



# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: **IECEx KIWA 19.0014X**

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Certificate history:

Status: **Current**

Issue No: 3

Issue 2 (2023-06-07)

Issue 1 (2023-04-03)

Issue 0 (2020-04-17)

Date of Issue: 2024-10-31

Applicant: **VEGA Grieshaber KG**  
Am Hohenstein 113  
77761 Schiltach  
**Germany**

Equipment: **Radar sensors types VEGAPULS C 21, C 22, C 23**

Optional accessory:

Type of Protection: **Intrinsic Safety "ib", Encapsulation "mb" and Dust Protection by Enclosure, "ta", "ta/tb", "tb"**

Marking: Ex ib mb IIC T4 Gb  
2-wire 4-20 mA HART:  
Ex ta, ta/tb IIIC T<sub>200</sub> 121°C Da, Da/Db  
Ex tb IIIC T<sub>200</sub> 134°C Db  
4-wire Modbus:  
Ex ta, ta/tb IIIC T<sub>200</sub> 142°C Da, Da/Db  
Ex tb IIIC T<sub>200</sub> 155°C Db

Approved for issue on behalf of the IECEx  
Certification Body:

**Dave Magee**

Position:

**Senior Director of Operations, Toronto**

Signature:  
(for printed version)

Date:  
(for printed version)

1. This certificate and schedule may only be reproduced in full.
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Certificate issued by:

**CSA Group**  
178 Rexdale Blvd  
Ontario M9W 1R3  
a





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Manufacturer: **VEGA Grieshaber**  
Am Hohenstein 113  
77761 Schiltach  
Germany

Manufacturing locations: **VEGA Grieshaber**  
Am Hohenstein 113  
77761 Schiltach  
Germany

**VEGA Americas, Inc.**  
3877 Mason Research Parkway  
Ohio  
Mason 45036  
**United States of America**

**VEGA India Level and Pressure  
Measurement Pvt. Ltd.**  
Plot No. 1  
Gat No. 181  
Village - Phulgaon  
Tal. Haveli  
Pune 412216  
**India**

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

## STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

**IEC 60079-0:2017** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

**IEC 60079-11:2023** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:7.0

**IEC 60079-18:2017** Explosive atmospheres - Part 18: Protection by encapsulation "m"  
Edition:4.1

**IEC 60079-26:2021** Explosive atmospheres - Part 26: Equipment with Separation Elements or combined Levels of Protection  
Edition:4.0

**IEC 60079-31:2022** Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:3.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

## TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

**NL/KIWA/EXTR19.0016/00**  
**NL/KIWA/EXTR19.0016/03**

**NL/KIWA/EXTR19.0016/01**

**NL/KIWA/EXTR19.0016/02**

Quality Assessment Report:

**DE/TUN/QAR06.0002/13**



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## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Radar sensors types VEGAPULS C 21, C 22, C 23 for use in explosive atmospheres caused by the presence of combustible gases or dusts, are used for monitoring and control of filling levels by means of microwave technology. The electronics, mounted in an plastic enclosure converts the reflected microwave echo, indicating the filling level, into an 2-wire 4-20mA HART or 4-wire Modbus signal. Operation and control of the sensor can either be through the wired connection or via smart phone and VEGA Tools-App (Bluetooth).

The sensor is equipped with a fixed cable of 5m, 10 m, 25m or selectable length with a G1", 1"NPT or R1" threaded connection.

Ambient and process temperature range for Ex ib mb, Ex tb: -20 to 80 °C

Ambient and process temperature range for Ex ta, ta/tb: -20 to 67 °C

## Electrical Data

2-wire 4-20 mA HART:

Supply and output circuit (+ (Brown wire), - (Blue wire)):

$U_N = 12 \dots 35 \text{ V}, < 1 \text{ W}$

4-wire Modbus:

Supply (+ (Brown wire), - (Blue wire)) and output circuit (+ (Black wire), - (White wire)):

$U_N = 8 \dots 30 \text{ V}, < 1 \text{ W}$

## Conditions of Manufacture

The Manufacturer shall comply with the following:

1. Radar sensors types VEGAPULS C 21, C 22, C 23 certified for the Ex marking "Ex ib mb IIC T4 Gb" shall be subjected to routine verification of the encapsulation as per clause 10.4 of IEC 60079-11:2023 (Ed. 7.0).

## SPECIFIC CONDITIONS OF USE: YES as shown below:

- For electrical and thermal data refer to the general product information.

- The equipment shall be installed and maintained such that hazards caused by electrostatic discharge are excluded and that there is a low risk of mechanical danger.



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## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

**Issue 1** – this Issue introduced the following changes:

1. Introduce alternate electronics for 4-20 mA HART similar to previously evaluated.
2. Minor modification of the label drawing.
3. Additional manufacturing location:  
VEGA India Level and Pressure Measurement Pvt. Ltd., Plot No. 1, Gat No. 181, Village - Phulgaon, Tal. Haveli, Pune 412216, India.
4. Change of manufacturing location:  
From: VEGA Americas, Inc., 4241 Allendorf Drive, Cincinnati, Ohio 45209, United States of America.  
To: VEGA Americas, Inc., 3877 Mason Research Parkway, Ohio, Mason 45036, United States of America.
5. The report is to facilitate the transfer of certificates IECEx KIWA 19.0014X from Kiwa Nederland B.V., Unit Kiwa ExVision, Wilmersdorf 50, 7327 AC Apeldoorn, The Netherlands to CSA Group.

**Issue 2** – this Issue introduced the following change:

1. Introduction of alternative enclosure design according to drawing 1016899.

**Issue 3** – this Issue introduced the following change:

1. Update of standard from IEC 60079-11:2011 Ed. 6.0 to IEC 60079-11:2023 Ed. 7.0.
2. Update of standard from IEC 60079-31:2014 Ed. 2.0 to IEC 60079-31:2022 Ed. 3.0.
3. Include the new standard IEC 60079-26:2021 Ed. 4.0 for the assessment of zone separation.