



Translation

(1) **EU-Type Examination Certificate**

(2) Equipment and protective systems intended for use in potentially explosive atmospheres, **Directive 2014/34/EU**

(3) **Certificate Number** TÜV 22 ATEX 314574 X **Issue:** 00

(4) for the product: Data logger NivuLink Micro II type NLG02xxxxExx

(5) of the manufacturer: **NIVUS GmbH**

(6) Address: Im Täle 2
75031 Eppingen
Germany

Order number: 8003041150

Date of issue: See date of signature

(7) The design of this product and any acceptable variation thereto are specified in the schedule to this EU-Type Examination Certificate and the documents therein referred to.

(8) The TÜV NORD CERT GmbH, Notified Body No. 0044, in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive. The examination and test results are recorded in the confidential ATEX Assessment Report No. 22 203 314574.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018/AC:2020-02

EN IEC 60079-7:2015/A1:2018

EN 60079-11:2012

EN 60079-18:2015/A1:2017

except in respect of those requirements listed at item 18 of the schedule.

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions for Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design, and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the product shall include the following:



II 2 G Ex eb ib [ib] mb IIB T4 Gb

TÜV NORD CERT GmbH, Am TÜV 1, 45307 Essen, notified by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The deputy head of the notified body

Hanover office, Am TÜV 1, 30519 Hannover, Tel. +49 511 998-61455, Fax +49 511 998-61590

(13) **SCHEDULE**

(14) **EU-Type Examination Certificate No. TÜV 22 ATEX 314574 X**

Issue 00

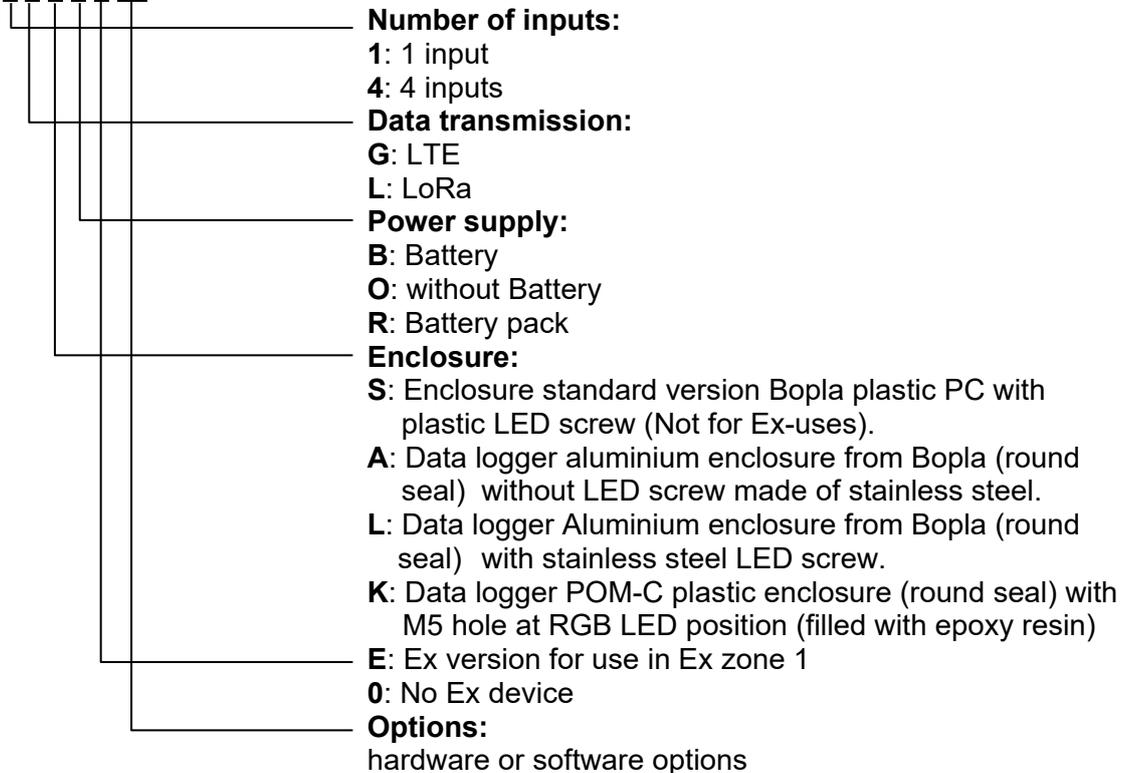
(15) **Description of product:**

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



Schedule to EU-Type Examination Certificate No. TÜV 22 ATEX 314574 X

Issue 00

Electrical data:

Power supply
(Internal primary cells)

In type of protection increased 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); X1.12(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 [µF] | 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.

Schedule to EU-Type Examination Certificate No. TÜV 22 ATEX 314574 X

Issue 00

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 [μF] | 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.

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: $-20 \text{ }^\circ\text{C} \leq T_a \leq +50 \text{ }^\circ\text{C}$

(16) Drawings and documents are listed in the ATEX Assessment Report No. 22 203 314574

(17) Specific Conditions for Use:

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 datalogger 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.

(18) Essential Health and Safety Requirements:

No additional ones.

- End of EU-Type Examination Certificate -