Translation

1 # EU-Type Examination Certificate

2 **Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014**

3 EU-Type Examination Certificate Number: **BVS 07 ATEX E 017 X** Issue: **01**

4 Equipment: **Vibrating level switch VEGAWAVE type S61.EEJ*T/R***

5 Manufacturer: **VEGA Grieshaber KG**

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

7 This product and any acceptable variations thereto are 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 07.2011 EU.
This issue of the EU-Type Examination Certificate replaces the previous issue of the EC-Type Examination Certificate BVS 07 ATEX E 017 including supplement 1.

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018	**General requirements**
IEC 60079-26:2021	**Equipment with Separation Elements or combined Level of Protection**
EN 60079-31:2014	**Protection by Enclosure "t"**

Where additional criteria beyond those given here have been used, they are listed at item 18 in the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the product is subject to the "Specific Conditions of Use" listed under item 17 of this certificate.

11 This EU-Type Examination Certificate relates only to the technical design of the specified product in accordance to the Directive 2014/34/EU. 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 1/2D Ex ta/tb IIIC T* Da/Db
P66 *see manual

DEKRA Testing and Certification GmbH
Bochum, 2022-07-20

Signed: Dr. Rolf Krökel
Managing Director

DEKRA Testing and Certification GmbH, Handwerkstr. 15, 70565 Stuttgart, Germany
Certification body: Dinnendahlstr. 9, 44809 Bochum, Germany
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13 **Appendix**

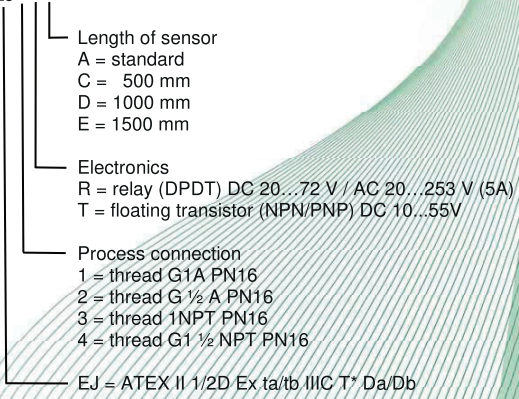
14 **EU-Type Examination Certificate**

BVS 07 ATEX E 017 X issue 01

15 **Product description**

15.1 **Subject and type**

Vibrating level switch type
VEGAWAVE
type S61.E EJ * * *



15.2 **Description**

The Vibrating level switch type VEGAWAVE type S61.EEJ*T/R*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.
The enclosure has a separate test report BVS PP 07.2003 EU.

Reason for this issue

- Change to Directive 2014/34/EU
- Inclusion ot the standard IEC 60079-26:2021
- Update standards
- Ex Marking
- Minor technical changes
- Change name of the product
- Added “Special conditions for safe use”

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15.3 **Parameters**

15.3.1 Electrical data

15.3.1.1 VEGAWAVE type S61.EEJ*R*
with electronics insert WE60R built in

supply voltage	AC	20...	253	V (50/60 Hz)
or	DC		20...72	V
power consumption		1...8VA, max.	1.6	W
relay circuit				
max. values:			253 V, 3 A, 500	VA
			253 V, 1 A, 41	W

15.3.1.2 VEGAVIB type S61.EEJ*T*
with electronics insert WE60T built in

supply voltage	DC	10...55		V
power consumption	max.		0.5	W
load current	max..		400	mA

15.3.2 Thermal data

15.3.2.1 Permitted process temperature at the probe (category 1D)
VEGAWAVE type S61.EEJ*R/T* - 40 °C...+ 150 °C

15.3.2.2 Max. surface temperature T at the probe process temperature + 3 K

15.3.2.3 Permitted ambient temperature at the electronics enclosure (category 2D) - 30 °C...+ 50 °C

15.3.2.4 Maximum surface temperature at the electronics enclosure with thermo fuse limited to 98 °C

15.3.3 Degrees of protection according to EN 60529
at the probe (category 1D) IP67
at the electronics enclosure (category 2D) IP66

16 **Report Number**

BVS PP 07.2011 EU, as of 2022-07-20

17 **Specific Conditions of Use**

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.

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18 **Essential Health and Safety Requirements**

Met by compliance with the requirements mentioned in item 9.
By complying with IEC 60079-26:2021, the requirements of Directive 2014/34/EU are recognised.

19 **Remarks and additional information**

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, 2022-07-20
BVS-HRH/Mu A 20220402 / 342738100

Managing Director

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Translation

(1) # 1st Supplement to the EC-Type Examination Certificate

(2) Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC
Supplement accordant with Annex III number 6

(3) No. of EC-Type Examination Certificate: **BVS 07 ATEX E 017**

(4) Equipment: **Vibrating level switch type VEGAWAVE WAVES61.EEJ*T/R***

(5) Manufacturer: **VEGA Grieshaber KG**

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

(7) The design and construction of this equipment and any acceptable variation thereto are specified in the appendix to this supplement.

(8) The certification body of DEKRA EXAM GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive. The examination and test results are recorded in the Test and Assessment Report BVS PP 07.2011 EG.

(9) The Essential Health and Safety Requirements are assured by compliance with:

EN 60079-0:2012 General requirements
IEC 60079-31:2013 Protection by enclosure "t"

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the appendix to this certificate.

