

[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: **IBExU07ATEX1082**

[4] Equipment: Monobloc doppler type KDA-K* ** E * * * *
KDA-R* ** E * * * *

[5] Manufacturer: NIVUS GmbH

[6] Address: Im Täle 2
75031 Eppingen
GERMANY

[7] The design of this equipment mentioned under [4] 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 mentioned under [4] 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-07-3-145/2 of 3rd July 2007.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2004 and EN 60079-11:2007.

[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 2G Ex ib IIB T4

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Authorised for certifications
-Explosion protection-By order

By order

(Dr. Löscher)

Schedule



- Seal -
(ID no. 0637)

Freiberg, 4th July 2007

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.

[13]

Schedule

[14]

to the EC-TYPE EXAMINATION CERTIFICATE IBExU07ATEX1082

[15]

Description of equipment

The intrinsically monobloc doppler measures by ultrasound level and flow rate, especially inside gullies. The equipment consist of a plastic enclosure with a fitting panel. The electronic components are all side encapsulated embedded. The Connection with the associated transmitter is carry out with a fixed cable.

Technische Daten

Ambient temperature

up -20 °C to +40 °C

Operating frequency

750 kHz resp. 1 MHz

Power supply circuit

(wires: red: V+; blue GND
black: shield)

in type of protection Intrinsic Safety Ex ib IIB

U_i 10 V

I_i 880 mA

L_i negl.

C_i negl.

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-07-3-145/2.

Summary of the test results:

The monobloc doppler fulfils the requirements of explosion protection of Equipment group II and Category 2G in type of protection Intrinsic safety for explosive atmospheres of explosion group IIB.

[17]

Special conditions for safe use

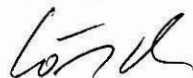
none

[18]

Essential Health and Safety Requirements

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

By order



(Dr. Lösch)

Freiberg, 4th July 2007

IBExU Institut für Sicherheitstechnik GmbH

An-Institut der TU Bergakademie Freiberg

- [1] **1st Addition to**
EC-TYPE EXAMINATION CERTIFICATE IBExU07ATEX1082
according to Directive 94/9/EC, Annex III

- Translation -



- [2] Equipment: a) Monobloc doppler
according to IBExU07ATEX1082:
Type KDA-K***E****
KDA-R***E****

b) supplemented type:
Type KDO-K***E****
KDO-R***E****

- [3] Manufacturer: NIVUS GmbH

- [4] Address: Im Täle 2
75031 Eppingen
Germany

[5] **Addition / Alteration**

The Monobloc doppler mentioned in [2] b) can be produced with a changed part number according to the submitted documents. The electrical parameters remain unchanged.

[6] **Test Report**

The proof of the explosion protection of the equipment mentioned in [2] b) is explained in the Test Report IB-10-3-241 of 9 August 2010. The test documents are part of the test report.

[7] **Test result**

IBExU certifies that the equipment mentioned in [2] b) fulfils the in Annex II of the Directive 94/9/EC fixed Essential Health and Safety Requirements by accordance with EN 60079-0:2006 and EN 60079-11:2007.

The Monobloc doppler type KDO-K***E**** and KDO-R***E**** fulfils the requirements of the explosion protection for equipment of the Equipment Group II, Category 2G in type of protection Intrinsic safety for explosive atmospheres of the Explosion Group IIB.

The marking of the equipment mentioned in [2] b) shall include the following:

II 2G Ex ib IIB T4

This addition is only valid in combination with the EC-Type Examination Certificate IBExU07ATEX1082 of 4th July 2007.

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(Dr. Wagner)



(Identification No. 0637)

Freiberg, 9 August 2010

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- [1] **2nd Addition to**
EC-TYPE EXAMINATION CERTIFICATE IBExU07ATEX1082
according to Directive 94/9/EC, Annex III
- Translation -



- [2] Equipment: **Monobloc Doppler**
Type KDA-K***E****
KDA-R***E****
KDO-K***E****
KDO-R***E****

- [3] Manufacturer: NIVUS GmbH

- [4] Address: Im Täle 2
75031 Eppingen
Germany

[5] **Addition / Alteration**

The Monobloc doppler mentioned in [2] can be produced according to the submitted documents. The equipment mentioned under [2] fulfils the requirements of the current standards under [7]. The max. input voltage is increased up to $U_i \leq 10.5 \text{ V}$. All other electrical parameters remain unchanged.

[6] **Test Report**

The proof of the explosion protection of the equipment mentioned in [2] is explained in the test report IB-12-3-271 of 20 August 2013. The test documents are part of the test report.

[7] **Test result**

IBExU certifies that the equipment mentioned in [2] fulfils the Essential Health and Safety Requirements given in Annex II of the Directive 94/9/EC by compliance with EN 60079-0:2012 and EN 60079-11:2012.

The Monobloc doppler fulfils the requirements of the explosion protection for equipment of the Equipment Group II, Category 2G in type of protection intrinsic safety for explosive atmospheres of the Explosion Group IIB.

The marking of the equipment mentioned in [2] shall include the following:

II 2G Ex ib IIB T4 Gb

This addition is only valid in combination with the EC-Type Examination Certificate IBExU07ATEX1082 of 4th July 2007 and 1st Addition of 9th August 2010.

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- Explosion protection -

By order

(Dipl.-Ing. Willamowski)



Freiberg, 20 August 2013

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