



20 twenty years
of advanced solutions for gas detection

Gas Sensing Elements
Proudly 100% Developed and Manufactured in Italy

NETC3 HEAD with 4-20mA output

UL/CSA recognized component with electronics and sensor

D55756 rev. 0 dated 15/01/2026



RECOGNIZED
COMPONENT



Intertek

Key Features

- Industry-standard 4-20mA analogue output
- MODBUS protocol on RS-485, for digital addressable systems
- Supplied ready-to-use with a fully configured and pre-calibrated sensor
- UL/CSA certified stainless steel or aluminum flameproof Ex d enclosure
- Certified as recognized component according to the UL and CSA 61010-1 and 60079-0; 60079-1 standards
- Simple calibration in the field, with software, calibration cap or Modbus commands
- Special ranges supplied on request
- 3/4", 1" or M20 back thread for connection to the detector's main body
- Front M46 thread for connection to flanges and calibration caps
- Made with robust aluminum or AISI 316L materials

General Description

The NETC3 XIN Head from N.E.T. is an UL/CSA certified enclosure complete with sensor and electronics, designed to be used as a recognized component of a fixed gas detection system.

NETC3 XIN Head is an ideal solution for gas detection system manufacturers who prefer not to invest in:

- Developing a sensor or finding it on the market;
- Developing electronics and firmware to process compensate it and linearize output signals;
- Designing their own detection head;
- Obtaining a UL/CSA certification for their device.

NETC3 XIN Head is a ready-made solution, bringing a complete sensor+electronics+housing package to be integrated in any gas detector project.

The units are currently available for the full

N.E.T. detection range of NDIR; the unit is fully configured and pre-calibrated with the requested sensor.

The full version features 4...20mA output and RS-485 Modbus signal over a 10-30 Vdc power supply.

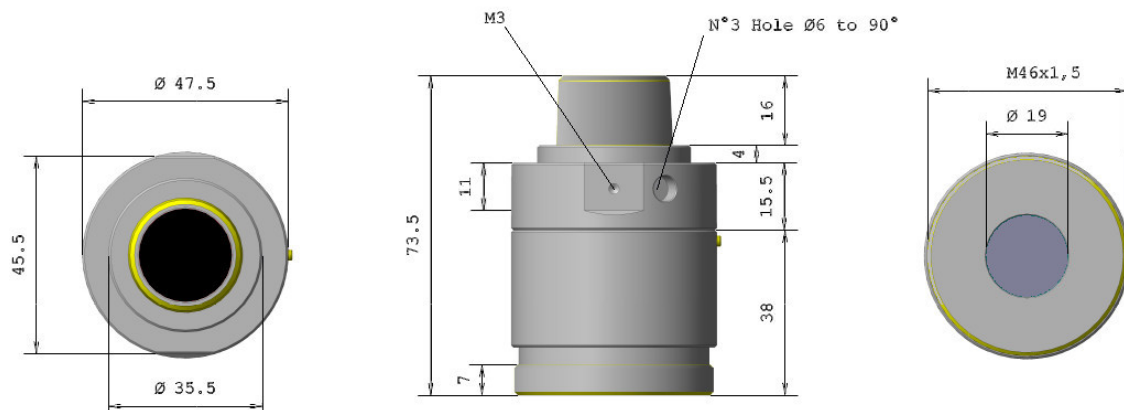
The flameproof enclosure is equipped with an integral stainless steel sinter filter, guaranteeing safe use in hazardous environments.

The NETC3 can be opened and the sensor can be replaced at the end of its life time.

The enclosure is fitted with an M46 thread at the front end to allow easy fitting of accessories and it comes with three possible threads at the rear end to fit into most detector housings (3/4", 1" or M20).

Full PC software and connection boards are available to plot live readings, perform calibrations and modify the unit's settings.

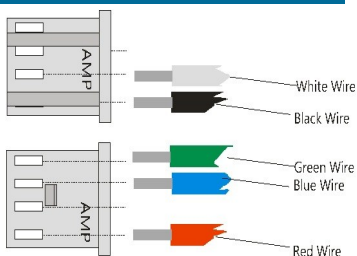
Mechanical specifications



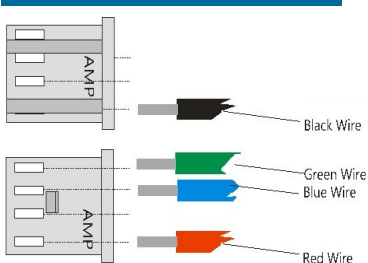
* all the above measures are in mm

Wiring scheme

4-20mA XIN version



RS485 DIN version



Wire colour	IR Sensor + 4-20mA board Version
Red	Vcc (12/24V)
White	Signal (4-20mA current)
Black	Gnd
Green	RS485A
Blue	RS485B

Wire colour	IR Sensor board Version
Red	Vcc (12/24V)
Black	Gnd
Green	RS485A
Blue	RS485B

Connector type: AMPMODU II 280365

Certification details

US/ Canadian Certification Details	Certificate number	N/A	ETL24CA27903X
	Approval	United States	Canada
	Marking (only gas)	Class I Zone 1 AEx db IIC T6 Gb Class I Div 2 Group A, B, C&D T6	Ex db IIC T6 Gb Class I Div 2 Group A, B, C&D T6
	Temperature range	-20°C / +40°C	-20°C / +40°C

Warranty and warning

The WARRANTY of the product is 3 years from the purchased date against defects in materials or production. This warranty however is not valid for articles that have been broken, repaired by a third person or not used according to the instructions contained in this document or supplied with the products, related to the storage, installation, operation, maintenance, or servicing of the products.

