

## Manufacturer declaration

### **EHEDG and 3-A, Installation and Cleaning Instructions**

VEGAPOINT 11, 21, 31

Hygienic process fittings



Document ID: 62398



# VEGA

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## 1 About this document

### 1.1 Function

This instructions manual provides the most important information needed for using of level switches.

#### **VEGAPOINT 11, 21**

according to " *EHEDG Doc. 2, Doc. 8, Doc. 10 and 3-A Sanitary Standard for Sensors and Sensor Fittings and Connections, Number 74*".

#### **VEGAPOINT 31**

acc. to " *EHEDG Doc. 2, Doc. 8, Doc. 10*".

### 1.2 Scope

These instructions apply to limit switches VEGAPOINT 11, 21, 31 with hygienic process fittings and seals. You can find the fittings and seals in the manufacturer declaration of this document.

## **2 3-A-/EHEDG-Standards - Meaning and implementation**

### **Meaning of 3-A**

3-A Sanitary Standards Incorporation (SSI) in the USA sets standards for materials, design and manufacturing methods for components used in hygienic processes. The organization also monitors compliance with the hygienic design of these components. Conformity is verified by an independent third party CCE (Certified Conformance Evaluator). In the case of conformity, 3-A SSI issues a symbol license for the 3-A logo.

### **Meaning of EHEDG**

The European Hygienic Engineering & Design Group (EHEDG) is a consortium of equipment and food manufacturers, food industry suppliers, research institutes and universities. The main objective is to promote safe food by improving hygiene technology and design in all areas of food production. To this end, the EHEDG has drawn up guidelines for the hygienic design of machines and plants as well as the infrastructure of food production.

### **Use of instruments according to EHEDG and 3-A**

For use in the food sector according to EHEDG or 3-A, special requirements apply compared to standard applications. This applies in particular to:

- Version of the housing (e.g. easy cleaning)
- Configuration of the process fitting (e.g. visibility of possible leakage)
- Seals (e.g. according to FDA and EG1935/2004, or resistant to process and cleaning media)
- Installation position on the vessel (e.g. self-drainage)
- Cleaning and maintenance (e.g. intervals, methods)

The EHEDG and 3-A logos prove that the device version has been tested and certified. The certificate always refers to a combination of sensor and process fitting.

**Process fittings****3 Instrument versions**

Only process fittings listed in chapter " *Manufacturer declaration*" may be used for installations according to 3-A/EHEDG standards.

They meet the hygienic requirements of EHEDG Doc. 2, Doc. 8, Doc. 10 and the 3-A Standard No. 74, including the requirement for self-drainage in the event of a leak in the device seal.

## 4 Mounting

Note the following items for a measuring point according to EHEDG or 3-A standard:

- All parts of the measuring point must comply with 3-A/EHEDG
- The mounting position must allow the self-drainage of the sensor as well as the hole for leakage detection
- The hole for leakage detection in the process fitting must be visible after mounting and possibly point vertically downward
- Welded connections must have a surface roughness  $R_a \leq 0.8 \mu\text{m}$
- Welding sockets must be welded flush with the inside of the vessel. The welding standard AWS D18.3 must be observed for hygienic welding.

### Installation position

In horizontal pipelines, avoid mounting in the upper or lower area of the pipe (see exclusion and limitation in the figure below).

In the upper part of the pipe cavities can form due to air inclusions.

In horizontal pipelines, lateral installation is therefore recommended.

The sensor is optimized for CIP cleaning and does not have to be removed for cleaning.

If the sensor is cleaned manually, do not use tools that damage the PEEK surface of the sensor tip.

When selecting the mounting, make sure that the sensor is positioned so that it empties itself.

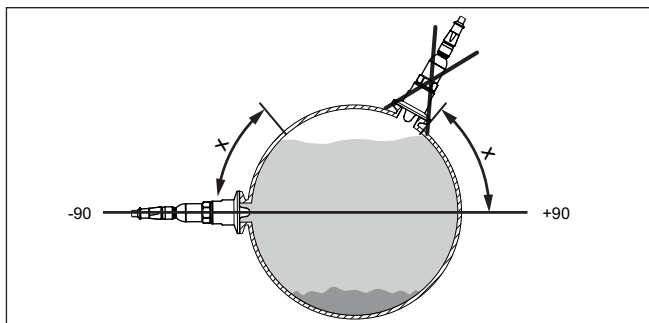


Fig. 1: Installation in horizontal pipelines

x Recommended mounting area

For vertical pipelines, make sure that the sensor is installed as flush as possible.

