



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

Certificate No.: **IECEx CCVE 25.0004X** Page 1 of 4 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2025-10-24

Applicant: **NPP VEGA LLC**
Moscow region,
Dmitrovsky Municipal District,
vil. Lotosovo, 6P 141862
Russian Federation

Equipment: **Ultrasonic gas flowmeter Vega-Sonic VS-12**

Optional accessory:

Type of Protection: **Flameproof enclosures "d"**

Marking: Electronic computing unit (ECU) - Ex db IIC T6 Gb
Ultrasonic sensors series 325 - Ex db IIC T6... T2 Gb
- 50°C ≤ Ta ≤ +60°C
IP66

Approved for issue on behalf of the IECEx
Certification Body:

Alexander Zalogin

Position:

Head of CB NANIO CCVE

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
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Certificate issued by:

NANIO CCVE
Zavod ECOMASH, VUGI Settlement
Lyubertsy, Moscow region
140004
Russian Federation





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Manufacturer: **NPP VEGA LLC**
Moscow region,
Dmitrovsky Municipal District,
vil. Lotosovo, 6P 141862
Russian Federation

Manufacturing
locations:

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 60079-1:2014](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

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 Report:

[RU/CCVE/ExTR25.0004/00](#)

Quality Assessment Report:

[RU/CCVE/QAR25.0002/00](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Ultrasonic gas flowmeters Vega-Sonic VS-12 (hereinafter referred to as "flowmeters") are designed to measure the velocity, volume flow (volume) of natural, associated and free oil, flare and other gases under operating conditions, as well as calculate the volume consumption and volume of associated and free oil, flare, natural gases, reduced to standard conditions.

Flowmeters consist of ultrasonic sensors series 325 installed in the measuring section with flange connections and an electronic computing unit (ECU), it is also possible to install ultrasonic sensors directly on the measuring pipeline by means of "cold" or "hot" tie-in through welded holder.

Flowmeters have different versions according to the method of connection to the process. The method of connection to the process is reflected in the model code of the flow meter: 1 - complete with measuring pipeline (MP); 2 - complete with a pipeline section for welding; 0 – IT is absent, insertion and welding of branch pipes into the existing pipeline at the place of operation.

The following Ex equipment are used in the flowmeters:

- cable glands KNV1M Ex db IIC Gb (IECEX CCVE 17.0004X);
- VZN2 series blanking elements Ex db IIC Gb (IECEX CCVE 18.0014X);
- Junction boxes types KKVA Ex db IIC T6...T4 Gb (IECEX CCVE 18.0008X).

Power supply: 187...242 V AC 50±2 Hz
12...28 V DC

Power consumption: no more 20 V·A

Temperature of the measured process medium: from -55 to +260 °C

The detailed model designation is given in the Annex 1 to this certificate.

SPECIFIC CONDITIONS OF USE: YES as shown below:



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- The dependence of the temperature class of ultrasonic sensors on the ambient temperature range and the maximum temperature of the measured process medium is presented in the table below.

Ambient temperature range, °C	Maximum temperature of the measured process medium, °C	Temperature class in Ex -marking
-50...+60	+70	T6
-50...+60	+80	T5
-50...+60	+120	T4
-50...+60	+180	T3
-50...+60	+260	T2

- When installing ultrasonic sensors series 325 on a pipeline, they must be tightened to a torque of 250 N.

- In order to avoid the risk of fire from friction sparks generated by friction or collision of parts, it is necessary to protect the housings of ultrasonic sensors from mechanical shocks.

- Elimination of defects, replacement, connection and disconnection of ultrasonic sensors from the pipeline supplying the measured process medium under pressure, must be carried out in the absence of pressure and gas in the supply pipeline. The exception is modifications of sensors equipped with special extraction mechanism at operating pressure and the presence of gas in the pipeline.

- Installation of the ECU should be carried out only when the power supply is switched off.

- Connection of external electrical circuits of the ECU must be carried out through cable glands certified according with Ex-marking Ex db IIC.

- Unused openings must be closed with certified blanking elements with Ex-marking Ex db IIC.

Annex:

[Annex 1 to IECEx CCVE 25.0004X_2.pdf](#)

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Annex 1 to IECEx CCVE 25.0004X

Issue No. 0

**DESCRIPTION OF THE ORDERING CODE OF
 ULTRASONIC GAS FLOWMETER VEGA-SONIC VS-12**

A-B-C-D-E-F-G-H-I-J-K-LLLL

A- number of channels: 1 or 2 pairs sensors
B - the presence of a measuring pipeline (IT): 1 - flange/ 2 - for welding/ 0 - for tie-in
C- estimated pressure, bar
D - execution of primary converters (sensors): 325(XXX)C - standard power / 325(XXX)P - high power / 325(XXX)U - vertical installation / 325(XXX)M - mid-radius
E - IT material (or welded pipes): US - carbon steel / NTU - low temperature carbon steel / HC - stainless steel / XX - non-standard material
F - operating temperature: ST: -55 to +120 °C / VT: -50 to +260°C
G - voltage of ECU: 1 - DC 12-28V / 2 - AC 187...244V (50±2Hz)
H - material of the extraction mechanism: US - carbon steel / NTU - low temperature carbon steel / HC - stainless steel / XX - non-standard material / 0 - absent. Sensor holders stainless steel
I - material for the manufacture of valves: NS - stainless steel / 0 - absent
J - fastener material: US - carbon steel / NTU - low temperature carbon steel / HC - stainless steel / XX - non-standard material
K - ECU installation type and connecting cable: XX - separate installation of ECU / 0 - integral installation of ECU
L - additional options (0 – no / 1–9 - one of the additional options)
Note: H – 0 and I – 0 – Elimination of defects, replacement, connection and disconnection of ultrasonic sensors from the pipeline supplying the measured process medium under pressure, must be carried out in the absence of pressure and gas in the supply pipeline