

Translation

(1) **EU-Type Examination Certificate**

(2) Equipment and protective systems intended for use in potentially explosive atmospheres, **Directive 2014/34/EU**



(3) **Certificate Number** TÜV 20 ATEX 266901 X **issue:** 00

(4) for the product: Guided radar sensors type  
NivoGuide 8100  
NivoGuide 3100  
NivoGuide 8200

(5) of the manufacturer: **UWT GmbH**

(6) Address: Westendstraße 5  
87488 Betzigau  
Germany

Order number: 8003017351

Date of issue: 2020-03-25

(7) The design of this product and any acceptable variation thereto are specified in the schedule to this EU-Type Examination Certificate and the documents therein referred to.

(8) The TÜV NORD CERT GmbH, Notified Body No. 0044, in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014, 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 Annex II to the Directive.

The examination and test results are recorded in the confidential ATEX Assessment Report No. 20 203 266901.

(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 item 18 of the schedule.

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions for Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design, and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. 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

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, notified by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the notified body

  
Roder

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(13) **SCHEDULE**

(14) **EU-Type Examination Certificate No. TÜV 20 ATEX 266901 X issue 00**

(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\*A/B\*\*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 8200: 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	$U = 9.6 \dots 35 \text{ V d.c}$
(Terminals 1[+], 2[-])	$U_m = 253 \text{ V a.c/d.c}$
	$I \leq 3.5 \dots 22.5 \text{ mA (with superimposed HART signal)}$

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

Supply and signal circuit	$U = 9.6 \dots 35 \text{ V d.c}$
(Terminals 1[+], 2)	$U_m = 253 \text{ V a.c/d.c}$
	$I \leq 3.5 \dots 22.5 \text{ mA (with superimposed HART signal)}$

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.
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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.

**Schedule to EU-Type Examination Certificate No. TÜV 20 ATEX 266901 X issue 00**

**Thermal data**

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

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

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

<b>Maximum surface temperature T* on electronics housing for applications requiring EPL Da/Db, Da/Dc and Db devices:</b>	
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.

- (16) Drawings and documents are listed in the ATEX Assessment Report No. 20 203 266901

**Schedule to EU-Type Examination Certificate No. TÜV 20 ATEX 266901 X issue 00**

(17) Specific Conditions for 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 electrostatical charges, e.g. 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 60079-31:2014. In the end-use application the degree of protection min IP6X shall be maintained in accordance with EN IEC 60079-0:2018 and in compliance with EN 60529:1991 + A1:2000 + A2:2013 einzuhalten.
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  $P_{\max} \leq 2 \text{ W}$ .

(18) Essential Health and Safety Requirements  
No additional ones

- End of Certificate -