



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx BVS 11.0071 Issue No: 1 Certificate history:  
Status: **Current** Page 1 of 5 Issue No. 1 (2017-04-07)  
Date of Issue: **2017-04-07** Issue No. 0 (2011-10-12)  
Applicant: **UWT GmbH**  
Westendstraße 5  
87488 Betzigau  
**Germany**  
Equipment: **Level limit switch type VIBRANIVO VN 40\*0**  
*Optional accessory:*  
Type of Protection: **Equipment dust ignition protection by enclosure "t"**  
Marking: Ex ta/tb IIIC T\* Da/Db  
\*see thermal data

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

Jörg Koch

*Position:*

Head of Certification Body

*Signature:  
(for printed version)*

*Date:*

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 the [Official IECEx Website](#).

Certificate issued by:

**DEKRA EXAM GmbH**  
Dinnendahlstrasse 9  
44809 Bochum  
Germany





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

Additional Manufacturing location(s):

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 electrical apparatus 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 : 2011** Explosive atmospheres - Part 0: General requirements  
Edition:6.0

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

*This Certificate **does not** indicate compliance with electrical 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/ExTR11.0100/01](#)

Quality Assessment Report:

[DE/BVS/QAR11.0007/03](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

#### Subject and type

Level limit switch type VIBRANIVO

VN 4020 Short extension length

VN 4030 Pipe extension

VN 4040 Pipe extension (screwed)

**SPECIFIC CONDITIONS OF USE: NO**



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## **EQUIPMENT (continued):**

### Description

The level limit switch VIBRANIVO VN 40\*0 is a modular concept of level limit switches. It is designed for monitoring the levels in any kind of containers, bins, silos, funnels and pipes.

The level limit switch is able to detect many kinds of bulk materials which are grainy, powdery or muddy. Some types can also detect bulk material inside liquids.

The two vibrating rods are actuated to mechanical oscillation by an actuating piezo-crystal. Another piezo-crystal converts the mechanical oscillations into an electrical signal, which is electronically amplified and applied to the actuating piezo-crystal.

If the vibrating rods are not covered by the filling material, they can vibrate freely. If the filling material covers the vibrating rods, they become damped in their oscillation. The oscillation is electronically analysed and converted into an electrical output signal.

In general a whole unit consists of three subassemblies: an extension including two vibration rods, a process connection to connect it to the bin and a housing which includes the electronic. The housing can be separated from the process connection.

In general the design of the units can vary in:

- the type of housing
- the cable inlets
- the electronics
- the form of the extension
- the form of the process connection (e.g. different threaded bushes and flanges)
- the length of the vibration rods
- the materials for the process connection and the extension

### Ratings

See Annex



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**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):**

- New type VN 4040
- The updating of the applicable Standards.

**Annex:**

[BVS\\_11\\_0071\\_UWT\\_Annex\\_Issue1.pdf](#)



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**Annex**  
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## Ratings

### Electrical data

Supply	Universal voltage Relay (DPDT)	19 .. 230 V +10 %* 50 .. 60 Hz 18 VA or 19 .. 50 V +10 %* DC 2 W
or	3 wire PNP	18 .. 50 V +10 %* DC 0.6 W * including 10 % of IEC 61010.
	Signal output Relay (DPDT)	max. 250 V AC, 8 A, non inductive max. 30 V DC, 5 A, non inductive
	3 wire PNP	transistor, max. 0.4 A

### Thermal data

Permitted ambient temperature at the electronics enclosure (zone 21)	Permitted process temperature	Max. surface temperature
-40 °C....+60 °C	-40 °C...+110 °C	115 °C
	-40 °C...+120 °C	120 °C
	-40 °C...+130 °C	130 °C
	-40 °C...+140 °C	140 °C
	-40 °C...+150 °C	150 °C

Max. surface temperature of the electronic enclosure with thermo fuse limited to 117 °C.  
Temperature at change over between extension and housing max. +80 °C.