



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 12.0060X** Page 1 of 4 Certificate history:
Status: **Current** Issue No: 2 Issue 1 (2016-03-24)
Date of Issue: 2023-03-13 Issue 0 (2012-09-06)
Applicant: **UWT GmbH**
Westendstrasse 5
87488 Betzigau
Germany
Equipment: **Capacitive Level limit switch CAPANIVO type CN40*0**
Optional accessory:
Type of Protection: **Intrinsic Safety "i", Separation Elements or combined Levels of Protection, Protection by Enclosure "t"**
Marking: CN 4020, CN 4030
Ex ta/tb IIIC TC Da/Db**
CN 4050
Ex ia/tb IIIC TC Da/Db**
* see thermal data

Approved for issue on behalf of the IECEx
Certification Body:

Dr Franz Eickhoff

Position:

**Senior Lead Auditor, Certification Manager and officially
recognised expert**

Signature:
(for printed version)


2023-03-13

Date:
(for printed version)

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Certificate issued by:

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





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Manufacturer: **UWT GmbH**
Westendstrasse 5
87488 Betzigau
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Manufacturing
locations: **UWT GmbH**
Westendstrasse 5
87488 Betzigau
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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 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

[IEC 60079-26:2021-02](#) Explosive atmospheres - Part 26: Equipment with Separation Elements or combined Levels of Protection
Edition:4.0

[IEC 60079-31:2022-01](#) Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
Edition:3.0

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/ExTR12.0059/02](#)

Quality Assessment Report:

[DE/BVS/QAR11.0007/09](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The level limit switch CAPANIVO CN 40*0 is a modular concept. It is designed for monitoring the levels in any kind of containers, bins, silos, hoppers and pipes.

It consists of a probe with electrodes (optional mounted to a pipe or a rope extension) situated in zone 20, a process connection to connect it to the bin and a housing situated in zone 21.

The electronics is located inside the housing, on some versions part of the electronics is located inside the probe.

The level limit switch is able to detect many kinds of bulk materials which are grained, powdery or muddy.

An electric field is created by electrodes along the probe. An increase of the dielectric constant due to the presence of bulk material changes the field. This change is detected by the electronics and converted into an electrical output signal.

Regarding the cable version the circuits within the cable are in type of protection Intrinsic Safety.

The general design can vary in:

- the type of housing
- 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 process connection and the extension
- different options

There are no components used referring to older standards.

Ratings

See Annex

SPECIFIC CONDITIONS OF USE: YES as shown below:

The apparatus shall be installed in a way that danger caused by electrostatic charges is avoided.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- Updating to the current standards
- IEC 60079-26 is added
- An "X" marking is added due to avoid danger caused by electrostatic charges.
- Implementation of an additional aluminium housing
- Additional colours for the plastic enclosure
- Editorial work

Annex:

[BVS_12_0060X_UWT_Annex_issue2.pdf](#)



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Rating:

Electrical data

Supply

	relay SPDT	21 .. 27 V +/-10 %* DC 1.5 W
or	relay DPDT	21 .. 230 V +/-10 %* 50-60 Hz 18 VA or 21 .. 45 V +/-10 %* DC 2 W
or	3-wire PNP	20 .. 40 V +/-10 %* DC 0.5 A

* including 10 % from EN 61010.

Signal- and alarm output

	relay SPDT	max. 250 V AC, 3 A, not inductive max. 30 V DC, 5 A, not inductive
or	relay DPDT	max. 250 V AC, 8 A, not inductive max. 30 V DC, 5 A, not inductive
or	3-wire PNP	transistor, max. 0.4 A

Thermal data

CN 4020 Version 120 °C

enclosure	T _{Amb} (EPL Db)	T _{Process} (EPL Da)	max. surface temperature (EPL Da) ¹⁾	max. surface temperature (EPL Db) ²⁾
Plastics	- 20 °C...+50 °C	- 30 °C...+120 °C	T ₂₀₀ 120 °C	T120 °C
Plastics	- 20 °C...+60 °C	- 30 °C...+100 °C	T ₂₀₀ 120 °C	T120 °C
Metal	- 30 °C...+60 °C	- 30 °C...+120 °C	T ₂₀₀ 120 °C	T120 °C

