



1 EU – Type Examination Certificate

2 Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 2014/34/EU

3 EU – Type Examination Certificate Number: **KIWA 19ATEX0028 X** Issue: **1**

4 Product: **Radar sensors types VEGAPULS 21, 31, C 21, C 22, C 23**

5 Manufacturer: **VEGA Grieshaber KG**

6 Address: **Am Hohenstein 113, 77761 Schiltach
Germany**

7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Kiwa Nederland B.V., Notified Body number 0063 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 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 confidential ATEX Assessment Report No. 180201206.

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN IEC 60079-0 : 2018 EN 60079-11 : 2012 EN 60079-26 : 2015

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 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 product. These are not covered by this certificate.

12 The marking of the product shall include the following:



VEGAPULS 21, 31:
II 1G,1/2G Ex ia IIC T4 Ga, Ga/Gb
VEGAPULS C 21, C 22, C 23:
II 1G,1/2G Ex ia IIC T4 Ga, Ga/Gb
II 1D,1/2D Ex ia IIIC T134°C Da, Da/Db

Kiwa Nederland B.V.
Unit Kiwa ExVision
Wilmersdorf 50
P.O. Box 137
7300 AC Apeldoorn
The Netherlands

Tel. +31 88 998 34 93
Fax +31 88 998 36 85
ExVision@kiwa.nl
www.kiwaexvision.com

Kiwa Nederland B.V.

Ronald Karel
Managing Director

Issue date:

7 November 2019

First issue:

This certificate shall, as far as applicable, be revised before the date of cessation of presumption of conformity of (one of) the included standards above as communicated in the Official Journal of the European Union.

© Integral publication of this certificate in its entirety and without any change is allowed.



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2019-01)



13 SCHEDULE

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15.1 Description of Product

Radar sensors types VEGAPULS 21, 31, 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 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 either equipped with a fixed cable (VEGAPULS C 21, C 22, C 23) of 5m, 10 m, 25m or selectable length with a G1", 1"NPT or R1" threaded connection or a 2 wire terminal (VEGAPULS 21, 31) via a M20x1.5 or ½" NPT cable entry.

VEGAPULS 21 and 31 are electrically identical where type 21 is equipped without a display module and a blind cover and type 31 is equipped with a display module and a windowed cover.

Ambient temperature range for VEGAPULS 21, 31: -40 °C to +70 °C

Ambient temperature range for VEGAPULS C 21, C 22, C 23: -40 °C to +80 °C

Process temperature range : -40 °C to +80 °C

15.2 Electrical Data

VEGAPULS C 21, C 22, C 23:

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

in type of protection intrinsic safety Ex ia IIC or Ex ia IIIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:

$U_i = 30 \text{ V}$; $I_i = 131 \text{ mA}$; $P_i = 983 \text{ mW}$; $C_i = 0.18 \text{ nF/m}$; $L_i = 0.65 \text{ }\mu\text{H/m}$

VEGAPULS 21, 31:

Supply and output circuit (+ (terminals 1), - (terminal 2)):

in type of protection intrinsic safety Ex ia IIC or Ex ia IIIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:

$U_i = 30 \text{ V}$; $I_i = 131 \text{ mA}$; $P_i = 983 \text{ mW}$; $C_i \approx 0 \text{ nF}$; $L_i \approx 0 \text{ }\mu\text{H}$

15.3 Instructions

The instructions provided with the product shall be followed in detail to assure safe operation.

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17 Specific Conditions of Use

- For electrical and thermal data refer to 15.1 and 15.2.

- The equipment shall be installed and maintained such that hazards caused by electrostatic discharge are excluded.

13 **SCHEDULE**

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18 **Essential Health and Safety Requirements**

All relevant Essential Health and Safety Requirements are covered by the standards listed at section 9.

For this product the standard EN IEC 60079-0 : 2018 is equivalent to the harmonized standard EN 60079-0 : 2012 + A11 : 2013 in terms of safety.

19 **Drawings and Documents**

As listed in ATEX Assessment Report No. 180201206.

