

CERTIFICATE OF CONFORMITY



1. **ELECTRICAL EQUIPMENT PER US REQUIREMENTS**

2. **Certificate No:** FM22NUS0008

3. **Equipment:** NivoGuide NG 3000, NG 8000 Series
(Type Reference and Name) Level Transmitter

4. **Name of Listing Company:** UWT GmbH

5. **Address of Listing Company:** Westendstraße 5
Betzigau
D-87488
Germany

6. The examination and test results are recorded in confidential report number:

PR463252 dated 13th September 2022

7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM Class 3810:2021, ANSI/IEC 60529:2004, ANSI/NEMA 250:2008, ANSI/ISA 12.27.01:2011
ANSI/ISA 61010-1:2012

8. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

9. **Equipment Ratings:**

Electrically Safe for use in ordinary (non-hazardous) industrial locations, indoors and outdoors, NEMA Type 4X/6P and IP66/67/68, Dual Seal.

Certificate issued by:



J.E. Marquedant
VP, Manager - Electrical Systems

13 September 2022

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
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10. Description of Equipment:

General - The NivoGuide NG 3000, NG 8000 Series Level Transmitters employ guided wave radar in order to determine the distance between the surface of a filling material and the sensor by means of high frequency microwave impulses in the GHz range. It emits high frequency microwave impulses that are directed along a measuring rod, respectively measuring cable. The electronic equipment uses the duration of the signals reflected by the surface of the filling material in order to calculate the distance to the surface of the filling material.

Construction - The NivoGuide NG 3000, NG 8000 Series consist of one or two encapsulated electronics inserts assembled in a single or double-chambered housing. The housings are constructed out of Stainless Steel or Aluminum. All versions of the enclosure provide two options for covers: one with a window for the NivoGuide display and adjustment modul internal display; and the standard solid cover without a window. The standard enclosure contains a single cover on the top, while the double chamber enclosure contains a cover on the top for the electronics and an additional cover mounted on the front that covers the wiring compartment. The internal NivoGuide display and adjustment modul display can be mounted on the top, as the standard enclosure, or on the front of the double chamber enclosure. All enclosures include either two ½ NPT or two M20 metric threaded entries that allow the equipment to be wired in accordance with applicable installation requirements.

Ratings - The NivoGuide NG 3000, NG 8000 Level Measurement Series are intended to operate at: 9.6 to 35 VDC for 2-wire 4-20 mA/HART “Electronics” model codes A and B;

All NivoGuide NG 3000, NG 8000 Level Measurement Series models have IP66/67 and NEMA Type 4X ratings. Type 6P and IP68 ratings are additionally available for “Housing” model codes A, D and N. A Dual Seal rating is available only for “Housing” model code D

NivoGuide NG 3100 abcdefghijklmnop

a = A

b = Certificate: M

c = Process temperature / Lead-through of probe: One digit alphanumeric variable for suitable seals seal suitable for application including given process temperature, required IP or NEMA rating and environmental conditions.

d = Electronic module: A or B

ef = Process connection: Two digit alphanumeric variable for connections, which comply with an international, national or industrial standard with pressure ratings

g = 1

h = Type and length of extension: One digit alphanumeric variable for combination of version and material:

Exchangeable cable (ø4mm) / 316

Exchangeable rod (ø6mm) / 316

Exchangeable cable (ø6-11mm) with gravity weight / PA coated (gravity weight is uncoated),

Exchangeable rod (ø16mm)

Material: 316, 316L, Alloy C22 (2.4601), PA coating

i = Display and Adjustment Module / Inspection window in lid: 0, A, F, B

j = reserved, Options not affecting safety, one digit alphanumeric variable referring to non-electrical properties

k = Inspection certificate: Options not affecting safety, one digit alphanumeric variable referring to non-electrical properties

l = Measurement loop identification label: Options not affecting safety, one digit alphanumeric variable referring to non-electrical properties

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m = Cable Entry: A, B, C, D, E, F or single digit representing suitably NRTL rated connection or cable gland
n = Language of operating instruction: Options not affecting safety, one digit alphanumeric variable referring to non-electrical properties
o = reserved, Options not affecting safety, one digit alphanumeric variable referring to non-electrical properties
p = Housing: A, D, N

NivoGuide NG 8100 abcdefghijklmnop

a = A
b = Certificate: M
c = Process temperature / Seconde line of defense / Lead-through of probe: One digit alphanumeric variable for suitable seals seal suitable for application including given process temperature, required IP or NEMA rating and environmental conditions.
d = Electronic module: A or B
ef = Process connection: Two digit alphanumeric variable for connections, which comply with an international, national or industrial standard with pressure ratings
g = 1
h = Type and length of extension: One digit alphanumeric variable for combination of version and material:
Version: Coax with single or multiple hole (ø21.3mm or 42.2mm),
Exchangeable rod (ø8mm – 12mm)
Exchangeable cable (ø2mm – 4mm) without weight, with gravity or centering weight
Exchangeable coated cable (ø4mm) with uncoated centering weight
Material: 304L, 316, 316L, Alloy 400 (2.4360), Alloy C22 (2.4602), Alloy C276 (2.4819), Duplex (1.4462), PFA coating
i = Display and Adjustment Module / Inspection window in lid: 0, A, F, B
j = Length of rigid part: Options not affecting safety, one digit alphanumeric variable referring to non-electrical properties
k = Inspection certificate: Options not affecting safety, one digit alphanumeric variable referring to non-electrical properties
l = Measurement loop identification label: Options not affecting safety, one digit alphanumeric variable referring to non-electrical properties
m = Cable Entry: A, B, C, D, E, F or single digit representing suitably NRTL rated connection or cable gland
n = Language of operating instruction: Options not affecting safety, one digit alphanumeric variable referring to non-electrical properties
o = reserved, Options not affecting safety, one digit alphanumeric variable referring to non-electrical properties
p = Housing: A, D, N

NivoGuide NG 8200 abcdefghijklmnop

a = B
b = Certificate: M
c = Process temperature / Seconde line of defense / Lead-through of probe: One digit alphanumeric variable for suitable seals seal suitable for application including given process temperature, required IP or NEMA rating and environmental conditions.
d = Electronic module: A or B
ef = Process connection: Two digit alphanumeric variable for connections, which comply with an international, national or industrial standard with pressure ratings
g = 1

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- h = Version/Material: One digit alphanumeric variable for combination of version and material:
 - Version: Coax with single or multiple hole (\varnothing 21.3mm or 42.2mm), without or with reference distance, Exchangeable rod (\varnothing 8mm – 16mm)
 - Exchangeable cable (\varnothing 2mm – 4mm) without weight, with gravity or centering weight
 - Material: 316, 316L, Alloy C22 (2.4602), Alloy C276 (2.4819), Duplex (1.4462)
- i = Display and Adjustment Module / Inspection window in lid: 0, A, F, B
- j = 0
- k = Inspection certificate: Options not affecting safety, one digit alphanumeric variable referring to non-electrical properties
- l = Measurement loop identification label: Options not affecting safety, one digit alphanumeric variable referring to non-electrical properties
- m = Cable Entry: A, B, C, D, E, F or single digit representing suitably NRTL rated connection or cable gland
- n = Language of operating instruction: Options not affecting safety, one digit alphanumeric variable referring to non-electrical properties
- o = Approval for steam boiler: Options not affecting safety, one digit alphanumeric variable referring to non-electrical properties
- p = Housing: A, D, N

11. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

12. Schedule Drawings

A copy of the technical documentation has been kept by FM Approvals.

13. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
13 September 2022	Original Issue.

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