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 BVS 15.0012X**	Page 1 of 5	Certificate history: Issue 0 (2015-02-23)
Status:	**Current**	Issue No: 1	
Date of Issue:	2020-08-05		
Applicant:	**UWT GmbH** Westendstraße 5 87488 Betzigau **Germany**		
Equipment:	**Level limit switch type RFnivo**		
Optional accessory:			
Type of Protection:	**Flameproof enclosures "d", Intrinsic safety "i", Dust ignition protection by enclosure "t", Increased safety "e"**		
Marking:	See "Equipment"-Section		

Approved for issue on behalf of the IECEx Certification Body: **Dr Franz Eickhoff**

Position: **Lead Auditor and officially recognised expert**

Signature: (for printed version)

Date: 2020-08-05

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:

DEKRA Testing and Certification GmbH
Certification Body
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
On the safe side.

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Certificate No.: **IECEx BVS 15.0012X**

Date of issue: 2020-08-05

Issue No: 1

Manufacturer: **UWT GmbH**
Westendstraße 5
87488 Betzigau
Germany

Additional manufacturing locations:

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 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

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/BVS/ExTR15.0010/01

Quality Assessment Report:

DE/BVS/QAR11.0007/06

IECEx Certificate of Conformity

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Description

The level limit switch RFnivo RF 3*00* is used for level monitoring in all types of containers and silos. It can be used with all powdery and granulated bulk materials, slurry and liquids.

An electric field is created between the probe and container wall to for monitoring the level. An increase of the dielectric constant due to the presence of material changes the electric field. This change is detected by the electronics and converted into an electrical output signal.

The unit consists of the probe extension (optional mounted to a pipe or extended by rod or rope), a process connection and a housing. The electronics is located inside the housing. The enclosure can be fixed directly (normal version) or by cable (max. cable length 25 m, remote version) to the process connection.

The general design of the devices can vary in:
- the type of enclosure
- the cable inlets
- the electronics
- the form of the extension
- the form of the process connection (for example different threaded bushes and flanges)
- the materials for the extension, process connection and housing
- different options

The enclosure can be in type of protection flameproof enclosure "d" or "de" (dependent on the variant) for use in zone 1 – areas or protected by enclosure "t" for use in zone 21 – areas.
The probe extension itself is always situated in zone 1 or zone 20.
Depending on the bushing the equipment is suitable for use in gas group IIB or IIC.

Parameters

See Annex

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. For remote version: Along the intrinsically safe circuit between electronics enclosure and probe equipotential equalization must exist.
2. The apparatus shall be installed in a way that danger caused by electrostatic charges is avoided.

IECEx Certificate of Conformity

Equipment (continued):

Compact version
enclosure 2, 3 and 4
Ex ia/tb IIIC T* Da/Db *see thermal data

enclosure d
Ex db ia IIC T* Gb or Ex db ia IIB T* Gb
Ex ia/tb IIIC T* Da/Db *see thermal data

enclosure de
Ex db eb ia IIC T* Gb or Ex db eb ia IIB T* Gb
Ex ia/tb IIIC T* Da/Db *see thermal data

Remote version
enclosure 2, 3 and 4
electronics enclosure
Ex tb [ia] IIIC T* Db * see thermal data

junction box + probe
Ex ia/tb IIIC T* Da/Db * see thermal data

enclosure d
electronics enclosure
Ex db [ia] IIC T* Gb or Ex db [ia IIC] IIB T* Gb
Ex tb [ia] IIIC T* Db * see thermal data

Junction box + probe
Ex ia IIC T* Gb
Ex ia/tb IIIC T* Da/Db * see thermal data

Enclosure de
Electronics enclosure
Ex db eb [ia] IIC T* Gb or Ex db eb [ia IIC] IIB T* Gb
Ex tb [ia] IIIC T* Db * see thermal data

Junction box + probe
Ex ia IIC T* Gb
Ex ia/tb IIIC T* Da/Db * see thermal data

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- Updating to the current standards
- A further enclosure variant is added (housing 2)
- Revision of list of sealing materials

Annex:

BVS_15_0012X_UWT_issue1.pdf

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 15.0012 X** **Issue No: 1**

Annex

Parameters

Electrical data:

Nominal voltage or			AC 21 up to 230 V+/-10%*, 50-60 Hz, max. 1.5 VA DC 21 up to 230 V +/-10%*, max. 1.5 W * incl. +/-10% of EN 61010	
Max. voltage	U_m	AC	265	V
Signal output			AC max. 250 V, 5 A non-inductive DC max. 30 V, 5 A non-inductive	
Max. voltage	U_m	AC	265	V

Sensor circuit (Internally, type of protection Ex ia IIC, max. cable length for remote version 25m)

Voltage	U_o	2.5	V
Current	I_o	183	mA
Power	P_o	129	mW

Thermal data:

Compact version

T_{amb}	max. $T_{Process}$	max. surface temperature $T_{surface}$ (EPL Db)	max. surface temperature T_{200} (EPL Da)	Temperature-class (EPL Gb)
-20 °C...+70 °C (1) -40 °C...+70 °C (2) -40 °C...+60 °C (3)	80 °C	120 °C	120 °C	T4
	120 °C	120 °C	120 °C	T4
	250 °C	250 °C	250 °C	T2
	445 °C (4)	445 °C (4)	445 °C (4)	T1 (4)

(1) For versions with plastic enclosure (housing 4)
(2) For versions with metallic enclosure (housing 2 or 3)
(3) For versions with metallic enclosure (housing d or de)
(4) only with RFnivo RF 3300*

The max. surface temperature at the electronics enclosure is limited to 120 °C by a thermo fuse.

Remote Version

Electronics enclosure

T_{amb}	max. surface temperature $T_{surface}$ (EPL Db)	Temperature-class (EPL Gb)
-20 °C...+70 °C (1) -40 °C...+70 °C (2) -40 °C...+60 °C (3)	120 °C	T4

(1) For versions with plastic enclosure (housing 4)
(2) For versions with metallic enclosure (housing 2 or 3)
(3) For versions with metallic enclosure (housing d or de)

The max. surface temperature at the electronics enclosure is limited to 120 °C by a thermo fuse.

IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 15.0012 X** **Issue No: 1**

Annex

Junction box + probe

T_{amb}	max. $T_{Process}$	max. surface temperature $T_{surface}$ (EPL Db)	max. surface temperature T_{200} (EPL Da)	Temperature-class (EPL Gb)
-20 °C...+70 °C (1) -40 °C...+70 °C (2)	80 °C	80 °C	80 °C	T6
	120 °C	120 °C	120 °C	T4
	250 °C	250 °C	250 °C	T2
	445 °C (4)	445 °C (4)	445 °C (4)	T1 (4)

(1) For versions with plastic enclosure (junction box 4)

(2) For versions with metallic enclosure (junction box 3)

(4) only with RFnivo RF 3300*

Degree of protection for the enclosure IP64