Datasheet

Nubo Sentry sensor node

Intrinsically safe close-proximity methane sensor

Version 1.3 from February 13, 2026

SENSIRION
connected solutions

Contents

1 Technical specifications

1.1 System specifications, electrical specifications and operating conditions

Feature	Specification
Measurement principle	Photoacoustic spectroscopy methane sensor
Measurement range	0 ppm to 40'000 ppm
Limit of detection (LOD)	10 ppm[1]
Default measurement interval	20 seconds
Min. measurement interval	5 seconds
Operating ambient temperature	-40 °C to +65 °C (-40 °F to +149 °F)
Operating humidity range	0 to 100 %RH
Operating pressure range	80 to 110 kPa
Power operation	Battery powered
Battery life	5 years at 20-second measurement interval[2]
System lifetime	Expected > 5 years

1.2 Physical specifications and UX

Feature	Specification
Total system weight	1.7 kg (3.75 lbs)
Sensor node dimensions W x H x T	138 x 135 x 182 mm^3 (5.43 × 5.31 × 7.17 in^3) excluding mounting bracket 161 x 135 x 231 mm^3 (6.34 × 5.31 × 9.09 in^3) including mounting bracket in horizontal position 161 x 208 x 182 mm^3 (6.34 × 8.19 × 7.17 in^3) including mounting bracket in vertical position
Enclosure ratings	IP65, IP67, NEMA 4X
Housing material	UV-resistant polycarbonate, white
Status indication	RGB LED
Mounting options	Metal hose clamp or screw mounting options; can be mounted to horizontal or vertical flat surfaces and pipes or poles with diameters up to 300 mm (12 in);

[1] at absolute humidity > 0.5 g/m^3 and operating temperature between -10 °C and +40 °C; acceptance criteria for continued exposure to electromagnetic fields (IEC61326-1, table 2) defined at 25 ppm
[2] assuming typical ambient temperatures between -10 °C and 40 °C and sufficient connectivity (LoRaWAN data rate and required TX power)

