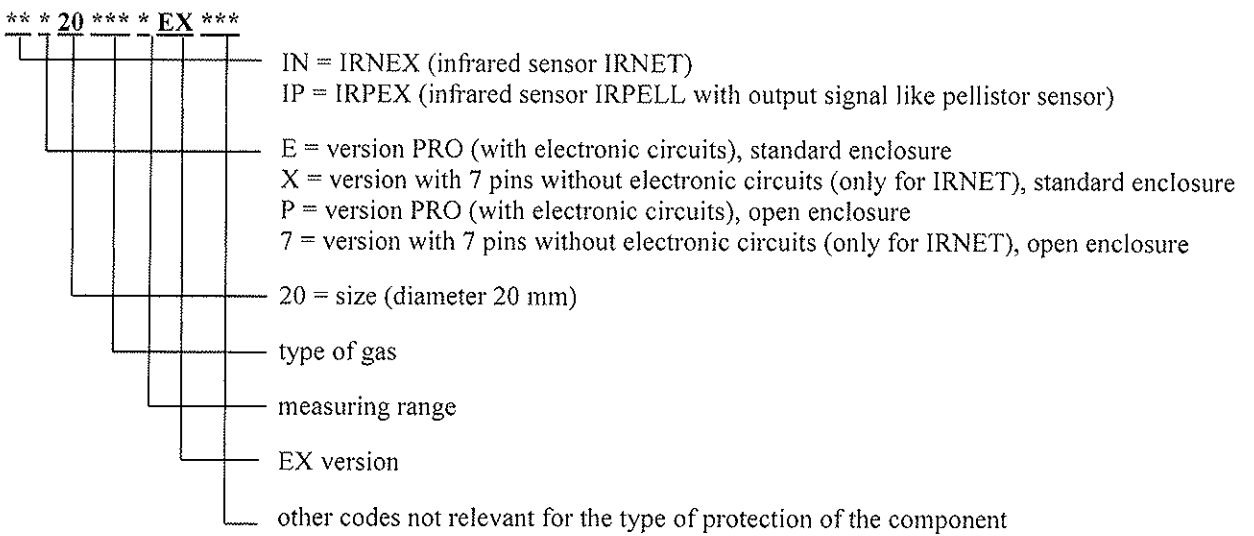
[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 11 ATEX 039U**

[15] **Description of component**

Gas detectors series **IRNEX** and series **IRPEX** 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.

On the one hand, the enclosure is closed by a sealed bushing with the pins for the connection to external circuits, on the other side a double-layer mesh locked and sealed on the enclosure is placed.

The various type of gas detectors series IRNEX and series IRPEX are identified by the following code



The complete identification codes of sensors series IRNEX and IRPEX , with their constructional characteristics, are detailed in the descriptive documents annexed to the certificate

**Electrical characteristics**

- Maximum supply voltage: 5.5 Vdc
- Maximum absorbed current: 100 mA

*For models with type of protection Ex d+ia I Ma:*

- Maximum input voltage  $U_i$ : 5.5 Vdc
- Maximum input current  $I_i$ : 100 mA

- Minimum ambient temperature: - 40 °C for group II devices  
- 20 °C for group I devices

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

[13]

## Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 11 ATEX 039U**

---

[16] **Report n. EX-B1017206**

### Routine tests

The manufacturer shall carry out the routine tests prescribed at clause 27 of EN 60079-0 Standard

### Descriptive documents (prot. EX-B1017222)

- Technical Note NTCX2879 rev.02 + annexes	(pg. 7+33)	dated	20.05.2011
- Safety Instructions MTCX2982 rev.01	(pg. 3)	dated	20.05.2011
- n. MECX2983		dated	01.03.2011
- n. MECX2539		dated	01.03.2011
- n. ASCX2675 rev. 4		dated	11.05.2011
- n. ASCX2893 rev. 4		dated	11.05.2011
- n. ME2388 rev. 1		dated	21.05.2011
- n. ME2389 rev. 1		dated	21.05.2011
- n. ME2144 rev. 2		dated	11.05.2011
- n. ME2145 rev. 2		dated	11.05.2011
- Declaration of Conformity DCCX2894		dated	20.05.2011

One copy of all documents is kept in CESI files.

[17] **Schedule of limitations**

- The gas detectors series IRNEX and IRPEX shall be properly protected against the mechanical risks (impact and drop) by installation into a suitable enclosure.
- The maximum ambient temperature around the component must not exceed:
  - + 60 °C for group II devices;
  - + 45 °C for group I devices.
 These limits take in account the external ambient temperature and the temperature rise inside the enclosure due to local heating.  
 For group II application, with a local ambient temperature around the component up to +60°C, the gas detectors series IRNEX and IRPEX respect the temperature class T6.
- The connection pins shall be protected with a type of protection listed in EN60079-0; a minimum degree of protection IP54 shall be guaranteed.
- The devices shall not be installed ore removed when an explosive atmosphere is present.

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

Assured by compliance to the Standards.