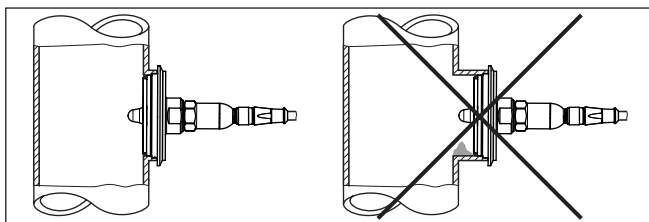


Fig. 2: Installation in vertical pipelines

### Hygienic adapter

When installing the hygienic adapter, make sure that the hole for leakage detection in the process fitting is at the lowest possible point. See the figure below:

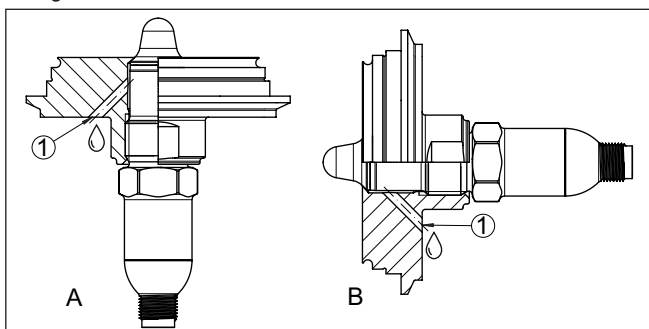


Fig. 3: Orientation of the welded socket

A Hole for leakage detection on the welding socket

B Mounting direction downwards

1 Mounting direction lateral - Leakage hole directed downwards

### Mounting the sensor

For sensor mounting proceed as follows:

1. Avoid contamination when mounting the sensor.  
Therefore, only remove the sensor from its packaging shortly before mounting and, in particular, check the sensor tip for damage.
2. Grease the thread of the sensor thinly with a suitable grease (e.g. NSF H1 or according to FDA 21 CFR 178.3570).
3. Screw in the sensor carefully by hand.

The VEGAPOINT 11, 21, 31 in hygienic version seals elastomer-free without special seal in the area of the sensor tip.

It is therefore essential that you observe the prescribed torque. This leaves a small gap (1) below the hexagon.

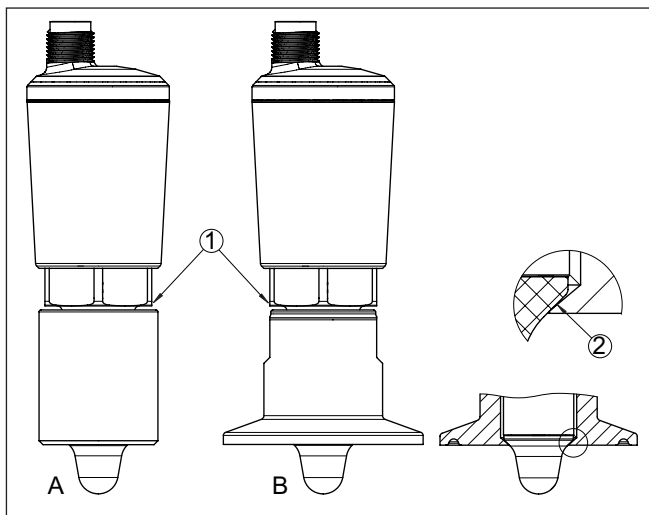


Fig. 4: VEGAPOINT 11, 21, 31 in hygienic version

1 Below the hexagon remains a gap

2 Detail of the sealing edge

A Hygienic version with welding adapter

B Hygienic version with clamp adapter



**Note:**

The sealing effect of the sensor is optimal when first screwed in. We therefore recommend not screwing in the sensor for test purposes.

Before further screwing in, check the sensor tip for damage such as notches or grooves. If in doubt, replace the sensor with a new one.

4. Tighten the sensor on the hexagon with a torque of 20 Nm (14.75 lbf ft).
5. The sensor is mounted.

## 5 Maintenance, cleaning, proper use

### Maintenance

It is the responsibility of the user to ensure the hygienically safe condition of the sensor during its entire service life.

Leaks in a gasket represent a hygienic risk. To avoid this, they should be checked regularly for damage. Sensor and process adapter form a unit and should be removed together during an inspection. The accessible surface of the sensor must be carefully cleaned.

