



NET3X DETECTION HEAD

Gas Sensing Head—ATEX certified component

DSEX3605 rev. 7 dated 28/04/2022



Key Features

- Ready-to-use detector heads tested and certified according to the ATEX directive as a component
- ¾", 1" or M20 back thread for connection to the detector's main body
- Front M46 thread for connection to flanges and calibration caps
- Optional GD protection (IP65)
- Accommodates N.E.T. comprehensive detection range:
 - Infrared sensors for CO₂, CH₄, hydrocarbons, SF₆, Ethylene and refrigerant gases.
 - Electrochemical cells for O₂, CO, NO₂, NO, H₂S, NH₃, CL₂, SO₂
 - Catalytic pellistors for flammable gases

General Description

NET3X are ready-to-use detector heads or gas sensor housings, already certified as a component or a complete device to be mounted on a gas detector in any environment.

The N.E.T. detector head is the ideal solution for gas detection system manufacturers who prefer not to invest in designing their own detection head and/or obtaining ATEX/IECEx certification for it.

NET3X can house 20mm (4-series) or 32mm (7-series) size sensors from N.E.T.'s full array of detection technologies.

The two-piece design of the housing allows the internal sensor to be field replaceable.

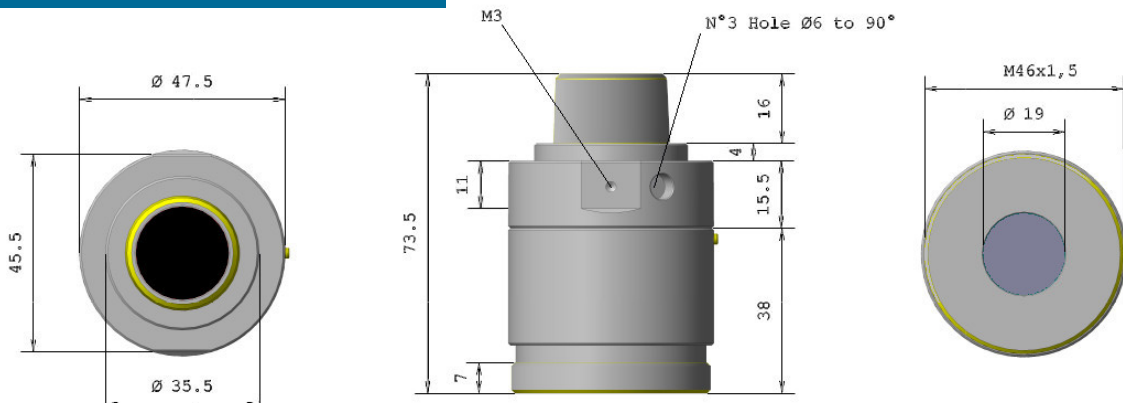
The user can select among ¾", 1" or M20 thread for connection to the detector's main body. An additional M46 front thread allows easy fit for selected accessories (splash guard, calibration cap and additional filter for GD protection).

The flameproof enclosure is equipped with an integral stainless steel sinter filter guaranteeing safe entry of the atmosphere being detected. NET3X has been tested and certified according to the ATEX directive as a component to be integrated in a fixed gas detection system.

