



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx BVS 06.0013X

Issue No: 2

Certificate history:

Status: **Current**

Issue No. 2 (2019-04-24)

Issue No. 1 (2017-11-09)

Date of Issue: **2019-04-24**

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Issue No. 0 (2006-09-27)

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

Equipment: **Vibrating level switch type VEGAWAVE WE6\*(\*)-GI\*\*\*\*\***

Optional accessory:

Type of Protection: **Equipment dust ignition protection by enclosure "T"**

Marking:

Ex ta IIIC T see manual Da  
Ex ta/tb IIIC T see manual Da/Db  
Ex tb IIIC T see manual Db  
IP66

Approved for issue on behalf of the IECEx

Certification Body:

Dr Franz Eickhoff

Position:

Deputy Head of Certification Body

Signature:

(for printed version)

Date:

2019-04-24

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**DEKRA Testing and Certification GmbH**  
Certification Body  
Dinnendahlstrasse 9  
44809 Bochum  
Germany

 **DEKRA**  
On the safe side.





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

Additional Manufacturing location(s):

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 apparatus 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

*This Certificate **does not** indicate compliance with electrical 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/BVS/EXTR06.0045/02](#)

Quality Assessment Report:

[DE/TUN/QAR06.0002/08](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

#### Description

The Vibrating Level Switch type VEGAWAVE WE6\*(\*)G1\*\*\*\*\* 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.

#### Model/Type designation

See Annex

#### Parameters

See Annex

### SPECIFIC CONDITIONS OF USE: YES as shown below:

The prospective short-circuit current  $I_{cn}$  must not exceed the specified value. In case of extremely ignitable dusts ( $MIE < 3 \text{ mJ}$ ) the equipment must not be used in areas where intensive charging processes are to be expected.



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**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):**

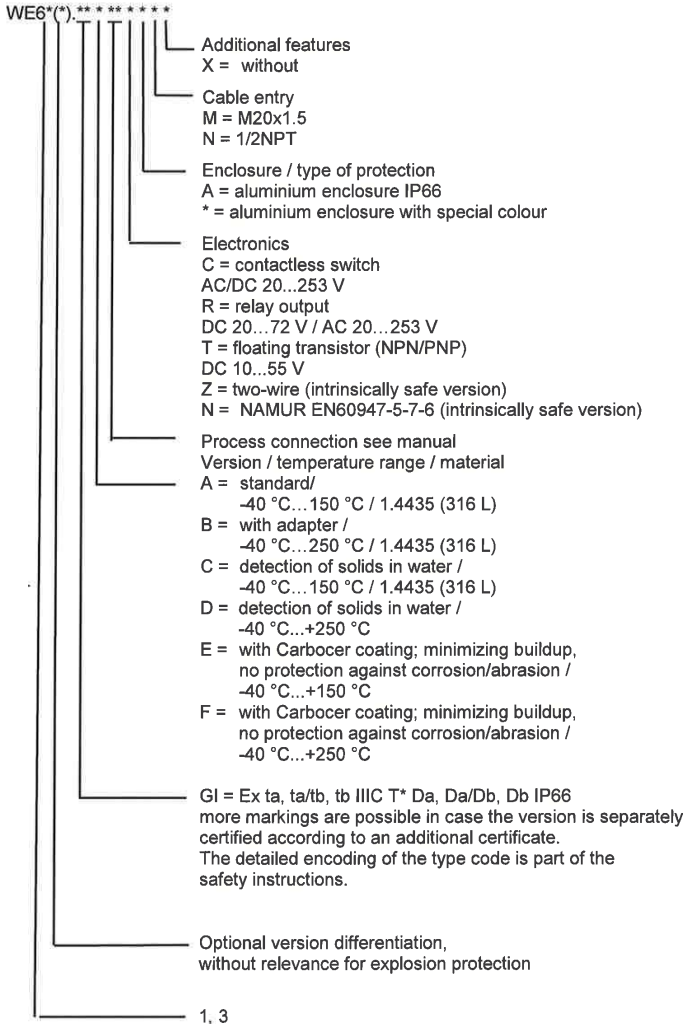
Update to standard EN 60079-0:2018  
Change of marking  
Change of drawing details  
Slight Change of electronic components

**Annex**

[BVS\\_06\\_0013X\\_VEGA\\_issue\\_2\\_1.pdf](#)

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**Subject and type:**  
 Vibrating level switch type VEGAWAVE



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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...55V

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(316L)

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

GI = Ex ta, ta/tb, tb IIIC T\* Da, Da/Db, Db IP66

more markings are possible in case the version is separately certified according to an additional certificate.

The detailed encoding of the type code is part of the safety instructions.

Optional version differentiation,

without relevance for explosion protection

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## Parameters

### Electrical data

Type VEGAWAVE WE6\*(\*).GI\*\*\*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

Type VEGAWAVE WE6\*(\*).GI\*\*\*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	$I_{cn}$	35	A

Type VEGAWAVE WE6\*(\*).GI\*\*\*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

Type VEGAWAVE WE6\*(\*).GI\*\*\*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



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Type VEGAWAVE WE6\*(\*).GI\*\*\*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  $L_i < 5 \mu\text{H}$

### Thermal data

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

Permitted process temperature at the probe

types VEGAWAVE WE61/63*(*).GIA/C/E*****	-40 °C...+150 °C
types VEGAWAVE WE61/63*(*).GIB/D/F*****	-40 °C...+250 °C
types VEGAWAVE WE62*(*).GIC/K/M/T*****	-20 °C... +80 °C

Max. surface temperature T at the probe                      process temperature                      +6 K

Permitted ambient temperature at the electronics enclosure (Zone 20 or Zone 21)  
-40 °C...+ 60 °C

Maximum surface temperature at the electronics enclosure Zone 20

type VEGAWAVE WE6*(*).GI***C/R/T*** with thermo fuse limited to		98 °C
type VEGAWAVE WE6*(*).GI***N***	ambient temperature	+23 K
type VEGAWAVE WE6*(*).GI***Z***	ambient temperature	+43 K

Maximum surface temperature at the electronics enclosure Zone 21

type VEGAWAVE WE6*(*).GI***C/R/T*** with thermo fuse limited to		98 °C
type VEGAWAVE WE6*(*).GI***N***	ambient temperature	+23 K
type VEGAWAVE WE6*(*).GI***Z***	ambient temperature	+36 K

Degrees of protection according to EN 60529                      IP66