The user plans the intervals according to the process conditions.

For variants with an O-ring seal, we recommend replacement after 5000 operating hours, at least once a year or after 500 sterilisation or cleaning cycles. When replacing the O-ring (relevant for process fitting AF), do not use any metallic tools.

The O-ring seal is designed so that it can be pressed out of the seal groove by hand with a little force. Before fitting the new seal, thinly grease the seal groove with a suitable grease (e.g. NSF H1 or FDA 21 CFR 178.3570). The O-ring can then be pressed into the seal groove.

We recommend using O-rings for a quick change of the seal. The EPDM O-ring 70.10-02 from Angst & Pfister for process fitting LX measures 21.82 x 3.53 mm (VEGA article number 2.28170).

### Cleaning

The sensor is optimized for CIP cleaning and does not have to be removed for the cleaning.

When installing in the tank, make sure that the cleaning fitting is positioned so that the connection as well as the sensor can be completely wetted and cleaned.

If a validation without removal is not possible, it is recommended to remove the unit to ensure successful cleaning.

It is the responsibility of the user to ensure the resistance of the sealing material and the sensor against the product and the cleaning process. This is based on resistance lists and the technical data of the respective sensor.

If the area behind the seal becomes dirty, soak this area with a suitable cleaner and then clean it with a suitable cleaning utensil that does not damage the stainless steel.

### Intended use

Salty and acidic foodstuffs such as seasoning concentrates, as well as strongly oxidizing or chlorine-containing cleaning agents, especially at high temperatures and longer exposure times, can also lead to corrosion of stainless steel.

The sensor tip in contact with the medium is made of PEEK Victrex 450G. The material is also suitable for frequent steam sterilization and hydrolysis resistant to water, steam and salt water. Details on the resistance can be found on the Victrex website.

In order to maintain hygienic integrity, regular visual inspection of the parts in contact with the medium and, if necessary, replacement are recommended.

## 6 Manufacturer declaration

### 6.1 3-A

#### Standard 74

We hereby declare that the instrument and process fitting combinations of the following versions of VEGAPOINT 11, 21 meet the requirements of 3-A standard 74.

#### VEGAPOINT 11, 21 with hygienic adapter P

In version: P11(\*).[A or D][AC]\*

In version: P21(\*).\*\*\*\*[A or D][AC]\*\*\*

- In conjunction with the hygienic adapters
  - HYGADAPT-P(\*).D[AT, AR, U5, E2, E3, BA, AD, AC, KA, Q6, KW, FR, FS or 7F]

#### VEGAPOINT 11, 21 with hygienic adapter L

In version: P11(\*).[A or D][AF]\*

In version: P21(\*).\*\*\*\*[A or D][AF]\*\*\*

- In conjunction with the hygienic adapters
  - HYGADAPT-L(\*).D[AT, AR, E2, E3, BA, AD, AC, Q6, KW, FR, FS or 7F]

#### VEGAPOINT 21

In version: P21(\*).\*\*\*\*[A or D][AN, AP or AQ]\*\*\*

### 6.2 EHEDG

We hereby declare that the instrument and process fitting combinations of the following versions of VEGAPOINT 11, 21, 31 meet the requirements of EHEDG Doc. 2, Doc. 8, Doc. 10.

#### VEGAPOINT 11, 21, 31 with hygienic adapter P

In version: P11(\*).D[AC]\*

In version: P21(\*).\*\*\*\*D[AC]\*\*\*

In version: P31(\*).\*\*\*\*D[AC]\*\*\*

- In conjunction with the hygienic adapters
  - HYGADAPT-P(\*).D[U5, E2, E3, BA, AD, AC, KA, Q6, KW, FR, FS or 7F]
  - HYGADAPT-P(\*).D[AT or AR] only in combination with Clamp seals Combifit International B.V., The Netherlands

#### VEGAPOINT 21, 31

In the version: P21(\*).\*\*\*\*D[AN, AP or AQ]\*\*\* in combination with Clamp seals Combifit International B.V., The Netherlands

In the version: P31(\*).\*\*\*\*D[AN, AP or AQ]\*\*\* in combination with Clamp seals Combifit International B.V., The Netherlands

