

Translation

**TÜV NORD**



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

(2) Equipment and protective systems intended for use in potentially explosive atmospheres, **Directive 94/9/EC**

(3) **Certificate Number** TÜV 08 ATEX 555027

(4) for the component: Bluetooth-Module type ZUB0BLUETEX01

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

(6) Address: Im Täle 2  
75031 Eppingen  
Germany

Order number: 8000555027

Date of issue: 2009-02-04

- (7) This component of an equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The TÜV NORD CERT GmbH, notified body No. 0044 in accordance with Article 9 of the Council Directive of the EC of March 23, 1994 (94/9/EC), certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive. The examination and test results are recorded in the confidential report No. 08 203 555027.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN 60079-0:2006**                      **EN 60079-11:2007**

(10) If the sign "U" is placed after the certificate number, it indicates that this certificate must not be confounded with an EC-Type Examination Certificate which is destined for an equipment or protective system. This partial certificate must only be used as a basis for an EC-Type Examination Certificate.

(11) This EC-type examination certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. 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 component must include the following:

 **II 2 G Ex ib IIB T4**

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, accredited 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 head of the certification body

Schwedt

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(13) **SCHEDULE**

(14) **EC-Type Examination Certificate No. TÜV 08 ATEX 555027**

(15) Description of component

The device is a Bluetooth-Module to transfer data inside an hazardous area.

Electrical data:

The specified external reactance  $L_o$  and  $C_o$  are valid for simultaneous occurrence. Permissible combinations of the external reactance  $L_o$  and  $C_o$  have to be taken from the tables of the individual, intrinsically safe circuits.

The following input and output circuits must only be connected to certified, intrinsically safe circuits.

Supply circuit..... in type of protection Intrinsic Safety Ex ib IIB  
 (pin 6, 7) with the following maximum values:  
 $U_i = 9.9 V$   
 $I_i = 200 mA$   
 $P_i = 1.2 W$   
 effective internal inductance: negligibly small  
 effective internal capacitance: negligibly small

Digital output..... in type of protection Intrinsic Safety Ex ib IIB  
 Bluetooth-Connection with the following maximum values:  
 (pin 1)  $U_o = 9.9 V$   
 $I_o = 10 mA$   
 characteristic line: linear

maximum external inductance $L_o$	10 mH	0.1 mH	10 $\mu H$
maximum external capacitance $C_o$	3.6 $\mu F$	11 $\mu F$	22 $\mu F$

RS232 interface ..... in type of protection Intrinsic Safety Ex ib IIB  
 (input, pin 4, 5) with the following maximum values:  
 $U_i = +/-10 V$   
 $I_i = +/-16.3 mA$   
 characteristic line: linear  
 effective internal inductance: negligibly small  
 effective internal capacitance: negligibly small

Schedule EC-Type Examination Certificate No. TÜV 08 ATEX 555027

RS232 interface..... in type of protection Intrinsic Safety Ex ib IIB  
 (output, pin 2, 3) with the following maximum values:  
 $U_o = +/-10 V$   
 $I_o = +/-16.3 mA$   
 characteristic line: linear

maximum external inductance $L_o$	1 mH	0.5 mH	0.1 mH
maximum external capacitance $C_o$	5.8 $\mu F$	6.9 $\mu F$	11 $\mu F$

(16) Test documents are listed in the test report No. 08 203 555027.

(17) Special conditions for safe use

none

(18) Essential Health and Safety Requirements

no additional ones