[1]

UNITED KINGDOM CONFORMITY ASSESSMENT

UK-TYPE EXAMINATION CERTIFICATE

[2]

Product or Protective System Intended for use in Potentially Explosive Atmospheres
UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1

[3] UK-Type Examination Certificate No.: **UL22UKEX2237X Rev. 0**

[4] Product: **Microwave sensors type series**
NIVOGUIDE 8100
NIVOGUIDE 3100
NIVOGUIDE 8200

[5] Manufacturer: **UWT GmbH**

[6] Address: **Westendstraße 5, 87488 Betzigau, Germany**

[7] This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[8] UL International (UK) Ltd, Approved Body number 0843, in accordance with Regulation 44 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended by UKSI 2019:696), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.
The examination and test results are recorded in the confidential report **UKRCC-BL- 4790222522.10.1**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 EN 60079-11:2012 EN 60079-26:2015

Except in respect of those requirements listed at section 19 of the schedule to this certificate.

[10] If the sign “X” is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the Schedule to this certificate.

[11] This UK-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12] The marking of the product shall include the following:

Ex II 1G Ex ia IIC T6 ... T1 Ga

Ex II 1/2 G Ex ia IIC T6 ... T1 Ga/Gb

Ex II 2 G Ex ia IIC T6 ... T1 Gb

Certification Officer
Andrew Moffat

This is to certify that the sample(s) of the Product described herein (“Certified Product”) has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the UKEx Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Regulations. The test results may not be used, in whole or in part, in any other document without UL’s prior written approval.

Date of issue: 2022-10-11

Approved Body UL International (UK) Ltd Unit 1-3 Horizon Kingsland Business Park Wade Road, Basingstoke RG24 8AH, UK
Phone : +44 (0)1256 312100

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Schedule
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[15] Description of Product

The level measuring instrument type series NIVOGUIDE as microwave sensors are used for evaluation of the distance between a product surface and the sensor via high-frequency microwave pulses. The microwave sensors emit high-frequency microwave pulses, which are carried along a measuring rod resp. a measuring cable. The electronics evaluate the delay time of the signals reflected by the product surface to calculate the distance to this surface.

Type code

NIVOGUIDE 8100: NG8100A**Q/Y***A/B**1*** *****A/D/N
NIVOGUIDE 3100: NG3100A**S***A/B**1*** *****A/D/N
NIVOGUIDE 8200: NG8200B**Q/Y***A/B**1**0 *****A/D/N

Electrical data

NIVOGUIDE 8100, NIVOGUIDE 3100, NIVOGUIDE 8200, single chamber housing, Ex i electronics and connection compartment

Supply and signal circuit (Terminals 1 [+], 2[-])	in type of protection, Intrinsic Safety "Ex ia IIC" Only for connection to a certified intrinsically safe circuit Maximum values: U_i = 30 V I_i = 131 mA P_i = 983 mW The effective internal capacitance is negligibly small. Effective internal inductance: 5 µH

NIVOGUIDE 8100, NIVOGUIDE 3100, NIVOGUIDE 8200, double chamber housing, Ex i connection compartment

Supply and signal circuit (Terminals 1 [+], 2[-])	in type of protection, Intrinsic Safety "Ex ia IIC" Only for connection to a certified intrinsically safe circuit Maximum values: U_i = 30 V I_i = 131 mA P_i = 983 mW The effective internal capacitance is negligibly small. Effective internal inductance: 10 µH

NIVOGUIDE 8100, NIVOGUIDE 3100, NIVOGUIDE 8200, single and double chamber housing, Ex i electronics and connection compartment

Display and adjustment circuit module resp. the interface adaptor (Spring contacts)	in type of protection, Intrinsic Safety "Ex ia IIC" Only for connection to the NivoGuide display and adjustment module.

The intrinsically circuits are safe galvanically separated from the parts which can be earthed.

