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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.: **UL22UKEX2242X 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- 4790222522.15.1**.

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





EN IEC 60079-0:2018 EN 60079-31:2014

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:

 **II 1 D Ex ta IIIC T* Da or**
 **II 1/2 D Ex ta/tb IIIC T* Da/Db or**
 **II 1/3 D Ex ta/tc IIIC T* Da/Dc or**
 **II 2 D Ex tb IIIC T* Db**

T*: see thermal data

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: 2022-10-21

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

UK-TYPE EXAMINATION CERTIFICATE No.

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[15]

Description of Product

The guided radar sensors type NG8100AW/Y*A/B**1*** *****/A/D resp. type NG3100AW/T*A/B**1*** *****/A/D resp. type NG8200BW/Y**1**0 *****/A/D 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: NG8100AW/Y*A/B**1*** *****/A/D
 NivoGuide 3100: NG3100AW/T*A/B**1*** *****/A/D
 NivoGuide 3200: NG8200BW/Y*A/B**1**0 *****/A/D

Electrical data

It must be observed, that when installed as EPL Da devices, the maximum power at the sensor must be limited to the $P_{max} \leq 2 \text{ W}$.

NivoGuide 8100, NivoGuide 3100, NivoGuide 8200, single chamber housing

Supply and signal circuit
 (Terminals 1 [+], 2[-])

U = 9.6...35 V DC
 U_m = 253 V AC/DC
 I ≤ 3.5... 22.5 mA (with superimposed HART signal)

NivoGuide 8100, NivoGuide 3100, NivoGuide 8200, double chamber housing

Supply and signal circuit
 (Terminals 1 [+], 2[-])

U = 9.6...35 V DC
 U_m = 253 V AC/DC
 I ≤ 3.5... 22.5 mA (with superimposed HART signal)

Display and adjustment circuit:
 (Spring-contacts in the connection compartment)

Only for connection to the NivoGuide display and adjustment module or for service purposes the interface adapter, if it is ensured that no explosive atmosphere is present.

The circuits of NivoGuide 8100 resp. NivoGuide 3100 resp. NivoGuide 8200 are galvanically separated from ground. The metallic parts of NivoGuide 8100, NivoGuide 3100 and NivoGuide 8200 are electrically connected with the earth terminals.

Thermal data

For applications requiring equipment in group III (explosive dust atmospheres), the following ambient temperature ranges and surface temperatures apply:

Permissible process temperature at the sensor:	
NivoGuide NG8100A*AA/B**1*** *****/1	-40 °C ... +80 °C
NivoGuide NG8100A*D/F/PA/B**1*** *****/1	-20 °C ... +150 °C
NivoGuide NG8100A*G/M/NA/B**1*** *****/1	-40 °C ... +150 °C
NivoGuide NG8100A*LA/B**1*** *****/1	-20 °C ... +200 °C
NivoGuide NG3100A*A/BA/B**1*** *****/1	-40 °C ... +80 °C
NivoGuide NG3100A*F/HA/B**1*** *****/1	-40 °C ... +150 °C
NivoGuide NG3100A*KA/B**1*** *****/1	-20 °C ... +200 °C
NivoGuide NG8200B*1A/B**1**0 *****/1	-196 °C ... +280 °C
NivoGuide NG8200B*2A/B**1**0 *****/1	-196 °C ... +450 °C (+400 °C)
NivoGuide NG8200B*3A/B**1**0 *****/1	-20 °C ... +250 °C
Permissible ambient temperature at the electronics housing:	-40 °C ≤ Ta ≤ +60 °C

Maximum surface temperature T* on electronics housing for applications requiring EPL Da devices:	
NivoGuide 8100, NivoGuide 3100, NivoGuide 8200	Ambient temperature + 86 K

Maximum surface temperature T* on electronics housing for applications requiring EPL Da/Db, Da/Dc and Db devices:	
NivoGuide 8100, NivoGuide 3100, NivoGuide 8200	Ambient temperature + 38 K

The probes (measuring part, rod) may only be used in EPL Da; Da/Db; Da/Dc and EPL Db applications if atmospheric conditions are present (temperatures: see tables above and pressure from 0.8 bar to 1.1 bar). If no explosive atmosphere is present, the permissible operating temperatures and pressures can be found in the manufacturer's specifications (operating instructions).

If the sensors (measuring part, measuring rod) are operated at higher temperatures than listed in the above table, measures must be taken to prevent the risk of ignition from hot surfaces.

Routine tests

None.

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Schedule

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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.

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Specific conditions of use:

1. The guided radar sensors type NG8100AW/Y*A/B**1*** ****A/D, type NG3100AW/T*A/B**1*** ****A/D and type NG8200BW/Y*A/B**1**0 ****A/D have to be installed in such a way, that process-related electrostatic charges, e.g. due to due to passing media, can be excluded.
2. The permissible process temperature at the sensor resp. the permissible ambient temperature at the electronics housing and the maximum surface temperature T* at the electronics housing depending on the ambient temperature range can be taken from the operating instructions.
3. The cable glands as well as the blanking elements, if used, have to be separately assessed and certified in accordance with EN 60079-31. In the end-use application the degree of protection min IP6X shall be maintained in accordance with EN 60079-0 and in compliance with EN 60529.
4. For installation in EPL Da areas, the maximum power provided to the guided radar sensors type NG8100AW/Y*A/B**1*** ****A/D, type NG3100AW/T*A/B**1*** ****A/D and type NG8200BW/Y*A/B**1**0 ****A/D must be limited to $P_{max} \leq 2 W$. Where appropriate, an external protective device shall be used.

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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.



The trademark 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.

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Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
Specification Type Plate UKEX NivoGuide 8100; NivoGuide 8200; NivoGuide 3100	6-79997	2	2022-09-16
Safety Instructions NivoGuide 8100, 3100, 8200 Dust Ignition protection by enclosure "d"	1009124	-	2022-02-17