

Translation

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

TÜV NORD

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



- (3) **Certificate Number** TÜV 16 ATEX 185271 X **issue:** 00
- (4) for the product: Surface radar sensors type OFR-EV0 and OFR-EVG
- (5) of the manufacturer: NIVUS GmbH
- (6) Address: Im Täle 2
75031 Eppingen
- Order number: 8000462886
- Date of issue: 2016-12-14

- (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. 16 203 185271.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012+A11:2013 EN 60079-11:2012
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 2 G Ex ib IIB T4 Gb

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 Deputy head of the notified body


Roder

Hanover office, Am TÜV 1, 30519 Hannover, Tel. +49 511 998-61455, Fax +49 511 998-61590

This certificate may only be reproduced without any change, schedule included.
Excerpts or changes shall be allowed by the TÜV NORD CERT GmbH

(13) SCHEDULE

(14) EU-Type Examination Certificate No. TÜV 16 ATEX 185271 X issue 00

(15) Description of product

The surface radar sensors type OFR-EV0 and OFR-EVG are intended for contactless velocity measurement on the surface of liquid media particularly in wastewater areas via radar technology.

The permissible ambient temperature range of the sensors is -20 °C ... 60 °C.

Electrical data

Signal- and supply circuit in type of protection Intrinsic Safety Ex ib IIB
 (Plug connector only for connection to
 pin 1 [+Vin] a certified intrinsically safe circuit
 pin 6 [GND] maximum values:
 $U_i = 10.5 \text{ V}$
 $I_i = 640 \text{ mA}$
 $P_i = 6.72 \text{ W}$
 The effective internal capacitance is negligibly small.
 Effective internal Inductance: 3.5 μH

RS485 interface in type of protection Intrinsic Safety Ex ib IIB
 (Plug connector maximum values:
 pin 2 [RxTx+] $U_o = 10.2 \text{ V}$
 pin 5 [RxTx-] $I_o = 119 \text{ mA}$
 $P_o = 304 \text{ mW}$
 characteristic line: linear
 The effective internal capacitance is negligibly small.
 Effective internal inductance: 53 μH

Ex ib	IIB	
max. permissible external inductance	10 mH	0.95 mH
max. permissible external capacitance	2.2 μF	5.1 μF

At connection of the RS485 interface to belonging measuring transducers with active intrinsically safe circuits, the rules for the interconnection of intrinsically safe circuits have to be observed.

Maximum values:

$U_i = 15.1 \text{ V}$
 $I_i = 168 \text{ mA}$
 $P_i = 634 \text{ mW}$

(16) Drawings and documents are listed in the ATEX Assessment Report No. 16 203 185271.

Schedule to EU-Type Examination Certificate No. TÜV 16 ATEX 185271X issue 00

(17) Specific Conditions for Use

1. At the plastic parts there is a danger of ignition by electrostatic discharge.
Observe manual of the manufacturer and warning label.
2. The metallic parts of the protective cover, if used, have to be connected with ground potential.

(18) Essential Health and Safety Requirements

no additional ones

- End of Certificate -