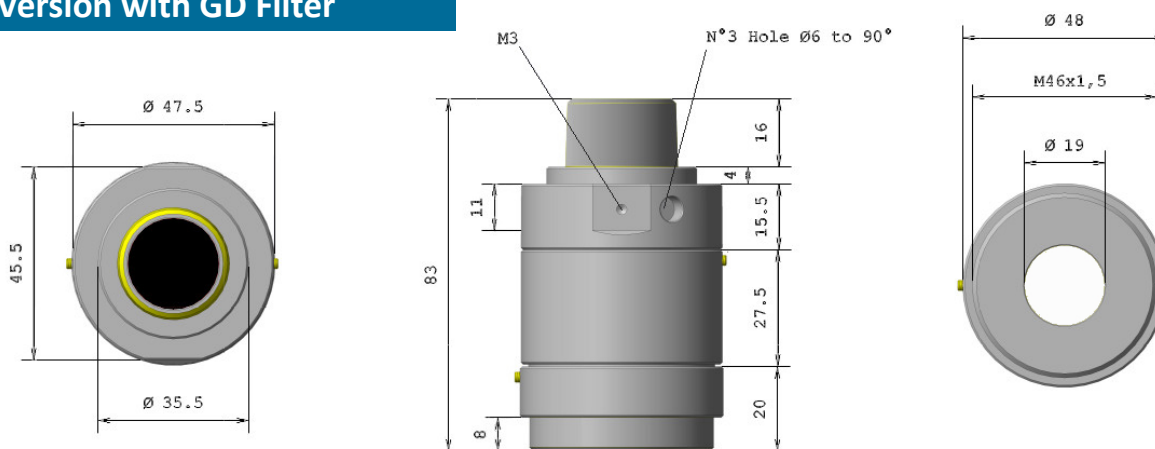
The NET3X enclosure is available also in aluminium.

Mechanical specifications

Version without GD Filter



Version with GD Filter



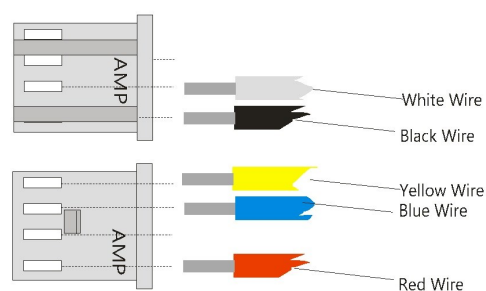
Wiring scheme

Electrochemical cells and Catalytic pellistors



Wire colour	Catalytic bead Version	Electrochemical Cell Version	Oxygen Cell Version
Black	-Vcc, Detector	Counter	Not used
Red	+Vcc, Compensator	Reference	-Ve
White	Common	Working	+Ve

Infrared sensors



Wire colour	IR Sensor Version
Red	Vcc (+5V)
White	Signal (Vout)
Black	Gnd
Yellow	RX
Blue	TX

Connector type: AMPMODU II 280359
Mating connector: AMPMODU II 280371-1

Connector type: AMPMODU II 280365
Mating connector: AMPMODU II 280384-1

Certification details

ATEX certification details	Certificate number	CESI 01 ATEX 066U
	ATEX marking (only gas)	I M2 Ex db I Mb II 2G Ex db IIC Gb
	ATEX marking (gas and dust, with dust cover)	I M2 Ex db I Mb II 2GD Ex db IIC Gb Ex tb IIIC Db IP65

Product specifications

General	Sensing Element:	EC cell & Pellistor	NDIR sensor
	Response time	Depend by the sensor	<60 seconds
	All the other functional parameters and warranty/ warning information are indicated inside datasheet of the specific sensor used inside the head.		

*The temperature range of heads equipped with Catalytic bead depends by the power dissipation inside the head, it is possible that it could be reduced than temperature range of the sensor itself. See certificate for details.

