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Translation

EU-Type Examination Certificate Supplement 4

Change to Directive 2014/34/EU

- 2 Equipment intended for use in potentially explosive atmospheres Directive 2014/34/EU
- 3 EU-Type Examination Certificate Number: BVS 04 ATEX E 079 X
- 4 Product: Vibrating level switch type VEGAVIB VB6(*).*******
- 5 Manufacturer: VEGA Grieshaber KG
- 6 Address: Am Hohenstein 113, 77761 Schiltach, Germany
- This supplementary certificate extends EC-Type Examination Certificate No. BVS 04 ATEX E 079 to apply to products designed and constructed in accordance with the specification set out in the appendix of the said certificate but having any acceptable variations specified in the appendix to this certificate and the documents referred to therein.
- DEKRA Testing and Certification GmbH, Notified Body number 0158, 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 the confidential Report No. BVS PP 04.2087 EU.
- The Essential Health and Safety Requirements are assured in consideration of

EN IEC 60079-0:2018 General requirements
EN 60079-31:2014 Protection by Enclosure "t"

Except in respect of those requirements listed under item 18 of the appendix

- 10 If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Special Conditions for Use specified in the appendix to this certificate.
- 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:

€ ii

II 1D Ex ta IIIC T* Da or II 1/2 D Ex ta/tb IIIC T* Da/Db or II 2D Ex tb IIIC T* Db

IP66 * see manual

DEKRA Testing and Certification GmbH Bochum, 2019-04-15

Signed: Jörg-Timm Kilisch



Managing Director

Page 1 of 5 of BVS 04 ATEX E 079 X / N4
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DEKRA Testing and Certification GmbH, Handwerkstr, 15, 70565 Stuttgart, Germany Certification body: Dinnendahistr, 9, 44809 Bochum, Germany Phone +49, 234, 3596-400, Fax +49, 234, 3596-401, e-mail DTC-Certification-body@dekra.com

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- 13 Appendix
- 14 EU-Type Examination Certificate

BVS 04 ATEX E 079 X Supplement 4

- 15 Product description
- 15.1 Subject and type

Vibrating level switch type VEGAVIB VB6*(*). Further criteria, without relevance for explosion protection cable entry = M20x1.5M N 1/2NPT * additional suitable cable glands and plug connections enclosure - type of protection aluminium enclosure IP66 special color electronics contactless switch AC/DC 20...253 V С R = relay output DC 20,..72 V / AC/20,..253 V floating transistor (NPN/PNP) DC 10...55 V T Z = two-wire (intrinsic safe version) N NAMUR EN60947-5-7-6 process connection see manual version/temperature range/ material standard/-40 °C...150 °C/1.4435(316L) B with adapter/ -40 °C ... 250 °C/1.4435(316L) C detection of solids in water/-40 °C/...150 °C/1 4435(316L) with Carbocer coating; minimizing buildup no protection against corrosion/abrasion / -40 °C ... +150 °C with Carbocer coating; minimizing buildup no protection against corrosion/abrasion / -40 °C...+250 °C detection of solids in water, with Carbocer coating; minimizing buildup, no protection against corrosion/abrasion / -40 °C...+150 °C CK = ATEX II 1G, 1/2G, 2G Ex ia IIC T6/1 ATEX II 1D, 1/2D, 2D Ex ta, ta/tb, tb IIIC T... IP66 GX = ATEX II 1D, 1/2D, 2D Ex ta, ta/tb, tb IIIC T... IP66 LK = ATEX II 1/2G, 2G Ex d IIC T6 1 ATEX II 1D, 1/2D, 2D Ex ta, ta/tb, tb IIIC T... IP66 optional version differentiation, without relevance for explosion protection 1.3.5.7



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¹ The assessment for use in explosive gas atmospheres is <u>not</u> part of this certificate.

Vibrating level switch type VEGAVIB VB6*(*), * * * * *

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Further criteria, without relevance for explosion protection cable entry = M20x1.5= 1/2NPT N enclosure - type of protection aluminium enclosure IP66 special color electronics C = contactless switch AC/DC 20...253 V R relay output DC 20...72 V / AC 20...253 V Т floating transistor (NPN/PNP) DC 10...55V Ζ two-wire (intrinsic safe version) NAMUR ÈN60947-5-7-6 process connection see manual version/temperature range/ material T rope PUR/-40 °C...80 °C/1.4435(316L) C detection of solids in water / -20 °C ...+80/°C K cable PUR / -20 °C ... +80 °C / with Carbocer coating minimizing buildup, no protection against corresion/abrasion cable FEP / -40 °C ... +150 °C / with Carbocer coating; minimizing buildup, no protection against corresion/abrasion detection of solids in water / -20 °C ... +80 °C // with Carbocer coating; minimizing buildub. no protection against corrosion/abrasion CK/= ATEX II 1G. 1/2G. 2G Ex ia IIC /T6/ ATEX II 1D / 1/2D / 2D Ex ta / ta/tb / tb III C/T / / IP66 ATEX II 1D, 1/2D, 2D/Ex ta/ta/tb/tb/IIIC/T/...IP66 GX /= optional version differentiation, without relevance for explosion protection 2.6

15.2 Description

With this supplement the certificate is changed to Directive 2014/34/EU. (Annotation: In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary

may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

Reason for the supplement:

Change to Directive 2014/34/EU Update to standard EN IEC 60079-0:2018 Change of marking Change of drawing details Slight Change of electronic components



Page 3 of 5 of BVS 04 ATEX E 079 X / N4
This certificate may only be reproduced in its entirety and without any change.