1) Max. surface temperature at the probe (no self-heating probe) limited by the process temperature

2) Max. surface temperature at the electronics enclosure limited to 120 °C by thermal fuse



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CN 4020 Version 180 °C

enclosure	T _{Amb} (EPL Db)	T _{Process} (EPL Da)	max. surface temperature (EPL Da) ¹⁾	max. surface temperature (EPL Db) ²⁾
Plastics	- 20 °C...+60 °C	- 30 °C...+120 °C	T ₂₀₀ 120 °C	T120 °C
Plastics	- 20 °C...+60 °C	- 30 °C...+130 °C	T ₂₀₀ 130 °C	T130 °C
Plastics	- 20 °C...+60 °C	- 30 °C...+140 °C	T ₂₀₀ 140 °C	T140 °C
Plastics	- 20 °C...+60 °C	- 30 °C...+150 °C	T ₂₀₀ 150 °C	T150 °C
Plastics	- 20 °C...+60 °C	- 30 °C...+160 °C	T ₂₀₀ 160 °C	T160 °C
Plastics	- 20 °C...+60 °C	- 30 °C...+170 °C	T ₂₀₀ 170 °C	T170 °C
Plastics	- 20 °C...+60 °C	- 30 °C...+180 °C	T ₂₀₀ 180 °C	T180 °C
Metal	- 30 °C...+60 °C	- 30 °C...+120 °C	T ₂₀₀ 120 °C	T120 °C
Metal	- 30 °C...+60 °C	- 30 °C...+130 °C	T ₂₀₀ 130 °C	T130 °C
Metal	- 30 °C...+60 °C	- 30 °C...+140 °C	T ₂₀₀ 140 °C	T140 °C
Metal	- 30 °C...+60 °C	- 30 °C...+150 °C	T ₂₀₀ 150 °C	T150 °C
Metal	- 30 °C...+60 °C	- 30 °C...+160 °C	T ₂₀₀ 160 °C	T160 °C
Metal	- 30 °C...+60 °C	- 30 °C...+170 °C	T ₂₀₀ 170 °C	T170 °C
Metal	- 30 °C...+60 °C	- 30 °C...+180 °C	T ₂₀₀ 180 °C	T180 °C

1) Max. surface temperature at the probe (no self-heating probe) limited by the process temperature

2) Max. surface temperature at the electronics enclosure limited to 120 °C by thermal fuse but the marking corresponds to the process temperature due to the fact that the process connection (EPL Db) is close to the process.

CN 4030

enclosure	T _{Amb} (EPL Db)	T _{Process} (EPL Da)	max. surface temperature (EPL Da) ¹⁾	max. surface temperature (EPL Db) ²⁾
Plastics	- 20 °C...+50 °C	- 30 °C...+110 °C	T ₂₀₀ 120 °C	T120 °C
Plastics	- 20 °C...+60 °C	- 30 °C...+ 70 °C	T ₂₀₀ 120 °C	T120 °C
Metal	- 30 °C...+60 °C	- 30 °C...+110 °C	T ₂₀₀ 120 °C	T120 °C

1) Max. surface temperature at the probe limited to 120 °C by thermal fuse

2) Max. surface temperature at the electronics enclosure limited to 120 °C by thermal fuse

CN 4050

enclosure	T _{Amb} (EPL Db)	T _{Process} (EPL Da)	max. surface temperature (EPL Da) ¹⁾	max. surface temperature (EPL Db) ²⁾
Plastics	- 20 °C...+50 °C	- 30 °C...+80 °C	T ₂₀₀ 135 °C	T120 °C
Plastics	- 20 °C...+60 °C	- 30 °C...+60 °C	T ₂₀₀ 135 °C	T120 °C
Metal	- 30 °C...+60 °C	- 30 °C...+80 °C	T ₂₀₀ 135 °C	T120 °C

1) Max. surface temperature at the probe limited to 135 °C by Intrinsic Safety

2) Max. surface temperature at the electronics enclosure limited to 120 °C by thermal fuse

Degree of protection according to IEC 60529

IP6X