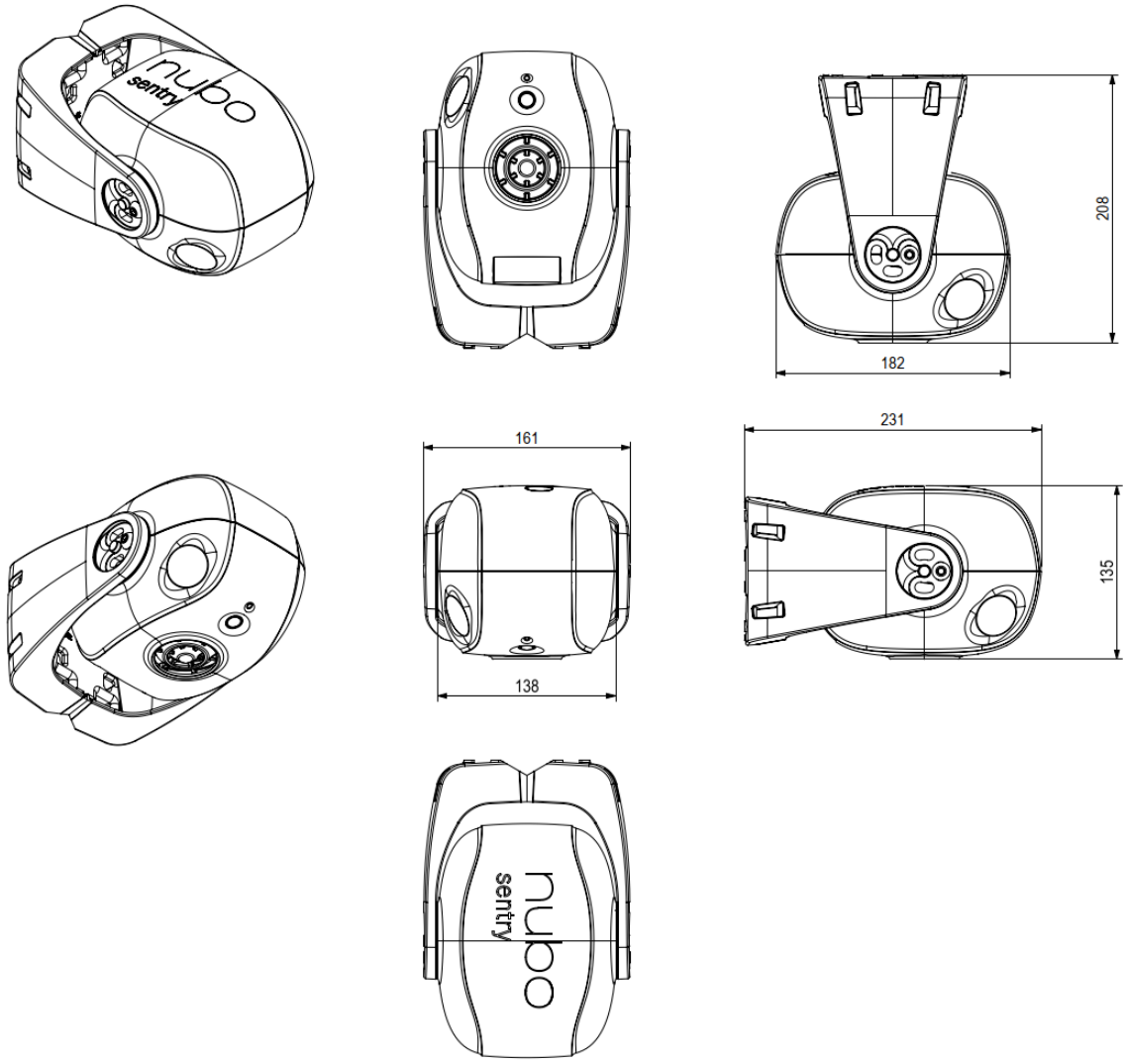
1.3 Communication specification and UX

Feature	Specification
Communication	LoRaWAN Class A device with situational Class C capability Implements LoRaWAN specification v1.0.4 Supports regional parameters RP002-1.0.3 Supports EU868, US915, AU915, AS923
Data transmission rate	Depending on adaptive data rate (ADR), region, measurement interval and number of relevant measurements within a given time; for default 20-second measurement interval & EU SF 7 / DR5, 1/12 min
Data buffer	3000 samples (CH4 + timestamp); 15 hours for default 20-second measurement interval
Commissioning/provisioning	Local commissioning via push-button activation and BLE communication interface
Activation method/ encryption	Supports LoRaWAN Class-A security using Over The Air Activation (OTAA)
Data output	CH4 concentration (ppm), timestamp
Situational data output	Device health metrics Low-battery level alert, high-temperature alert, high-humidity alert, inclination alert[3], high and critical methane level alert
Firmware updates	Supports Firmware Over The Air (FOTA) with LoRa, and via BLE

[3] Inclination alert capability may be lost under continued exposure to electromagnetic fields (IEC 61326-1, Table 2, 10 V/m).

2 Technical drawings

Nubo Sentry sensor node and mounting bracket (dimensions in millimeters)



3 Certifications

3.1 Explosion prevention and protection

IECEx	ATEX	$_{c}$MET$_{us}$
IEC 60079-0: 2017 IEC 60079-11: 2023 IEC 60079-28: 2015	EN IEC 60079-0: 2018 EN 60079-11: 2012 (based on IEC Ed. 6) EN 60079-28: 2015	CAN/CSA-C22.2 No. 60079-0:19 ANSI/ISA/UL 60079-0:2019 CAN/CSA-C22.2 No. 60079-11:2014 ANSI/ISA/UL 60079-11:2013 CAN/CSA-C22.2 No. 60079-28:2016 ANSI/ISA/UL 60079-28:2017
Ex ia op is IIB T4 Ga -40 to +65 °C	II 1G Ex ia op is IIB T4 Ga -40 to +65 °C	IS Cl.I Div.1 Gr.C,D T4, Cl.I ZN 0 AEx/Ex ia op is IIB T4 Ga -40 to +65 °C
IECEx SEV 25.0019.X	SEV 25 ATEX 0765 X	E116260

Specific conditions of use:
Avoid electrostatic charging of the plastic surfaces (enclosure): Do not rub surfaces with a dry cloth.

