



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 TUN 21.0024X** Page 1 of 4 [Certificate history:](#)
Issue 0 (2022-04-04)

Status: **Current** Issue No: 1

Date of Issue: 2023-09-14

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

Equipment: **VEGAPULS Air 23 resp. VEGAPULS Air 42**

Optional accessory:

Type of Protection: **"ec"; "tb" resp. "tc"**

Marking: Ex ec IIC T6...T1 Gc
Ex tb IIIC T135°C Db
Ex tc IIC T135°C Dc

Approved for issue on behalf of the IECEx
Certification Body:

Andreas Meyer

Position:

Deputy Head of the IECEx Certification Body

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:

TÜV NORD CERT GmbH
Hanover Office
/ 1, 30519 Hannover
iny





IECEX Certificate of Conformity

Certificate No.: **IECEX TUN 21.0024X**

Page 2 of 4

Date of issue: 2023-09-14

Issue No: 1

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

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

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

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

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

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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:

[DE/TUN/ExTR21.0031/01](#)

Quality Assessment Report:

[DE/TUN/QAR06.0002/12](#)



IECEx Certificate of Conformity

Certificate No.: **IECEx TUN 21.0024X**

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Date of issue: 2023-09-14

Issue No: 1

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Description:

The Autarkic Radar Sensors VEGAPULS Air 23, 42 are used for non-contact level measurement of liquids and solids.

VEGAPULS Air 23, 42 emit a radar signal in the GHz range via their antennas. The transmitted signal is reflected by the medium and received by the antenna as an echo. The frequency difference between the transmitted and the received signal is proportional to the distance and depends on the level. The measured value is transmitted wirelessly via various radio technologies.

Type code:

VEGAPULS Air 23 resp. VEGAPULS Air 42

Electrical and thermal data:

See Attachment to IECEx TUN 21.0024X issue No.1

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The Autarkic Radar Sensor type VEGAPULS Air 23 resp. VEGAPULS Air 42 has to be installed and used in such a way, that electrostatic charging from operation, maintenance and cleaning is excluded.

For the uses in potentially explosive dust atmospheres process-related electrostatic charges, e.g. due to passing media have to be excluded.

2. For EPL Gc applications:

The "Memory Stick" has only to be operated outside the hazardous area at the USB port.

The connection and disconnection of the SIM card as well as the changing of the power supply cells including their connectors has only be carried out outside the hazardous area.

The connection and disconnection of the hybrid capacitor (only for the Autarkic Radar Sensor type VEGAPULS Air 42) has only be carried out outside the hazardous area by the manufacturer within the scope of repairs.

3. Only permissible cells according to the manufacturer's operating instructions are allowed to be used.

4. The filter element on the housing wall of the VEGAPULS Air 42 variant is only certified as a part of this variant.

5. The permissible ambient temperature range is given in the operating instructions.



IECEx Certificate of Conformity

Certificate No.: **IECEx TUN 21.0024X**

Page 4 of 4

Date of issue: 2023-09-14

Issue No: 1

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- Proof of conformity of the new variant of the Autarkic Radar Sensor type VEGAPULS Air 42 with one cell and additional capacitor to the current versions of the standards IEC 60079-0:2017, IEC 60079-7:2017 and IEC 60079-31:2022

The existing variant VEGAPULS Air 42 with 5 cells is no longer produced.

- Proof of conformity of the Autarkic Radar Sensor type VEGAPULS Air 23 to the current version of the IEC 60079-31:2022. The Autarkic Radar Sensor type VEGAPULS Air 23 is already assessed according to IEC 60079-0:2017 and IEC 60079-7:2017 in the previous issue No.0
- The Autarkic Radar Sensor type VEGAPULS Air 23 remains mechanically and electrically unchanged.
- By considering **DE/TUN/QAR06.0002/12** the manufacturing locations:

VEGA Americas 4241 Allendorf Drive Cincinnati Ohio 45209 United States of America	is replaced by	VEGA Americas, Inc. 3877 Mason Research Parkway Ohio Mason 45036 United States of America
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Annex:

[Attachment to IECEx TUN 21.0024X issue No.1.pdf](#)

Page 1 of 2
Attachment to IECEx TUN 21.0024X issue No.: 1

Description:

The Autarkic Radar Sensors VEGAPULS Air 23, 42 are used for non-contact level measurement of liquids and solids.

