



# Safety Instructions

## VEGASON SN6\*.UX

FM16US0400X



Document ID: 30863



# VEGA



# CERTIFICATE OF CONFORMITY

1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**

2. **Certificate No:** FM16US0400X
3. **Equipment:** VEGASON Models 61 & 62 Series  
**(Type Reference and Name)** Ultrasonic Level Transmitters
4. **Name of Listing Company:** VEGA Grieshaber KG
5. **Address of Listing Company:** Am Hohenstein 113  
Schiltach, D-77761  
Germany

6. The examination and test results are recorded in confidential report number:

3020088 dated 23<sup>rd</sup> December 2004

7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM Class 3600:2011, FM Class 3610:2010, FM Class 3611:2004, FM Class 3616:2011,  
FM Class 3810:2005, ANSI/ISA 60079-0:2009, ANSI/ISA 60079-11:2009, ANSI/ISA 61010-1:2004,  
ANSI/NEMA 250:1991, ANSI/IEC 60529:2004

8. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.
9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

**Certificate issued by:**



J. E. Marquedant  
Manager, Electrical Systems

19 April 2017  
Date

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA  
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: [information@fmaprovals.com](mailto:information@fmaprovals.com) [www.fmaprovals.com](http://www.fmaprovals.com)

F 347 (Mar 16)

Page 1 of 5

**SCHEDULE**

US Certificate Of Conformity No: FM16US0400X

## 10. Equipment Ratings:

## I. VEGASON IS (Div 1) Version

Intrinsically Safe Apparatus for use in Class I, Division 1 or 2, Groups A, B, C & D, Class II, Division 1 or 2, Groups E, F & G, Class III, Division 1 or 2, in accordance with manufacturer's Control Drawing; Intrinsically Safe Apparatus AEx ia for use in Class I, Zone 0, Zone 1, or Zone 2, Group IIC, in accordance with manufacturer's Control Drawing; Intrinsically Safe Apparatus with Fieldbus Intrinsically Safe Concept Wiring for use in Class I, Division 1 or 2, Groups A, B, C & D, Class II, Division 1 or 2, Groups E, F & G, Class III, Division 1 or 2, in accordance with manufacturer's Control Drawing; Intrinsically Safe Apparatus AEx ia with Fieldbus Intrinsically Safe Concept Wiring for use in Class I, Zone 0, Zone 1, or Zone 2, Group IIC, in accordance with manufacturer's Control Drawing; Nonincendive Apparatus for use in Class I, Division 2, Groups A, B, C & D, Class II, Division 2, Groups F & G, Class III, Division 1 or 2; Nonincendive for use in Class I, Zone 2, Group IIC hazardous (classified) locations, Type 4X/6P and IP66

## II. VEGASON DIP &amp; NI (Div 1 &amp; 2) Version

Dust Ignitionproof Apparatus for use in Class II, Division 1 or 2, Groups E, F & G; Class III, Division 1 or 2; Nonincendive Apparatus for use in Class I, Division 2, Groups A, B, C & D, Class II, Division 2, Groups F & G, Class III, Division 1 or 2; Nonincendive for use in Class I, Zone 2, Group IIC hazardous (classified) locations, Type 4X/6P and IP66

## 11. The marking of the equipment shall include:

## I. VEGASON IS (Div 1) Version

IS CL I,II,III DIV 1 GP ABCDEFG CL I Zone 0 AEx ia IIC (T4 @ 80°C, T5 @ 80°C or T6 @ 70°C)\*\*  
Intrinsically Safe per Dwg GE2158 Entity  
FISCO\*\*\* Field Device per Dwg GE2308  
Type 4X/6P\*, IP66

## II. VEGASON DIP &amp; NI (Div 1 &amp; 2) Version

CL II,III DIV 1 GP EFG Ta = -40°C to 80°C  
CL I Zone 2\*\*\*\* AEx nA IIC (T4 @ 80°C, T5 @ 80°C or T6 @ 70°C)\*\*  
CL I DIV 2\*\*\*\* GP ABCD  
CL II,III DIV 2\*\*\*\* GP FG  
Type 4X/6P\*, IP66

\* Enclosure Type 6P rating is available only for Housing options K and V

\*\* For Indicator Control Module (PLICSCOM) options A or B, T5 at Ta = 80 °C; for option X, T6 at Ta = 70 °C

\*\*\* FISCO certification available only for Electronics options F or P

\*\*\*\* Non-Incendive for Class I Div 2 and Zone 2 is available only for "Indicator Control Module (PLICSCOM)" model codes A, B, and X

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA

T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: [information@fmaprovals.com](mailto:information@fmaprovals.com) [www.fmaprovals.com](http://www.fmaprovals.com)

F 347 (Mar 16)

Page 2 of 5

**SCHEDULE**



US Certificate Of Conformity No: FM16US0400X

**12. Description of Equipment:**

**General** - The VEGASON 61 and 62 Series Ultrasonic Level Transmitters are used for non-contact and continuous distance measurement. The VEGASON utilizes ultrasonic technology to measure level. It emits a signal from its ultrasonic sensor to the targeted process medium to be measured, and the reflected signal bounces off the process medium and is received and processed by the VEGASON, then output as an electrical signal proportional to the level measured. The VEGASON is designed to measure solids as well as liquids and also has an optional LCD display that is integrally mounted.

