



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX TUN 22.0006X** Page 1 of 5 [Certificate history:](#)
Status: **Current** Issue No: 0
Date of Issue: 2023-10-04
Applicant: **NIVUS GmbH**
Im Täle 2
75031 Eppingen
Germany
Equipment: **Data logger NivuLink Micro II type NLG02xxxxExx**
Optional accessory:
Type of Protection: **Equipment protection by intrinsic safety "ib"; Equipment protection by increased safety "eb"; Equipment protection by encapsulation "mb"**
Marking: **Ex eb ib [ib] mb IIB T4 Gb**

Approved for issue on behalf of the IECEx
Certification Body:

Andreas Meyer

Position:

Deputy Head of the IECEx Certification Body

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

TÜV NORD CERT GmbH
Hanover Office
Am TÜV 1, 30519 Hannover
Germany





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Manufacturer: **NIVUS GmbH**
Im Täle 2
75031 Eppingen
Germany

Manufacturing
locations: **NIVUS GmbH**
Im Täle 2
75031 Eppingen
Germany

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

[IEC 60079-18:2017](#) Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[DE/TUN/ExTR22.0005/00](#)

Quality Assessment Report:

[DE/TUN/QAR13.0011/09](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Description:

The data logger NivuLink Micro II type NLG02xxxxExx is a stand-alone data logger with gateway function. It is suitable for the transmission of measurement data to a web portal or process control system.

The wireless data transmission is via an integrated 4G LTE GPRS modem with GPS functionality. Optionally, the possibility of a LoRa data transmission also exists.

Type code; Electrical and Thermal data: Refer to the Attachment to IECEX TUN 22.0006X issue No.0

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The data logger NivuLink Micro II type NLG02xxxxExx has to be installed and used in such a way that electrostatic charging from operation, maintenance, and cleaning is excluded.
2. If the data logger NivuLink Micro II type NLG02xxxLExx and the data logger NivuLink Micro II type NLG02xxxKExx are installed in hazardous area, they have to be protected from UV radiation.
3. The connecting and disconnecting of the "SIM card" is only permitted if no explosive atmosphere exists.

The connection to the "USB socket" is only permitted outside the potentially explosive atmosphere.

4. Change of the supply batteries is only permitted outside of the explosion hazardous area.
5. Only permissible cells according to the manufacturer's operating instructions are allowed to be used.
6. The data logger NivuLink Micro II type NLG02xxxLExx and the data logger NivuLink Micro II type NLG02xxxAExx have to be installed in such a way that a mechanical hazard can be excluded.
7. For reading out the measured values, an industrial USB Isolator (e.g. type FIT0860) with 1500 V isolation voltage is provided between the USB interface of the device (laptop/PC,..) connected to the data logger and the USB socket of the data logger.

The power supply of the connected device (laptop/PC,...) is to be connected to a power supply unit with SELV/PELV protective extra-low voltage.

A battery-powered laptop/PC is considered as SELV/PELV device.



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Equipment (continued):

Data logger NivuLink Micro II type NLG02xxxxExx



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Additional information:

Refer to the Attachment to IECEX TUN 22.0006X issue No.0

Annex:

[Attachment to IECEX TUN 22.0006X issue No.0 .pdf](#)

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Attachment to IECEx TUN 22.0006X issue No.: 0

General product information:

Description:

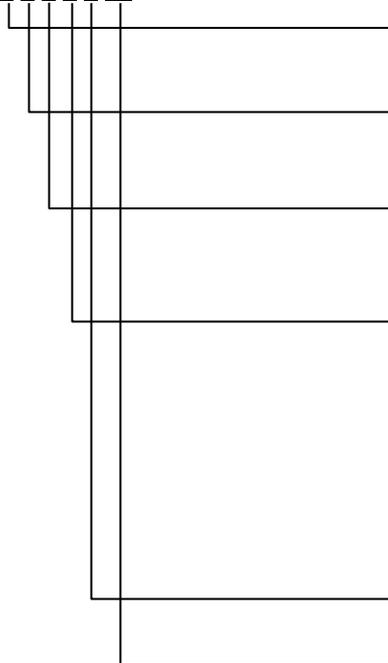
The data logger NivuLink Micro II type NLG02xxxxExx is a stand-alone data logger with gateway function. It is suitable for the transmission of measurement data to a web portal or process control system.

The wireless data transmission is via an integrated 4G LTE GPRS modem with GPS functionality.

Optionally, the possibility of a LoRa data transmission also exists.