VEGAPULS Air 23, 42 emit a radar signal in the GHz range via their antennas. The transmitted signal is reflected by the medium and received by the antenna as an echo. The frequency difference between the transmitted and the received signal is proportional to the distance and depends on the level. The measured value is transmitted wirelessly via various radio technologies.

Type code:

VEGAPULS Air 23 resp. VEGAPULS Air 42

Electrical data:

Supply voltage (Internal primary cells) VEGAPULS Air 23:
 $U_n = 3.6 \text{ V d.c.}$
Supply with 2x 3.6 V / 3.6 Ah; LS17500 (Li-SOCL2)- cells.

VEGAPULS Air 42:
 $U_n = 3.6 \text{ V d.c.}$
Supply with 1x 3.6 V / 17 Ah; LS33600(Li-SOCL2)- cell.

Thermal data:

Permissible ambient temperature range during operation: $-20 \text{ °C} \leq T_a \leq +60 \text{ °C}$

Details of change:

- Proof of conformity of the new variant of the Autarkic Radar Sensor type VEGAPULS Air 42 with one cell and additional capacitor to the current versions of the standards IEC 60079-0:2017, IEC 60079-7:2017 and IEC 60079-31:2022

The existing variant VEGAPULS Air 42 with 5 cells is no longer produced.

- Proof of conformity of the Autarkic Radar Sensor type VEGAPULS Air 23 to the current version of the IEC 60079-31:2022. The Autarkic Radar Sensor type VEGAPULS Air 23 is already assessed according to IEC 60079-0:2017 and IEC 60079-7:2017 in the previous issue No.0

The Autarkic Radar Sensor type VEGAPULS Air 23 remains mechanically and electrically unchanged.

- By considering **DE/TUN/QAR06.0002/12** the manufacturing locations:

VEGA Americas
4241 Allendorf Drive
Cincinnati Ohio 45209
United States of America

is replaced by

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

Page 2 of 2
Attachment to IECEx TUN 21.0024X issue No.: 1

Specific Conditions of Use:

1. The Autarkic Radar Sensor type VEGAPULS Air 23 resp. VEGAPULS Air 42 has to be installed and used in such a way, that electrostatic charging from operation, maintenance and cleaning is excluded. For the uses in potentially explosive dust atmospheres process-related electrostatic charges, e.g. due to passing media have to be excluded.
2. For EPL Gc applications:
The "Memory Stick" has only to be operated outside the hazardous area at the USB port.
The connection and disconnection of the SIM card as well as the changing of the power supply cells including their connectors has only be carried out outside the hazardous area.
The connection and disconnection of the hybrid capacitor (only for the Autarkic Radar Sensor type VEGAPULS Air 42) has only be carried out outside the hazardous area by the manufacturer within the scope of repairs.
3. Only permissible cells according to the manufacturer`s operating instructions are allowed to be used.
4. The filter element on the housing wall of the VEGAPULS Air 42 variant is certified as a part of this variant.
5. The permissible ambient temperature range is given in the operating instructions.



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 TUN 21.0024X** Page 1 of 3 [Certificate history:](#)
Status: **Current** Issue No: 0
Date of Issue: 2022-04-04
Applicant: **VEGA Grieshaber KG**
Am Hohenstein 113
Schiltach 77761
Germany
Equipment: **VEGAPULS Air 23 resp. VEGAPULS Air 42**
Optional accessory:
Type of Protection: **"ec"; "tb" resp. "tc"**
Marking: Ex ec IIC T6...T1 Gc
Ex tb IIIC T135°C Db
Ex tc IIIC T135°C Dc

Approved for issue on behalf of the IECEx
Certification Body:

Thomas Heinen

Position:

Deputy Head of the IECEx Certification Body

Signature:
(for printed version)

Date:
(for printed version)



Digital
unterscriben von
Heinen Thomas
Datum: 2022.04.04
08:58:02 +02'00'

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Certificate issued by:

TÜV NORD CERT GmbH
Hanover Office
TÜV NORD CERT GmbH
TÜV NORD Platz 1, 30519 Hannover
Germany





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Certificate No.: **IECEx TUN 21.0024X**

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Date of issue: 2022-04-04

Issue No: 0

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

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

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

VEGA Americas, Inc
4241 Allendorf Drive
Cincinnati, Ohio 45209
United States of America

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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 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "I"
Edition:2

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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:

[DE/TUN/ExTR21.0031/00](#)

Quality Assessment Report:

[DE/TUN/QAR06.0002/10](#)



IECEx Certificate of Conformity

Certificate No.: **IECEx TUN 21.0024X**

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Date of issue: 2022-04-04

Issue No: 0

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Description:

The Autarkic Radar Sensors VEGAPULS Air 23, 42 are used for non-contact level measurement of liquids and solids.

VEGAPULS Air 23, 42 emit a radar signal in the GHz range via their antennas. The transmitted signal is reflected by the medium and received by the antenna as an echo. The frequency difference between the transmitted and the received signal is proportional to the distance and depends on the level. The measured value is transmitted wirelessly via various radio technologies.

Type code:

VEGAPULS Air 23 resp. VEGAPULS Air 42

Electrical and thermal data:

See Attachment to IECEx TUN 21.0024X issue No.0

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The Autarkic Radar Sensor type VEGAPULS Air 23 resp. VEGAPULS Air 42 has to be installed and used in such a way, that electrostatic charging from operation, maintenance and cleaning is excluded.

For the uses in potentially explosive dust atmospheres process-related electrostatic charges, e.g. due to passing media have to be excluded.

2. For EPL Gc applications, the "Memory Stick" has only to be operated outside the hazardous area at the USB port.

The connection and disconnection of the SIM card as well as the changing of the power supply cells including their connectors has only be carried out outside the hazardous area.

3. Only permissible cells according to the manufacturer's operating instructions are allowed to be used.

4. The filter element on the housing wall of the VEGAPULS Air 42 variant is only certified as a part of this variant.

5. The permissible ambient temperature range is given in the operating instructions.

Annex:

[Attachment to IECEx TUN 21.0024X issue No.0 .pdf](#)

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Attachment to IECEx TUN 21.0024X issue No.: 0

General product information:

Description:

The Autarkic Radar Sensors VEGAPULS Air 23, 42 are used for non-contact level measurement of liquids and solids.

VEGAPULS Air 23, 42 emit a radar signal in the GHz range via their antennas. The transmitted signal is reflected by the medium and received by the antenna as an echo. The frequency difference between the transmitted and the received signal is proportional to the distance and depends on the level. The measured value is transmitted wirelessly via various radio technologies.

Type code:

VEGAPULS Air 23 resp. VEGAPULS Air 42

Electrical data:

Supply voltage
(Internal primary cells)

VEGAPULS Air 23:

$U_n = 3.6 \text{ V d.c.}$

Supply with 2x 3.6 V / 3.6 Ah Li-SOCL2- cells

VEGAPULS Air 42:

$U_n = 3.6 \text{ V d.c.}$

Supply with 5x 3.6 V / 3.6 Ah Li-SOCL2- cells

Thermal data:

Permissible ambient temperature range during operation : $-20 \text{ °C} \leq T_a \leq +60 \text{ °C}$

Details of change (applicable only when revising an existing ExTR package):

Proof of conformity of the Autarkic Radar Sensor type VEGAPULS Air 23 resp. VEGAPULS Air 42 to the current versions of the standards IEC 60079-0:2017, IEC 60079-7:2017 and IEC 60079-31:2013.

Specific Conditions of Use:

1. The Autarkic Radar Sensor type VEGAPULS Air 23 resp. VEGAPULS Air 42 has to be installed and used in such a way, that electrostatic charging from operation, maintenance and cleaning is excluded.
For the uses in potentially explosive dust atmospheres process-related electrostatic charges, e.g. due to passing media have to be excluded.
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3. Only permissible cells according to the manufacturer's operating instructions are allowed to be used.
4. The filter element on the housing wall of the VEGAPULS Air 42 variant is only certified as a part of this variant.
5. The permissible ambient temperature range is given in the operating instructions.