Adjustments can be made with an optional PLICSCOM internal display. The PLICSCOM connects inside the VEGASON into a spring connector moulded into the top of the communication/signal processing assembly specifically designated for the PLICSCOM. Access to the PLICSCOM requires the enclosure to be opened.

**Construction** - The circuitry for the VEGASON is contained on a multiple printed circuit board that is mounted and encapsulated into two plastic shells, one for the communication and signal processing and another for the sensor assembly. The communication/signal processing shell is mounted inside an enclosure and the sensor shell mounts to the outside bottom. There are four variations of the enclosure for the VEGASON series, one polycarbonate, one Stainless Steel, and two Aluminum versions. Both versions of the Aluminum enclosure provide two cover options, one with a window for the PLICSCOM internal display, and the standard cover without a window. The standard single chamber Aluminum enclosure contains a single cover on the top of the enclosure. The double chamber version of the enclosure is a double compartment housing with two thread-on covers, a solid and a windowed. The electronics enclosure is mounted directly to the sensing element. This enclosure has a tool secured access cover. The enclosure are supplied with two conduit openings that are either 1/2 NPT or M20 for field wiring purposes.

**Ratings** - The VEGASON communicates with conventional 4...20 mA current loop, HART, Fieldbus and Profibus. The 4...20 mA / HART version operates at 36 VDC. The Fieldbus and Profibus versions operate on a supply of 26 VDC. Refer to GE2158 and GE2308 for IS Entity and FISCO parameters, respectively.

I. VEGASON IS (Div 1) Version

**SN 6a.Ubcdefgh, Level Measuring Equipment.**

- a = Configuration: 1, 2, 1Y or 2Y
- b = Agency Approval: F
- c = Version: A
- d = Two character code representing process connection (ASME, DIN, G, LA, NPT or TRI-CLAMP), material process connection, material transducer and pressure ratings
- e = Electronics: F, H or P
- f = Housing Type: A, D, K or V
- g = Cable Entry: M or N
- h = Indicator Control Module (PLICSCOM): A, B or X

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA  
 T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: [information@fmaprovals.com](mailto:information@fmaprovals.com) [www.fmaprovals.com](http://www.fmaprovals.com)

F 347 (Mar 16)

Page 3 of 5

30863-EN-170427

**SCHEDULE**

US Certificate Of Conformity No: FM16US0400X

## II. VEGASON DIP &amp; NI (Div 1 &amp; 2) Version

**SN 6a.Ubcdefgh, Level Measuring Equipment.**

a = Configuration: 1, 2, 1Y or 2Y

b = Agency Approval: X

c = Version: A

d = Two character code representing process connection (ASME, DIN, G, LA, NPT or TRI-CLAMP), material process connection, material transducer and pressure ratings

e = Electronics: F, H or P

f = Housing Type: A, D, K or V

g = Cable Entry: M or N

h = Indicator Control Module (PLICSCOM): X, A, B, K, U, L, S or F

13. **Specific Conditions of Use:**

## I. VEGASON IS (Div 1) Version

1. Potential Electrostatic Charging Hazard – The enclosure is constructed from plastic. To prevent the risk of electrostatic sparking the plastic surface should only be cleaned with a damp cloth.
2. Enclosures containing Aluminum constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.

## II. VEGASON DIP &amp; NI (Div 1 &amp; 2) Version

1. Potential Electrostatic Charging Hazard – The enclosure is constructed from plastic. To prevent the risk of electrostatic sparking the plastic surface should only be cleaned with a damp cloth.

14. **Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

15. **Schedule Drawings**

A copy of the technical documentation has been kept by FM Approvals.

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA

T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: [information@fmaprovals.com](mailto:information@fmaprovals.com) [www.fmaprovals.com](http://www.fmaprovals.com)

F 347 (Mar 16)

Page 4 of 5



**SCHEDULE**



US Certificate of Conformity No: FM16US0400X

**16. Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
23 <sup>rd</sup> December 2004	Original Issue.
19 <sup>th</sup> April 2017	<p><b>Supplement 9:</b>                      Report Reference: - RR208970 dated 19<sup>th</sup> April 2017                      Description of the Change: Drawing and model code listing changes to incorporate additional "Indicator Control Module (PLICSCOM)" display electronics options K, U, L, S, and F for non-IS/NI versions. FM Class 3616:2011 standard is added per evaluation satisfactorily conducted for Projects 3045925 and 3054428.                      Temperature ratings were clarified on labels. Changes do not affect safety nor types of protection.</p>

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA  
 T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: [information@fmaprovals.com](mailto:information@fmaprovals.com) [www.fmaprovals.com](http://www.fmaprovals.com)

F 347 (Mar 16)

Page 5 of 5

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

© VEGA Grieshaber KG, Schiltach/Germany 2017



30863-EN-170427

VEGA Grieshaber KG  
Am Hohenstein 113  
77761 Schiltach  
Germany

Phone +49 7836 50-0  
Fax +49 7836 50-201  
E-mail: [info.de@vega.com](mailto:info.de@vega.com)  
[www.vega.com](http://www.vega.com)