Safety Instructions: NOD-0002

“ic” Intrinsic safety

LORA VIBRO SENSOR NODE

AEInnova
Alternative
Energy Innovations

Contents

The following complementary documents are available in the Download Centre:

- *User Manual MUS-VS3*

Please scan the QR Code to access the Download Centre or click the link below: https://aeinnova.com/download-center	

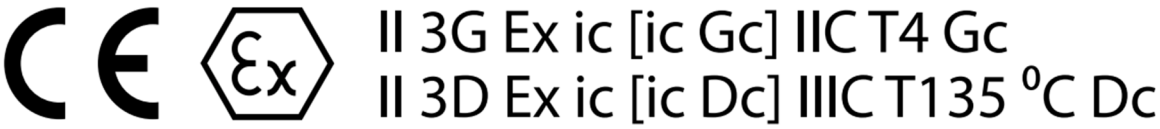
1 Safety information

- Carefully read and understand these instructions before installing or performing any maintenance on the module.
- Installation and maintenance of this module must be conducted exclusively by qualified and trained personnel, in strict accordance with applicable national regulations and relevant standards.
- This module is intended solely for use in **Zone 2 (gases)** and **Zone 22 (dusts)**. Installation in other ATEX zones is strictly prohibited.
- All technical specifications indicated on the ATEX marking label and in this manual must be strictly observed and complied with.
- Technical data provided on the enclosure labels must also be fully complied with.
- This equipment must only operate within its specified parameters. Do not use the device if it is damaged or malfunctioning. During installation, maintenance, and cleaning, compliance with all applicable explosion protection standards (e.g., **EN 60079-14**, **EN 60079-17**) and accident prevention regulations is mandatory.
- The equipment must not be stored or operated outside the temperature range specified in the Ex documentation.
- Prevent any accumulation of dust around the module.
- Clean the module only with a damp cloth and/or approved antistatic cleaning agents. Ensure the device is completely dry before reactivation.
- Do not paint or coat the enclosure in any way.
- Any modifications or design alterations to the equipment are strictly forbidden.
- **Warning labels** affixed to the equipment indicate potential hazards and must be always observed:

WARNING - DO NOT OPEN WHEN
EXPLOSIVE ATMOSPHERE IS PRESENT

2 Area of applicability

The equipment is designed for operation in the following ATEX zones: Zone 2 (gas atmosphere) and Zone 22 (dust atmosphere).



II 3G Ex ic [ic Gc] IIC T4 Gc = application in classified area of zone 2, without limitation by type of explosive substance whose auto-ignition temperature is higher than 135 °C.

II 3D Ex ic [ic Gc] IIIC T135 °C Dc = application in classified areas of zone 22, without limitation by type of explosive substance whose auto-ignition temperature is higher than 202.5 °C in the form of a cloud of dust, or 210 °C in the form of a layer of dust <5mm thick.

3 Installation

- Handle the components of this module with care. Read the installation instructions thoroughly before beginning the installation and follow them precisely during the installation process.
- Please contact the manufacturer or supplier in the following cases:
    - The installation instructions are unclear or if there is any uncertainty regarding the installation procedures or safety precautions.
    - If any component is found to be missing.
- The module must be installed strictly in accordance with the manufacturer's installation instructions and recommendations. **Do not use it for any purpose other than it is intended use**.
- **Alternative Energy Innovations S.L.** as the manufacturer, is not responsible for damages or consequences resulting from improper installation or installation in an unsuitable location or environment or use of the product outside its specified purpose.
- The installation of the module must be performed exclusively by qualified personnel.
- Installation shall comply with the **EN 60079-14** standard and/or applicable local/national regulations governing installations in hazardous areas.
- Installation must not be carried out until the installer has thoroughly read and understood all **warnings, cautions, and procedures** outlined in this manual.

	**Although the module is protected, none of its connectors should be left disconnected. They must either be connected or closed with protective caps.**

4 Electrical data

The following parameters applies to the LoRa Vibro Sensor Node with intrinsic safety type of protection (Ex i):

Input power parameters:

- U_i = 5,9 V
- I_i = 1,34 A
- L_i = 0 µH
- C_i = 0 µF

Output power parameters:

- U_o = 5,9 V
- I_o = 0,56 A
- P_o = 0,82 W
- L_o (IIB) = 225 µH
- C_o (IIB) = 470 µF
- L_o (IIC) = 56 µH
- C_o (IIC) = 5,90 µF

These values represent the maximum permitted parameters for safe connection to intrinsically safe circuits, in accordance with the ATEX directive and the relevant standards.

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