## 7 3-A certificate

ISSUE DATE: December 19, 2013

CERTIFICATE AUTHORIZATION NUMBER: 1731



THIS IS TO CERTIFY THAT

VEGA Grieshaber KG

Am Hohenstein 113, Schiltach 77761, Germany

is hereby authorized to continue to apply the  
3-A Symbol to the models of equipment, conforming to 3-A Sanitary Standards for:

Number 74-07

74-07 (Sensors and Sensor Fittings and Connections)

set forth below

CIP Models:

VEGAFLEX 83 model FX83(\*\*).\*\*abbC\*\*d\*\*M  
(a = F, H, G, I), (bb = LJ, LB, LC, LD, LA), (d = 8, Z)

VEGAPULS 63 model PS63(\*\*).\*\*Nbb\*d\*\*X  
(bb = CA, CB, CC, CD, DC, DD, LC, EC, LK), (d = 8, Z)

VEGAPULS 64 model PS64(\*\*).\*\*abbc\*\*d\*\*\*M  
(a = H, I), (bb = CA, CB, CC, CD, DC, DD, LC, EC, LK), (c = I, J), (d = 8, Z)

VEGASWING 61 model SWING61(\*\*).\*\*bbbd\*\*(\*);

VEGASWING 63 model SWING63(\*\*).\*\*bbbd\*\*  
(bbb = CAA, CB1, CAD, CFP, CDP, LFV, CEP, CAP, LDP, LCP, SGD, SHP,  
SKA, SK2, SK5, SK6, SLN, SLP, S7P, LAP, RAC, RBC, RCA, RDI, RFP, RDA,  
RDP, RSP, RWP, TAP, TAA, TAY, TNP, CA1, CAN, CDN, CG1, CEN, LAN, TAN,  
CBP, RGP, RCI, CA2, CBN, CBB, CBA, CAB, LHP)  
(d = X, T, G);

Weld-in sockets VEGA Hygienic Connection (code LAN and LAP for SWING61(\*\*), and  
SWING63(\*\*).) Weld-in socket ESTA.LA3\*\*\*

VEGABAR 82 model B/(\*)82.\*\*bbc\*\*\*\*\*M

(bb = ES, UX, FR, FS, AR, AW, AS, E2, AD, AC, HF, AX, KO, HQ, KW, ES, FF, PS);  
(c = D, F, G, P, Q)

VEGABAR 83 model B/(\*)83.\*\*bbc\*\*\*\*\*M

(bb = E2, E3, FR, FS, AR, AT, TE, KY, AW, AS, AC, KW, ES, Q4, Q6, FF, LX),  
(c = S, 3, P, E, C, Q, F, N, H, T)

Additional options for VEGABAR only: weld-in socket VEGA Hygienic Connection ES, model codes  
WDSB80.ESM\*G\*\*M and WDSB80.UXM\*G\*\*M;

VEGAPOINT 11 model P11(\*\*).aAC\* and VEGAPOINT 21, model P21(\*\*).\*\*\*\*aAC\*\*

(a = A or D) with adapters:

HYGADAPT-P.acc (a = A or D), (cc = AT, AR, U5, E2, E3, BA, AD, AC, KA, Q6, KW, FR, FS, 7F).

VEGAPOINT 21 model P21(\*\*).\*\*\*\*aAb\*\*\*\* (a = A, D), (b = C, N, P, Q, F);  
 VEGAPOINT 11 model P11(\*\*).aAF\* and VEGAPOINT 21 model P21(\*\*).\*\*\*\*aAF\*\*\*  
 with adapters HYGADAPT-L.acc (a = A, D), (cc = AT, AR, E2, E3, AD, AC, Q6, KW, FR, FS, 7F)

VEGABAR 29, model B29(\*\*).\*\*\*abb\*\*\*\* and  
 VEGABAR 39, model B39(\*\*).\*\*\*abb\*\*\*\*  
 (a = A or D), (bb = AV, AT, AR, FR, FS, E2, U5);

VEGABAR 29, model B29(\*\*).\*\*\*aLX\*\*\*\* and  
 VEGABAR 39, model B39(\*\*).\*\*\*aLX\*\*\*\* (a = A, D);  
 with HYGADAPT-L.acc (a = A or D), (cc = AT, AR, E2, E3, AD, AC, Q6, KW, FR, FS, 7F).

VALID THROUGH: **December 31, 2021**

Timothy R. Rugh  
 Executive Director  
 3-A Sanitary Standards, Inc.

