



20 twenty years
of advanced solutions for gas detection

Gas Sensing Elements
Proudly 100% Developed and Manufactured in Italy

NETC3 DETECTION HEAD

UL/CSA recognized gas detection head

DS5754 rev. 0 dated 15/01/2026



Key Features

- Ready-to-use detector heads tested and certified as recognized component according to the UL and CSA 61010-1 and 60079-0; 60079-1 standards
- $\frac{3}{4}$ ", 1" or M20 back thread for connection to the detector's main body or junction boxes
- Front M46 thread for connection to flanges and calibration caps
- Made with robust Aluminum or AISI 316L materials
- Accommodates N.E.T. comprehensive detection range:
 - Infrared sensors for CO₂, CH₄, hydrocarbons, SF₆ and refrigerant gases
 - Electrochemical cells for O₂, CO, NO₂, NO, H₂S, NH₃, CL₂, SO₂
 - Catalytic pellistors for flammable gases

General Description

NETC3 are ready-to-use detector heads or gas sensor housings, certified as a recognized component 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 UL/CSA certification for it. NETC3 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 replaceable in-field.

The user can select a $\frac{3}{4}$ ", 1" or M20 thread for connection to the detector's main body. An additional

M46 front thread allows an easy fit for selected accessories (splash guard and calibration cap).

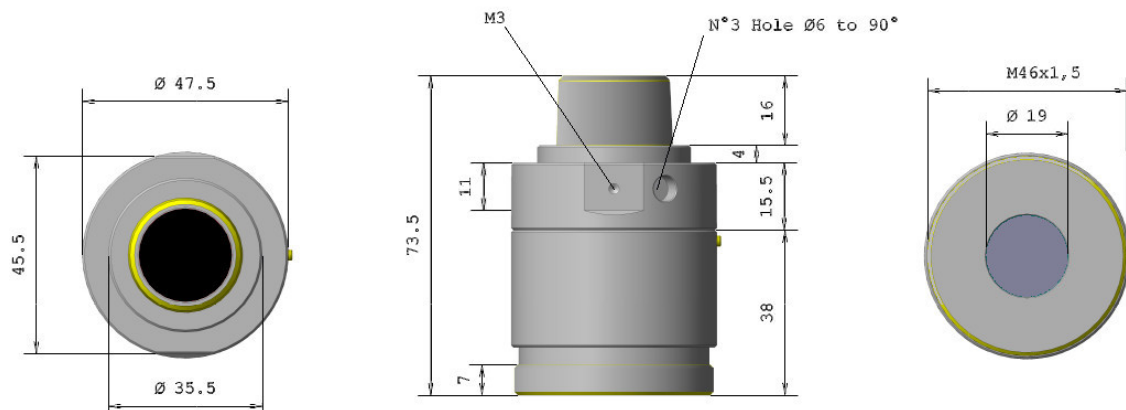
The flameproof enclosure is equipped with an integral stainless steel sinter filter guaranteeing safe entry of the atmosphere being detected.

NETC3 heads have been tested and certified according to UL/CSA 61010-1; 60079-0 and 60079-1 standards.

The NETC3 enclosure is available in aluminum or stainless steel AISI 316L.



Mechanical specifications



* all the above measures are in mm

Wiring scheme

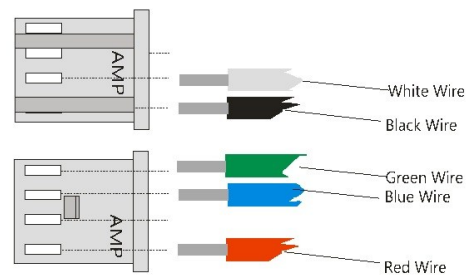
Electrochemical cells and Catalytic pellistors