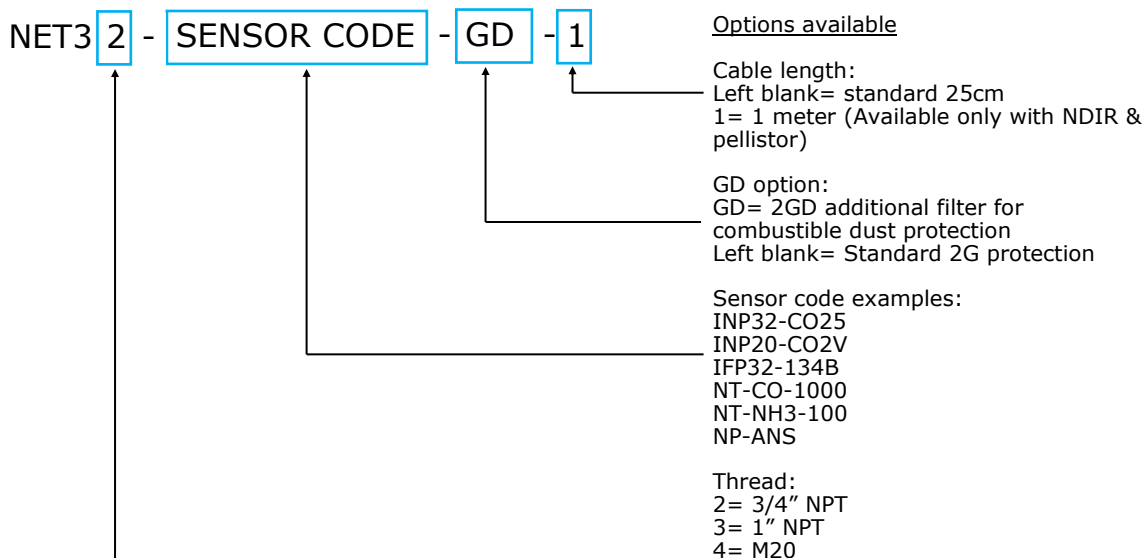
Examples of Head part numbers

Gas		Technology	Range	Part number
Methane	CH ₄	NDIR	0-5%Vol	NET3X-INP32-CH45-VS
Propane	C ₃ H ₈	NDIR	0-2,1%Vol	NET3X-INP32-PRO2-VS
Carbon Dioxide	CO ₂	NDIR	0-5000 ppm	NET3X-INP32-CO2P-VS
Carbon Dioxide	CO ₂	NDIR	0-5% Vol	NET3X-INP32-CO25-VS
Carbon Dioxide	CO ₂	NDIR	0-100% Vol	NET3X-INP20-CO2V-VS
Sulfur Hexafluoride	SF ₆	NDIR	0-2000ppm	NET3X-IFP32-SF6B-VS
R-134a	CH ₂ FCF ₃	NDIR	0-2000ppm	NET3X-IFP32-134B-VS
Carbon Monoxide	CO	EC cell	0-300 ppm	NET3X-NT-CO-PL1000
Hydrogen Sulfide	H ₂ S	EC cell	0-100 ppm	NET3X-NT-H2S-PL100
Ammonia	NH ₃	EC cell	0-100 ppm	NET3X-NT-NH3-PL100
Nitrogen Oxide	NO	EC cell	0-300 ppm	NET3X-NT-NO-PL300
Chlorine	Cl ₂	EC cell	0-10 ppm	NET3X-NT-CL2-PL10
Sulfur Dioxide	SO ₂	EC cell	0-20 ppm	NET3X-NT-SO2-PL20
Oxygen	O ₂	EC cell	0-25% vol	NET3X-NT-O2-A2

Gas		Technology	V	mA	Range	Part number
Hydrocarbons	HC	Pellistor	2,0	175	0-100% LEL	NET3X-NP-17SHM
Hydrocarbons	HC	Pellistor	2,5	170	0-100% LEL	NET3X-NP-18SHM
Hydrocarbons	HC	Pellistor	2,0	300	0-100% LEL	NET3X-NP-30SHM
Ammonia	NH ₃	Pellistor	2,2	175	0-100% LEL	NET3X-NP-ANSHM
Hydrogen	H ₂	Pellistor	1,6	140	0-100% LEL	NET3X-NP-AHSHM

Ordering details

When making an order, we kindly ask our customers to specify the basic physical and electrical properties that are needed for their specific application. This is made through the part number here below. The squared fields of the part number below can be modified according to the options on the right.



N.E.T. has a policy of continuous development and improvement of its products. As such the specification for the device outlined in the data sheet may be changed without notice. In case of modification of the product, N.E.T. disclaims all liability.

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