



[1] **EC-TYPE EXAMINATION CERTIFICATE**  
according to Directive 94/9/EC, Annex III (Translation)

[2] Equipment and Protective Systems intended for use  
in Potentially Explosive Atmospheres, Directive 94/9/EC

[3] EC-Type Examination Certificate Number: **IBExU04ATEX1208**

[4] Equipment: Transducer type NivuCont Plus and type HC Plus

[5] Manufacturer: NIVUS GmbH

[6] Address: Im Täle 2  
D-75031 Eppingen

[7] The design of this equipment and any acceptable variation thereto are specified in the schedule to this EC-Type Examination Certificate.

[8] IBExU Institut für Sicherheitstechnik GmbH, NOTIFIED BODY number 0637 in accordance with article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive. The test results are recorded in the test report IB-04-3-312 of 22 October 2004.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 50014:1997+A1+A2, EN 50020:2002, EN 50284:1999, E DIN IEC 61241-11:2001.

[10] If the sign „X“ is placed after the Certificate number, it indicates that the equipment is subject to special conditions for safe use specified under [17] in the schedule to this EC-Type Examination Certificate.

[11] This EC-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this directive apply to the manufacture and supply of this equipment.

[12] The marking of the equipment mentioned under [4] shall include the following

II (1) GD [EEx ia] IIC res. IIB

**IBExU** Institut für Sicherheitstechnik GmbH  
Fuchsmühlenweg 7 - D-09599 Freiberg  
Phone: +49 3731 3805-0 - Fax: +49 3731 23650

Authorised for certifications  
-Explosion protection-By order

(Dr. Lösch)



- Seal -  
(ID no. 0637)

Freiberg, 22 October 2004

Certificates without signature and seal are not valid. Certificates may only be duplicated completely and unchanged. In case of dispute, the German text shall prevail.

**Schedule**

[13] **Schedule**

[14] **to the EC-TYPE EXAMINATION CERTIFICATE IBExU04ATEX1208**

[15] **Description of equipment**

The Transducer mentioned under [4] is an associated apparatus and is to install outside of hazard areas. It serves to the galvanic isolated supply and the signal transmission for 2- respectively 3-line sensors for two channels in potentially explosive atmospheres, which requires Category 1 Apparatus. The electronics components are on a circuit board inside a 19"- respectively front board and wall form enclosure. The electrical connections are carried out on the backside with terminals. The equipment is fit out with LC-Display and foil keyboard.

Ambient temperature                      -20 °C up to +40 °C

**Electrical data**

Supply circuit:                                              Terminals no. 30[+24V], 31[0 V] and 32/17 [PE]  
 $U_N$       24 VDC                                              (res. 30z, 30d and 30b)  
Terminals no. 18[N] and 19[L1]                      (res. 32z and 32d)  
 $U_N$       230 VAC  
maximum r.s.m                                               $U_m$       250 VAC

Data current circuit:                                              Terminals no. 7 up to 29 (res. 10z/10d up to 32z/32d/32b)  
 $U_N$       24 VDC  
 $U_m$       250 VAC (Relays)

Sensor current circuits:                                              Terminals no.1/2/3 (res. 2z/2d/2b) and 4/5/6 (res. 4z/4d/4b)  
per channel                                              **type of protection EEx ia IIC/IIB**  
 $U_o$       27,3 V  
 $I_o$       93.4 mA  
 $P_o$       637 mW  
characteristic linear

Maximum values for lumped capacitance / inductance

|       | EEx ia IIC | EEx ia IIB |
|-------|------------|------------|
| $C_o$ | 80 nF      | 400 nF     |
| $L_o$ | 1 mH       | 5 mH       |

Further details are specified in the test documents which are part of the test report.

[16] **Test report**

The test results are recorded in the test report IB-04-3-312.

**Summary of the test results:**

The Transducer type NivuCont Plus and Type HC Plus fulfils the requirements of explosion protection for associated apparatus of Equipment group II and Category (1) GD in type of protection Intrinsic safety for explosive atmospheres of explosion group IIC res. IIB.

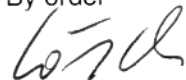
[17] **Special conditions for safe use**

none

[18] **Essential Health and Safety Requirements**

Confirmed by compliance of standards (see [9]).

By order



(Dr. Lösch)

Freiberg, 22 October 2004