The issuance of this authorization for the use of the 3-A Symbol is based upon the voluntary certification, by the applicant for it, that the equipment listed above complies fully with the 3-A Sanitary Standard(s) designated. Legal responsibility for compliance is solely that of the holder of this Certificate of Authorization, and 3-A Sanitary Standards, Inc. does not warrant that the holder of an authorization at all times complies with the provisions of the said 3-A Sanitary Standards. This in no way affects the responsibility of 3-A Sanitary Standards, Inc. to take appropriate action in such cases in which evidence of nonconformance has been established.

NEXT TPV INSPECTION/REPORT DUE: **October 2023**

ISSUE DATE: June 04, 2003

CERTIFICATE AUTHORIZATION NUMBER: 1260



THIS IS TO CERTIFY THAT

VEGA Americas, Inc.

4241 Allendorf Drive, Cincinnati, OH 45209

is hereby authorized to continue to apply the  
3-A Symbol to the models of equipment, conforming to 3-A Sanitary Standards for:

Number 74-07

74-07 (Sensors and Sensor Fittings and Connections)

set forth below

CIP Model(s):

VEGAFLEX 83 model FX83(\*\*).\*\*abbC\*\*d\*\*M  
(a = F, H, G, I), (bb = LJ, LB, LC, LD, LA), (d = 8, Z)

VEGAPULS 63 model PS63(\*\*).\*\*Nbb\*d\*\*X  
(bb = CA, CB, CC, CD, DC, DD, LC, EC, LK), (d = 8, Z)

VEGAPULS 64 model PS64(\*\*).\*\*abbc\*\*d\*\*\*M  
(a = H, I), (bb = CA, CB, CC, CD, DC, DD, LC, EC, LK), (c = I, J), (d = 8, Z)

VEGASWING 61 model SWING61(\*\*).\*\*bbbd\*\*(\*);

VEGASWING 63 model SWING63(\*\*).\*\*bbbd\*\*

(bbb = CAA, CB1, CAD, CFP, CDP, LFV, CEP, CAP, LDP, LCP, SGD, SHP,  
SKA, SK2, SK5, SK6, SLN, SLP, S7P, LAP, RAC, RBC, RCA, RDI, RFP, RDA,  
RDP, RSP, RWP, TAP, TAA, TAY, TNP, CA1, CAN, CDN, CG1, CEN, LAN, TAN,  
CBP, RGP, RCI, CA2, CBN, CBB, CBA, CAB, LHP)  
(d = X, T, G);

Weld-in sockets VEGA Hygienic Connection (code LAN and LAP for SWING61(\*\*). and  
SWING63(\*\*).) Weld-in socket ESTAL3\*\*\*

VEGABAR 82 model B/(\*)82.\*\*bbc\*\*\*\*\*M

(bb = ES, UX, FR, FS, AR, AW, AS, E2, AD, AC, HF, AX, KO, HQ, KW, ES, FF, PS);  
(c = D, F, G, P, Q)

VEGABAR 83 model B/(\*)83.\*\*bbc\*\*\*\*\*M

(bb = E2, E3, FR, FS, AR, AT, TE, KY, AW, AS, AC, KW, ES, Q4, Q6, FF, LX),  
(c = S, 3, P, E, C, Q, F, N, H, T)

Additional options for VEGABAR only: weld-in socket VEGA Hygienic Connection ES, model codes  
WDSB80.ESM\*\*G\*\*M and WDSB80.UXM\*\*G\*\*M;

VEGAPOINT 11 model P11(\*\*).aAC\* and VEGAPOINT 21, model P21(\*\*).\*\*\*\*aAC\*\*

(a = A or D) with adapters:

HYGADAPT-P.acc (a = A or D), (cc = AT, AR, U5, E2, E3, BA, AD, AC, KA, Q6, KW, FR, FS, 7F).

VEGAPOINT 21 model P21(\*\*).\*\*\*\*aAb\*\*\*\* (a = A, D), (b = C, N, P, Q, F);  
 VEGAPOINT 11 model P11(\*\*).aAF\* and VEGAPOINT 21 model P21(\*\*).\*\*\*\*aAF\*\*\*  
 with adapters HYGADAPT-L.acc (a = A, D), (cc = AT, AR, E2, E3, AD, AC, Q6, KW, FR, FS, 7F)

VEGABAR 29, model B29(\*\*).\*\*\*abb\*\*\*\* and  
 VEGABAR 39, model B39(\*\*).\*\*\*abb\*\*\*\*  
 (a = A or D), (bb = AV, AT, AR, FR, FS, E2, U5);

VEGABAR 29, model B29(\*\*).\*\*\*aLX\*\*\*\* and  
 VEGABAR 39, model B39(\*\*).\*\*\*aLX\*\*\*\* (a = A, D);  
 with HYGADAPT-L.acc (a = A or D), (cc = AT, AR, E2, E3, AD, AC, Q6, KW, FR, FS, 7F).

