Translation

1 # EU-Type Examination Certificate Supplement 2

2 **Equipment intended for use in potentially explosive atmospheres Directive 2014/34/EU**

3 EU-Type Examination Certificate Number: **BVS 06 ATEX E 092 X**

4 Product: **Vibrations-Grenz-Schalter type VEGAWAVE WE6*(*).** * ** * * * * ***

5 Manufacturer: **VEGA Grieshaber KG**

6 Address: **Am Hohenstein 113, 77761 Schiltach, Germany**

7 This supplementary certificate extends EC-Type Examination Certificate No. BVS 06 ATEX E 092 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.

8 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 06.2081 EU.

9 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.

11 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 1D Ex ta IIIC T* Da
II 1/2D Ex ta/tb IIIC T* Da/Db
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

DEKRA Testing and Certification GmbH, Handwerkstr. 15, 70565 Stuttgart, Germany
Certification body: Dinnendahlstr. 9, 44809 Bochum, Germany
Phone +49.234.3696-400, Fax +49.234.3696-401, e-mail DTC-Certification-body@dekra.com

13 **Appendix**

14 **EU-Type Examination Certificate**

BVS 06 ATEX E 092 X
Supplement 2

15 **Product description**

15.1 **Subject and type**

Vibrating level switch type VEGAWAVE

WE6*(*) ** * ** * * * *

Additional features
X = without

Cable entry
M = M20x1.5
N = 1/2NPT

Enclosure / type of protection
A = aluminium enclosure IP66
* = aluminium enclosure with special colour

Electronics
C = contactless switch
AC/DC 20...253 V
R = relay output
DC 20...72 V / AC 20...253 V
T = floating transistor (NPN/PNP)
DC 10...55 V
Z = two-wire (intrinsically safe version)
N = NAMUR EN60947-5-7-6 (intrinsically safe version)

Process connection see manual

Version / temperature range / material
A = standard/
-40 °C...150 °C / 1.4435 (316 L)
B = with adapter /
-40 °C...250 °C / 1.4435 (316 L)
C = detection of solids in water /
-40 °C...150 °C / 1.4435 (316 L)
D = detection of solids in water /
-40 °C..+250 °C
E = with Carbocer coating; minimizing buildup,
no protection against corrosion/abrasion /
-40 °C...+150 °C
F = with Carbocer coating; minimizing buildup,
no protection against corrosion/abrasion /
-40 °C...+250 °C
G = detection of solid particles in water with carbocer-coating;
less buildup, no corrosion / abrasion protection
-50..+150 °C

Approval *
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

DEKRA Testing and Certification GmbH, Handwerkstr. 15, 70565 Stuttgart, Germany
Certification body: Dinnendahlstr. 9, 44809 Bochum, Germany
Phone +49.234.3696-400, Fax +49.234.3696-401, e-mail DTC-Certification-body@dekra.com

Vibrating level switch type VEGAWAVE
WE6*(*).** * ** * * * *

Additional features
X = without

Cable entry
M = M20x1.5
N = 1/2NPT

Enclosure / type of protection
A = aluminium enclosure IP66
* = aluminium enclosure with special colour

Electronics
C = contactless switch AC/DC 20...253 V
R = relay output
DC 20…72 V / AC 20…253 V
T = floating transistor (NPN/PNP)
DC 10...55 V
Z = two-wire (intrinsically safe version)
N = NAMUR EN60947-5-7-6 (intrinsically safe version)

Process connection see manual

Version / temperature range / material
T = cable PUR/
-20 °C...+80 °C/ 1.4435 (316 L)
C = cable PUR / detection of solids in water /
-20 °C...+80 °C
K = cable PUR / with Carbocer-coating, minimizing buildup,
no protection against corrosion / abrasion /
-20 °C...+80 °C
M = cable PUR / detection of solids in water / with
Carbocer-coating, minimizing buildup, no protection
against corrosion/abrasion /
-20 °C...+80 °C

Approval *
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

Optional version differentiation,
without relevance for explosion protection

2

[1] The assessment for use in explosive gas atmospheres is **not** part of this Certificate.