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

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

Infrared sensors



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

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

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

Product specifications

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

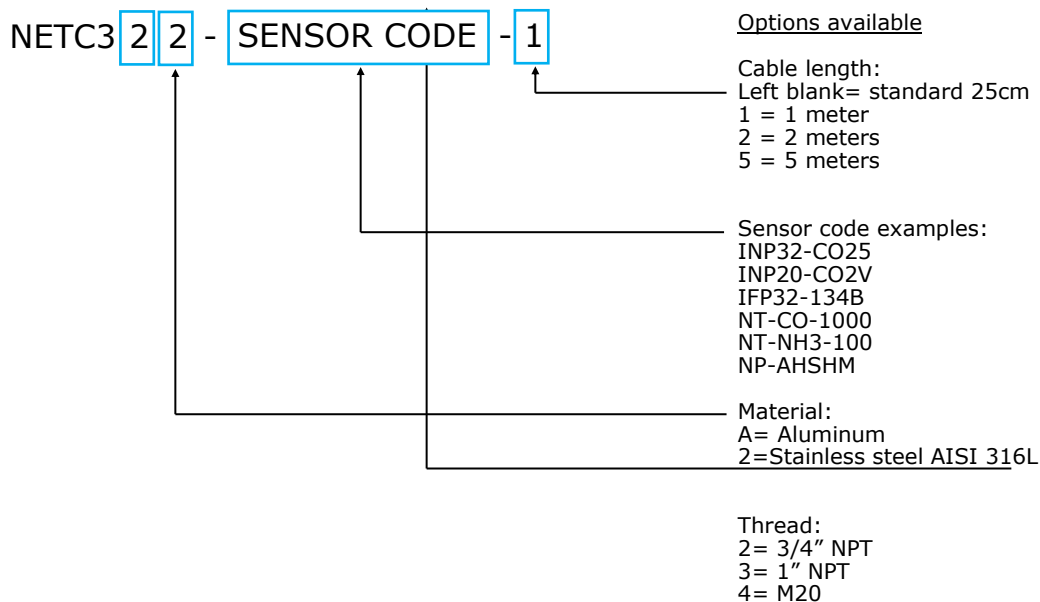
Examples of Head part numbers

Gas		Technology	Range	Part number
Methane	CH ₄	NDIR	0-5%Vol	NETC3XY-INP32-CH45-VS
Propane	C ₃ H ₈	NDIR	0-2,1%Vol	NETC3XY-INP32-PRO2-VS
Carbon Dioxide	CO ₂	NDIR	0-5000 ppm	NETC3XY-INP32-CO2P-VS
Carbon Dioxide	CO ₂	NDIR	0-5% Vol	NETC3XY-INP32-CO25-VS
Carbon Dioxide	CO ₂	NDIR	0-100% Vol	NETC3XY-INP20-CO2V-VS
Sulfur Hexafluoride	SF ₆	NDIR	0-2000ppm	NETC3XY-IFP32-SF6B-VS
R-134a	CH ₂ FCF ₃	NDIR	0-2000ppm	NETC3XY-IFP32-134B-VS
Carbon Monoxide	CO	EC cell	0-300 ppm	NETC3XY-NT-CO-PL1000
Hydrogen Sulfide	H ₂ S	EC cell	0-100 ppm	NETC3XY-NT-H2S-PL100
Ammonia	NH ₃	EC cell	0-100 ppm	NETC3XY-NT-NH3-PL100
Nitrogen Oxide	NO	EC cell	0-300 ppm	NETC3XY-NT-NO-PL300
Chlorine	Cl ₂	EC cell	0-10 ppm	NETC3XY-NT-CL2-PL10
Sulfur Dioxide	SO ₂	EC cell	0-20 ppm	NETC3XY-NT-SO2-PL20
Oxygen	O ₂	EC cell	0-25% vol	NETC3XY-NT-O2A2

Gas		Technology	V	mA	Range	Part number
Hydrocarbons	HC	Pellistor	2,0	175	0-100% LEL	NETC3XY-NP-17SH
Hydrocarbons	HC	Pellistor	2,5	170	0-100% LEL	NETC3XY-NP-18S
Hydrocarbons	HC	Pellistor	2,0	300	0-100% LEL	NETC3XY-NP-30S
Ammonia	NH ₃	Pellistor	2,2	175	0-100% LEL	NETC3XY-NP-ANSHM
Hydrogen	H ₂	Pellistor	1,6	140	0-100% LEL	NETC3XY-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.

No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of N.E.T. For permission requests or technical support please contact or write to the address below:

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