VALID THROUGH: **December 31, 2021**

Timothy R. Rugh  
 Executive Director  
 3-A Sanitary Standards, Inc.

The issuance of this authorization for the use of the 3-A Symbol is based upon the voluntary certification, by the applicant for it, that the equipment listed above complies fully with the 3-A Sanitary Standard(s) designated. Legal responsibility for compliance is solely that of the holder of this Certificate of Authorization, and 3-A Sanitary Standards, Inc. does not warrant that the holder of an authorization at all times complies with the provisions of the said 3-A Sanitary Standards. This in no way affects the responsibility of 3-A Sanitary Standards, Inc. to take appropriate action in such cases in which evidence of nonconformance has been established.

NEXT TPV INSPECTION/REPORT DUE: **October 2022**

## 8 EHEDG certificate

CERTIFICATE OF COMPLIANCE



**EL Class I**

*Date of issue: 18 July 2019*

*Valid until: 31 December 2020*

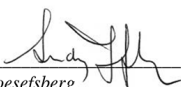
*EHEDG hereby declares that the product*  
***level switch type VEGAPOINT 11, 21, 31 with PEEK cap***

*from*

*VEGA Grieshaber KG, Am Hohenstein 113, 77761 Schiltach, Germany*

*has/have been evaluated for compliance and meets/meet the current criteria for*  
*Hygienic Equipment Design of the EHEDG*

***Certificate No. EHEDG-C1900019***

Signed  President EHEDG  
 Ludvig Joesefsberg

Signed  EHEDG Certification Officer  
 Mirjam Steenaard

*EHEDG Secretariat*  
*Lyoner Straße 18*  
*60528 Frankfurt am Main*  
*Germany*

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## Appendix 3

## EHEDG Certification – Equipment Evaluation Form

Date: 18.06.2019

EHEDG File Number: EHEDG-C1900019

Certification Type: EL CLASS I

Applicant: VEGA Grieshaber KG

Equipment: Level switch for point level detection

Type or model No/s.: VEGAPOINT 11, 21, 31 with PEEK cap

Other essential identification:

**Evaluated by:**

Name: Dr. Jürgen Hofmann

**Approved by:**

Name: Nicolas Rossi

Title: [AEO]

Date, Signature: 19/09/19



1. Results of inspection for compliance with the EHEDG Hygienic Design Criteria.

Conclusion:

**The equipment complies with the criteria.**YES ☐**The use of the EHEDG Certification logo is justified:**MAYBE ☒

2. Evidence for compliance provided and convincing for Certification.

Conclusion:

**The equipment complies with the criteria where possible.**YES ☒**The use of the EHEDG Certification logo is justified:**

Signature:



Date: 17.09.2019

*The original of this form will be kept by EHEDG together with the application, the inspection report, the evidence provided and any other relevant documentation, as listed on the back.*

### Appendix 3

| No. | Description  |
|-----|--|
| 1.  | EHEDG Certificate of Compliance  |
| 2.  | Contract to use the EHEDG Certification Logo for equipment   |
| 3.  | Appendix 1: Equipment intended for cleaning-in-place with liquids without dismantling                              |
| 4.  | Appendix 2: conditions for use of the EHEDG Certification Logo   |
| 5.  | Appendix 3: Equipment evaluation form  |
| 6.  | Evaluation report of the design of the level switch type VEGAPOINT 11, 21, 31 with PEEK cap, no. 664TUM2019        |
| 7.  | Drawing of the level switch type VEGAPOINT 11, 21, 31 with PEEK cap, drawing nos. GE4153, GE4028; original stamped |
| 8.  | Test report of the in-place cleanability test method, 666/22.02.2019   |
| 9.  | Example of EHEDG Certified Logo Type EL CLASS I  |





Printing date:

# VEGA

All statements concerning scope of delivery, application, practical use and operating conditions of the sensors and processing systems correspond to the information available at the time of printing.

Subject to change without prior notice

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