15.2 **Description**

Reason for the supplement:

Change of marking
Change of drawing details
Slight Change of electronic components

Description of Product

The Vibrating Level Switch type VEGAWAVE WE6*(*).GX******** 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 switch signal is generated.

DEKRA Testing and Certification GmbH, Handwerkstr. 15, 70565 Stuttgart, Germany
Certification body: Dinnendahlstr. 9, 44809 Bochum, Germany
Phone +49.234.3696-400, Fax +49.234.3696-401, e-mail DTC-Certification-body@dekra.com

15.3 **Parameters**

15.3.1 Electrical data

15.3.1.1 Type VEGAWAVE WE6*(*).GX***C***
with electronics insert WE60C 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	I_{cn}	100	A

15.3.1.2 Type VEGAWAVE WE6*(*).GX***R***
with electronics insert WE60R built in

supply voltage	AC	20...253	V (3A)
or	DC	20... 72	V
power consumption		1..8	VA / max. 1.6 W
relay circuit			
max. values:		253 V, 3 A,500	VA
		253 V, 1 A, 41	W
Maximum short circuit current	I_{cn}	100	A

15.3.1.3 Type VEGAWAVE WE6*(*).GX***T***
with electronics insert WE60T built in

supply voltage	DC	10..55	V
power consumption	max.	0.5	W
load current	max..	400	mA
Maximum short circuit current	I_{cn}	100 A	

15.3.1.4 Type VEGAWAVE WE6*(*).GX***Z***
with intrinsically safe electronics insert WE60Z built in
Supply and signal circuit

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

U_i	=	30	V
I_i	=	131	mA
P_i	=	983	mW

effective internal capacitance negligible
effective internal inductance negligible

15.3.1.5 Type VEGAWAVE WE6*(*).GX***N***
with intrinsically safe electronics insert WE60N 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:

U_i	=	20	V
I_i	=	103	mA
P_i	=	516	mW

effective internal capacitance negligible
effective internal inductance L_i < 5 µH

DEKRA Testing and Certification GmbH, Handwerkstr. 15, 70565 Stuttgart, Germany
Certification body: Dinnendahlstr. 9, 44809 Bochum, Germany
Phone +49.234.3696-400, Fax +49.234.3696-401, e-mail DTC-Certification-body@dekra.com

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

Types VEGAWAVE WE61/63(*).GXA/C/E******	-40 °C...+150 °C
Types VEGAWAVE WE61/63(*).GXB/D/F******	-40 °C...+250 °C
Types VEGAWAVE WE62(*).GXC/K/M/T******	-20 °C... +80 °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...+ 60 °C

15.3.2.4 Maximum surface temperature at the electronics enclosure category 1D

type VEGAWAVE WE6*(*).GX***C/R/T***
with thermo fuse limited to 98 °C

type VEGAWAVE WE6*(*).GX***N***	ambient temperature	+ 23 K
type VEGAWAVE WE6*(*).GX***Z***	ambient temperature	+ 43 K

15.3.2.5 Maximum surface temperature at the electronics enclosure category 2D

type VEGAWAVE WE6*(*).GX***C/R/T***
with thermo fuse limited to 98 °C

type VEGAWAVE WE6*(*).GX***N***	ambient temperature	+ 23 K
type VEGAWAVE WE6*(*).GX***Z***	ambient temperature	+ 36 K

15.3.3 Degrees of protection according to EN 60529 IP66

16 **Report Number**

BVS PP 06.2081 EU, as of 2019-04-15

17 **Special Conditions for Use**

The prospective short-circuit current I_{cn} 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.

DEKRA Testing and Certification GmbH, Handwerkstr. 15, 70565 Stuttgart, Germany
Certification body: Dinnendahlstr. 9, 44809 Bochum, Germany
Phone +49.234.3696-400, Fax +49.234.3696-401, e-mail DTC-Certification-body@dekra.com

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/Mu A20180354

Managing Director

DEKRA Testing and Certification GmbH, Handwerkstr. 15, 70565 Stuttgart, Germany
Certification body: Dinnendahlstr. 9, 44809 Bochum, Germany
Phone +49.234.3696-400, Fax +49.234.3696-401, e-mail DTC-Certification-body@dekra.com