3.2 European conformity information

CE

Hereby, Sensirion Connected Solutions AG declares that this radio equipment is compliant with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at https://sensirion-connected.com/resource/eu-declaration-conformity-nubosentry.

3.3 FCC notice

Warning

- Changes or modifications not expressly approved by Sensirion Connected Solutions AG may void the user's authority to operate this equipment.
- To comply with FCC RF exposure guidelines, maintain a minimum distance of 20 cm (7.8 in) between the device and nearby persons during operation.

FC

Contains FCC ID: SQG-BL54L15
Contains FCC ID: VPYLB2GT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference does not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

3.4 IC regulatory statement / Déclaration réglementaire IC

Warning

- Changes or modifications not expressly approved by Sensirion Connected Solutions AG may void the user's authority to operate this equipment.
- Toute modification non expressément approuvée par Sensirion Connected Solutions AG peut invalider l'autorisation d'utilisation de cet équipement.
- This device must be installed and operated with a separation distance of at least 20 cm (7.8 in) from all persons and must not be co-located or operated in conjunction with any other antenna or transmitter.
- Cet appareil doit être installé en considérant une distance de séparation d'au moins 20 cm (7.8 in) de toute personne et ne doit pas être localisé ou utilisé en conflit avec toute autre antenne ou émetteur radio.

IC

Contains IC ID: 3147A-BL54L15
Contains IC ID: 772C-LB2GT

CAN ICES-3(B)/NMB-3(B)
This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de classe B est conforme à la norme canadienne NMB-003.

This device complies with ISED's licence-exempt RSSs. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

Cet appareil est conforme aux normes CNR d'ISDE Canada applicables aux appareils radio exempts de licence. Le fonctionnement est soumis aux deux conditions suivantes :

- L'appareil ne doit pas produire d'interférences, et
- L'appareil doit accepter tout brouillage radioélectrique subi, même si l'interférence est susceptible d'en compromettre le fonctionnement

4 Important legal notices

Warning: personal injury

Do not use this product as safety or emergency stop devices or in any other application where failure of the product could result in personal injury. Do not use this product for applications other than its intended and authorized use. Before installing, handling, using or servicing this product, please consult the manual and data sheet. Failure to comply with these instructions could result in death or serious injury. Please also consult local laws and regulations, in particular with regard to hazardous-area compliance and the radio frequencies used by this product.

If the buyer purchases or uses SENSIRION CONNECTED SOLUTIONS (SCS) products for any unintended or unauthorized application, the buyer shall defend, indemnify and hold harmless SCS and its officers, employees, subsidiaries, affiliates and distributors against all claims, costs, damages, expenses and reasonable attorney fees arising from, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if SCS is allegedly negligent with respect to the design or the manufacture of the product.

Ancillary services required

This product is part of the SCS continuous methane emission monitoring solution "Nubo Sentry" and unless otherwise agreed upon requires the "Environmental Monitoring as a Service" (EMaaS) subscription available from SCS for proper functioning. SCS reserves the right, without further notice, (i) to change the product specifications or the information in this document, (ii) to improve the reliability, functions and design of this product and (iii) to modify the cloud service and data analytics algorithms.

5 Revision history

Date	Revision	Page(s)	Changes
2025-11-17	1.0	All	Initial release
2026-01-09	1.1	6	Updated standards and markings
2026-01-20	1.2	6-8	Updated EMC information
2026-02-13	1.3	4	Updated LoRaWAN specification

6 Contact information

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