The WARRANTY on the specific sensor coupled with the XIN board is specified in the relevant data sheet available at www.nenvitech.com

Recalibration of the sensor will void the calibration warranty

Product specifications

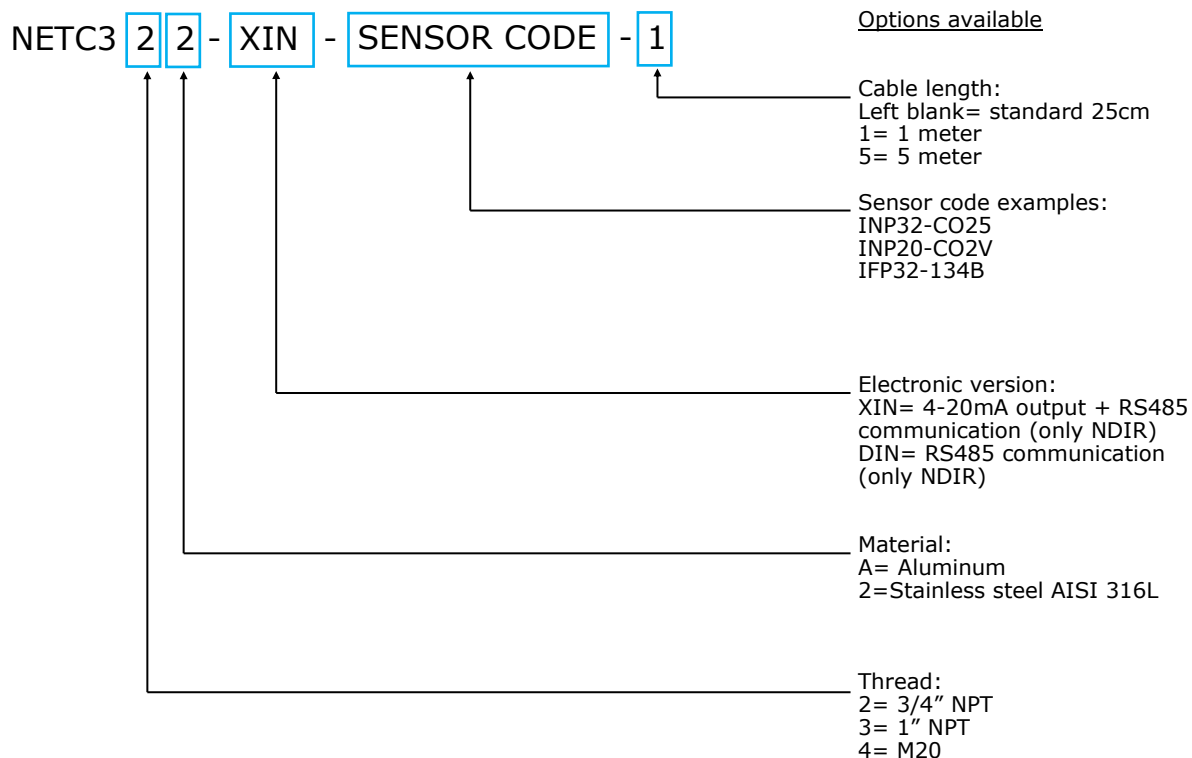
General	Product type:	XIN/DIN 4-20mA
	Sensing Element:	NDIRsensor
	Operating temperature range	Depend by the sensor technology (See Sensor specification)
	Storage temperature range	Depend by the sensor technology (See Sensor specification)
	Maximum temperature cycle variations	± 1°C/min
	Operating humidity range	0-95% non condensing
	Operating pressure range	800-1200 mBar
	Enclosure	Stainless Steel/Aluminum
	Calibration	Individually calibrated with temperature compensation. Test report supplied.
Measurement	Range	ppm; %vol
	Response time	<60 seconds
	Digital to analog error	±2%F.S
	Digital error	Depend by the sensor
Electrical	Power Voltage	Nominal 12-24Vdc
	Current Consuption @12V	<80 mA Idc
	Current Consuption @24V	<40 mA Idc
	Warm up time	60 s for full operation @ 25 °C 1 hour for full specification @ 25 °C
	Max output current	24 mA
	Output load resistor range	100-350 Ω
	DC output impedance	30 Ω
Signal Output	Analog output	4-20mA *not available in DIN version
	Digital communication	Modbus protocol RS485
	Baud Rate	4800;9600;19200;38400 bps

Examples of Head part numbers

Gas		Technology	Range	Part number
Methane	CH ₄	XIN version	0-5%Vol	NETC3XY-XIN-INP32-CH45
Carbon Dioxide	CO ₂	XIN version	0-5% Vol	NETC3XY-XIN-INP32-CO25
R-134a	CH ₂ FCF ₃	XIN version	0-2000ppm	NETC3XY-XIN-IFP32-134B
Propane	C ₃ H ₈	XIN version	0-2,1%Vol	NETC3XY-XIN-INP32-PRO2
Carbon Dioxide	CO ₂	XIN version	0-5000 ppm	NETC3XY-XIN-INP32-CO2P

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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N.E.T. SRL
Via Campania, 5 | 20006 | Pregnana Milanese | Milano | Italy
T +39.02.9354.4190
E info@nenvitech.com
www.nenvitech.com