Thermal data

If the microwave sensors are used in explosion hazardous areas for EPL Ga; EPL Ga/Gb and EPL Gb applications, the permissible temperature range in the area of the electronics/at the measuring sensor dependent on the temperature class has to be taken from the following table:

Temperature Class	Ambient temperature range (Electronics/housing)	Medium temperature range at measuring sensor
T6	-40 °C ... +46 °C	-40°C ... + 80 °C
T5	-40 °C ... +61 °C	-40°C ... + 95 °C
T4	-40 °C ... +70 °C	-40°C ... +130 °C
T3	-40 °C ... +70 °C	-40°C ... +195 °C
T2	-40 °C ... +70 °C	-40°C ... +290 °C
T1	-40 °C ... +70 °C	-40°C ... +440 °C

Low-temperature execution down to -196 °C

If the microwave sensors are used in explosion hazardous areas for EPL Gb applications, the permissible temperature range in the area of the electronics/at the measuring sensor dependent on the temperature class has to be taken from the following table:

Temperature Class	Ambient temperature range (Electronics/housing)	Medium temperature range at measuring sensor
T6	-40 °C ... +46 °C	-196°C ... + 80 °C
T5	-40 °C ... +61 °C	-196°C ... + 95 °C
T4	-40 °C ... +70 °C	-196°C ... +130 °C
T3	-40 °C ... +70 °C	-196°C ... +195 °C
T2	-40 °C ... +70 °C	-196°C ... +290 °C
T1	-40 °C ... +70 °C	-196°C ... +440 °C

[13] [14]

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The measuring sensors are allowed to be operated only if atmospheric conditions exist (pressure from 0.8 bar to 1.1 bar).
If no explosion hazardous atmospheres exist, the permissible operating temperatures and pressures have to be taken from the manufacturer's data (manual).
If the measuring sensors are operated at higher medium temperatures as listed in the a.m. table, measures have to be taken, that the danger of ignition caused by hot surfaces is excluded.
The max. permissible temperature at the electronics/housing must not exceed the values as mentioned in the a.m. table.

Routine tests
None

[16] Test Report No. (associated with this certificate issue)
The test report no. is provided under item no. [8] on page 1 of this UK-Type Examination Certificate.

[17] Specific conditions of use:

1. At the plastic parts of the microwave sensors type series NIVOGUIDE 8100, NIVOGUIDE 3100 and NIVOGUIDE 8200 there is a danger of ignition by electrostatic discharge.
   Observe manual of the manufacturer and warning label.

2. For EPL Ga resp. EPL Ga/Gb applications, at the metallic parts of the microwave sensors type series NIVOGUIDE 8100, NIVOGUIDE 3100 and NIVOGUIDE 8200 made of light metal there is a danger of ignition by impact or friction.
   Observe manual of the manufacturer.

3. For EPL Ga resp. EPL Ga/Gb applications and at risks by pendulum or vibration the respective parts of the microwave sensors type series NIVOGUIDE 8100, NIVOGUIDE 3100 and NIVOGUIDE 8200 have to be secured effectively against these dangers.
   Observe manual of the manufacturer.

4. For EPL Ga/Gb applications the medium tangent materials of the microwave sensors type series NIVOGUIDE 8100, NIVOGUIDE 3100 and NIVOGUIDE 8200 have to be resistant to the media.
   Observe manual of the manufacturer.

5. The ambient temperature range depending on temperature class is to be taken from the operating instructions.

[18] Conditions of certification:
Where ATEX certified Ex Components or Ex Equipment are used, it is the responsibility of the manufacturer to ensure that only Ex Components or Ex Equipment having equivalent UKEx certification are used after the permission to accept such ATEX certified Ex Component or Ex Equipment is withdrawn.

[19] Essential Health and Safety Requirements (Regulations Schedule 1)
In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the relevant reports.

Additional information

The trademark UWT LEVEL CONTROL may be used as the company identifier on the marking label.

The manufacturer shall inform the approved body concerning all modifications to the technical documentation as described in Annex III to UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1.

[20] Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
Specification Type Plate UKEX NivoGuide 8100, NivoGuide 8200, NivoGuide 3100	6-79997	02	2022-09-16
NivoGuide 8100, 3100, 8200 Intrinsic safety "i" Safety Instructions	1009122	-	2022-02-17