Type code:

NLG02 x x x x x xx



Number of inputs:

1: 1 input

4: 4 inputs

Data transmission:

G: LTE

L: LoRa

Power supply:

B: Battery

O: without Battery

R: Battery pack

Enclosure:

S: Enclosure standard version Bopla plastic PC with plastic LED screw (Not for Ex-uses).

A: Data logger aluminium enclosure from Bopla (round seal) without LED screw made of stainless steel.

L: Data logger Aluminium enclosure from Bopla (round seal) with stainless steel LED screw.

K: Data logger POM-C plastic enclosure (round seal) with M5 hole at RGB LED position (filled with epoxy resin)

E: Ex version for use in Ex zone 1

0: No Ex device

Options:

hardware or software options

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Electrical data:

Power supply (Internal primary cells)	In type of protection increase safety Ex eb IIB $U_n = 10.8 \text{ V d.c.}$ Powered via 3 x 3.6 V / 13 Ah LSH20-batteries or 3 x 3.6 V / 14.5 Ah UHR-ER34615-X-batteries
Alternative external supply (Terminal X3)	In type of protection intrinsic safety Ex ib IIB Only for connection to certified intrinsically safe circuits. Maximum values: $U_i = 11.7 \text{ V}$ $I_i = 1.25 \text{ A}$ $P_i = 14.6 \text{ W}$ The effective internal capacitances and inductances are negligibly small.
Relay output (Terminals X1.1(NO); X1.10(NC); X.1.2(COM))	In type of protection intrinsic safety Ex ib IIB. Only for connection to certified intrinsically safe circuits. Maximum values: $U_i = 26 \text{ V}$ $I_i = 100 \text{ mA}$ $P_i = 2.6 \text{ W}$ The effective internal capacitances and inductances are negligibly small.
RS-485 Interface output (Terminals X1.3(RxTx+); X1.11(GND); X1.12(RxTx-))	In type of protection intrinsic safety Ex ib IIB with following maximum values: $U_o = 5.88 \text{ V}$ $I_o = 150.1 \text{ mA}$ $P_o = 221.9 \text{ mW}$ Characteristic line: Linear The effective internal capacitances and inductances are negligibly small.

The maximum permissible values for the external inductance L_o and the external capacitance C_o can be taken from the following table:

Ex ib IIB	L_o [mH]	14	5	0.5	0.1	0.002
	C_o [μ F]	7.3	12	23	39	1000

RS-485 Interface input (Terminals X1.3(RxTx+); X1.11(GND); X1.12(RxTx-))	In type of protection intrinsic safety Ex ib IIB. Only for connection to certified intrinsically safe circuits. Maximum values: $U_i = 7.21 \text{ V}$ $I_i = 176 \text{ mA}$ $P_i = 317.24 \text{ mW}$ The effective internal capacitances and inductances are negligibly small.
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Universal input

- 1: (X1.4(PWR CH1); X1.5(INP CH1); X1.6(GND))
- 2: (X1.7(PWR CH2); X1.8(INP CH2); X1.9(GND))
- 3: (X1.13(PWR CH3); X1.14(INP CH3); X1.15(GND))
- 4: (X1.16(PWR CH4); X1.17(INP CH4); X1.18(GND))

In type of protection intrinsic safety Ex ib IIB with following maximum values per universal input:

$U_o = 25.09 \text{ V}$
 $I_o = 90.9 \text{ mA}$
 $P_o = 570 \text{ mW}$
 Characteristic line: Linear
 The effective internal capacitances and inductances are negligibly small.

The maximum permissible values for the external inductance L_o and the external capacitance C_o can be taken from the following table:

Ex ib IIB	L_o [mH]	26	2	1	0.5	0.2
	C_o [μ F]	0.52	0.53	0.61	0.72	0.83

The USB interface circuit (X11), the antenna circuit BU1 with GPRS and LoRa module and the SIM-card slot circuit (X14) are in type of protection intrinsic safety Ex ib IIB.

For reading out the measured values, an Industrial USB Isolator e.g. type FIT0860 with 1500 V isolation voltage is provided between the USB interface of a laptop/PC and the USB socket of the data logger.

The maximum permissible connectable reactances for the SIM card:

Capacitance $C_o = 200 \mu\text{F}$
 Inductance $L_o =$ negligibly small.

The different intrinsically safe circuits and the power supply via internal primary cells are galvanically connected to each other.

Thermal data:

Permissible ambient temperature range during operation: $-20 \text{ }^\circ\text{C} \leq T_a \leq +50 \text{ }^\circ\text{C}$

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The power supply of the connected device (laptop/PC,...) is to be connected to a power supply unit with SELV/PELV protective extra-low voltage.
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