¹ The assessment for use in explosive gas atmospheres is <u>not</u> part of this certificate

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Description of Product

The Vibrating Level Switch type VEGAVIB VB6*(*).******* is used for level monitoring, controlling and regulating in silos with dust generating material.

The probe of the Vibrating Level Switch vibrates at its mechanical resonant frequency. In case the probe is covered with material, the vibration is damped and a signal is generated.

- 15.3 **Parameters**
- 15.3.1 Electrical data
- 15.3.1.1 Type VEGAVIB VB6*(*), GX/LK**C** with electronics insert VB60C built in

supply voltage	DC/AC 20	253	V
output	contactless switch		
current	<	5	mA
load current	min.	10 🔏	mA
	max.	400	mA
Maximum short circuit current Ica		100	A

15.3.1.2 Type VEGAVIB VB6*(*) GX/I K**R** with electronics insert VB60R built in

supply voltage	AC ///20,253///	//V/(3A
or	DC ///20/72///	// \V /////
power consumption	18 VA, max.//1/6/	// \\\
relay circuit max, values:	253 X/ 3 A	///////////////////////////////////////
max. values.	253 V, 1 A, //41//	/\\\\\
Maximum short circuit current les	///////////////////////////////////////	///4////

15.3.1.3 Type VEGAVIB VB6*(*).GX/LK**T** with electronics insert VB60T built in

supply voltage	//////\DC////	10././55///	X.
power consumption	//////max////	/10././55/ ////0.5/	/W/
load current	//////max////	////400///	/mA
Maximum short circuit current Icn////////////////////////////////////	97/1///////////////////////////////////	////1,00///	/A//
111111111111111111111111111111111111111		///////////////////////////////////////	// 1/1/18/

15.3.1.4 Type VEGAVIB VB6*(*).GX/CK**Z** with intrinsically safe electronics insert VB60Z built in

> in type of protection Intrinsic Safety Ex ia IIC Supply and signal circuit only for connection to a certified intrinsically safe circuit with the following maximum values: U 30

131 mA 983 mW

effective internal capacitance negligible effective internal inductance negligible

- 15.3.1.5 Type VEGAVIB VB6*(*).GX/CK**N** with intrinsically safe electronics insert VB60N built in
 - supply and signal circuit in type of protection Intrinsic Safety Ex ia IIC/IIB or Ex ib IIC/IIB

only for connection to a certified intrinsically safe circuit with the following maximum values:

20 V Ui mA li = 103 = 516 P_i mW

effective internal capacitance negligible effective internal inductance L < 5 µH



Page 4 of 5 of BVS 04 ATEX E 079 X / N4 This certificate may only be reproduced in its entirety and without any change. D DEKR

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15.3.2 Thermal data

The max. surface temperature is the higher one of the values listed below.

15.3.2.1 Permitted process temperature at the probe Type VEGAVIB VB61/3/5/7(*).GXA/C****

Type VEGAVIB VB61/3/5/7(*).GXA/C****

Type VEGAVIB VB61/3/5/7(*).GXB****

Type VEGAVIB VB61/3/5/7(*).GXE/G****

Type VEGAVIB VB61/3/5/7(*).GXE/G****

Type VEGAVIB VB61/3/5/7(*).GXF****

-40 °C up to + 250 °C

Type VEGAVIB VB61/3/5/7(*).GXF****

-40 °C up to + 250 °C

Type VEGAVIB VB62/6(*).GXT****

Type VEGAVIB VB62/6(*).GXC/K/M****

Type VEGAVIB VB62/6(*).GXL****

-40 °C up to + 80 °C

-40 °C up to + 150 °C

15.3.2.2 Max. surface temperature T at the probe process temperature + 6 K
15.3.2.3 Permitted ambient temperature at the electronics enclosure

category 1D or category 2D -40 °C up to + 60 °C

15.3.2.4 Maximum surface temperature at the electronics enclosure category 1D

with thermo fuse limited to 98
type VEGAVIB VB6*(*).GX** N*** ambient temperature +23K

type VEGAVIB VB6*(*).GX**Z*** ambient temperature +43K

15.3.2.5 Maximum surface temperature at the electronics enclosure category.2D

type VEGAVIB VB6*(*).GX**C/R/T**
with thermo fuse limited to

type VEGAVIB VB6*(*).GX** N***

ambient temperature +23K

type VEGAVIB VB6*(*).GX**Z***

15.3.3 Degrees of protection according to EN 60529

16 Report Number

type VEGAVIB VB6*(*).GX**C/R/T**

BVS PP 04.2087 EU, as of 2019-04-15

Special Conditions for Use

The prospective short-circuit current lon must not exceed the specified value.

In case of extremely ignitable dusts (MIE < 3 mJ) the equipment must not be used in areas where intensive charging processes are to be expected.

18 Essential Health and Safety Requirements

The Essential Health and Safety Requirements are covered by the standards listed under item 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

Drawings and documents are listed in the confidential report.

We confirm the correctness of the translation from the German original. In the case of arbitration only the German wording shall be valid and binding.

DEKRA Testing and Certification GmbH Bochum, 2019-04-15 BVS-Hor/VKA A20180352

Managing Director



Page 5 of 5 of BVS 04 ATEX E 079 X / N4
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