(11) This supplement to the EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:

II 1/3D Ex ta/tc IIIC T* Da/Dc
IP66 * see manual

DEKRA EXAM GmbH
Bochum, dated 2014-04-24

Signed: Dr. Eickhoff
Certification body

Signed: Schumann
Special services unit

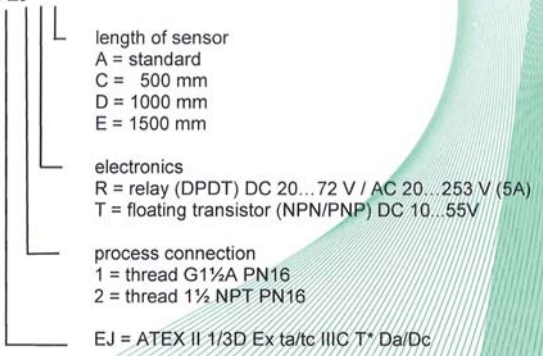
DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany Phone +49.234.3696-105 Fax +49.234.3696-110 zs-exam@dekra.com

(13) Appendix to

(14) **1st Supplement to the EC-Type Examination Certificate BVS 07 ATEX E 017**

(15) 15.1 Subject and type

Vibrating level switch type
VEGAWAVE WAVES61.E EJ * * *



15.2 Description

The Vibrating Level Switch type VEGAWAVE WAVES61.EEJ*T/R* 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.
The enclosure has a separate test report BVS PP 07.2003 EG.
The reason for this supplement is a new material for the cover of the enclosure and the updating to the current standards.

15.3 Parameters

15.3.1 Electrical data

15.3.1.1 Type VEGAWAVE WAVES61.EEJ*R* with electronics insert WE60R built in

supply voltage (terminals 1, 2)	AC	20...253	V, 50/60 Hz
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

15.3.1.2 Type VEGAWAVE WAVES61.EEJ*T* with electronics insert WE60T built in

supply voltage (terminals 1, 4)	DC	10...55	V
power consumption	max.	0.5	W
load current	max.	400	mA

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15.3.2	Thermal data	
15.3.2.1	Permitted process temperature at the probe (category 1D) types VEGAWAVE WAVES61.EEJ*R/T*	- 40 °C...+150 °C
15.3.2.2	Max. surface temperature T at the probe	process temperature + 3 K
15.3.2.3	Permitted ambient temperature at the electronics enclosure (category 3D)	- 30 °C...+ 60 °C
15.3.2.4	Maximum surface temperature at the electronics enclosure with thermo fuse limited to	98 °C
15.3.3	Degrees of protection according to EN 60529	IP66

(16) Test and Assessment Report

BVS PP 07.2011 EG as of 2014-04-24

(17) Special conditions for safe use

None

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 EXAM GmbH
44809 Bochum, 2014-04-24
BVS-Hk/Ma A20120191

Certification body

Special services unit

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EXAM
BBG Prüf- und Zertifizier GmbH

Translation

(1) # EC-Type Examination Certificate

(2) **- Directive 94/9/EC -**
Equipment and protective systems intended for use in potentially explosive atmospheres

(3) ## BVS 07 ATEX E 017

(4) **Equipment:** **Vibrations-Grenz-Schalter type VEGAWAVE WAVES61.EEJ*T/R***

(5) **Manufacturer:** **VEGA Grieshaber KG**

(6) **Address:** **77757 Schiltach, Germany**

(7) The design and construction of this equipment and any acceptable variation thereto are specified in the schedule to this type examination certificate.

(8) The certification body of EXAM BBG Prüf- und Zertifizier GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.
The examination and test results are recorded in the test and assessment report BVS PP 07.2011 EG.

(9) The Essential Health and Safety Requirements are assured by compliance with:

IEC 61241-0:2004 General requirements
EN 61241-1:2004 Protection by enclosure 'tD'

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate

(12) The marking of the equipment shall include the following:

II 1/3 D Ex tD A20/22 IP66 T see 15.3.2

EXAM BBG Prüf- und Zertifizier GmbH
Bochum, dated 12. February 2007

Signed: Dr. Jockers
Certification body

Signed: Dr. Eickhoff
Special services unit

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(13) Appendix to

(14) # EC-Type Examination Certificate

BVS 07 ATEX E 017

(15) 15.1 Subject and type

Vibrating level switch type
VEGAWAVE WAVES61.E EJ * * *

- length of sensor
  A = standard
  C = 500 mm
  D = 1000 mm
  E = 1500 mm
- electronics
  R = relay (DPDT) DC 20…72 V / AC 20…253 V (5A)
  T = floating transistor (NPN/PNP) DC 10...55V
- process connection
  1 = thread G1½A PN16
  2 = thread 1½ NPT PN16
- EJ = ATEX II 1/3D Ex tD A20/22 IP 66 T…

15.2 Description

The Vibrating Level Switch type VEGAWAVE WAVES61.EEJ*T/R* 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.
The enclosure has a separate test report BVS PP 07.2003 EG.

15.3 Parameters

15.3.1 Electrical data

15.3.1.1 Type VEGAWAVE WAVES61.EEJ*R* with electronics insert WE60R built in

supply voltage	AC 20... 253 V (50/60 Hz)
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

15.3.1.3 Type VEGAWAVE WAVES61.EEJ*T* with electronics insert WE60T built in

supply voltage	DC 10...55 V
power consumption	max. 0,5 W
load current	max.. 400 mA

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15.3.2	Thermal data		
15.3.2.1	Permitted process temperature at the probe (category 1D) types VEGAWAVE WAVES61.EEJ*R/T*	- 40 °C... +150	°C
15.3.2.2	Max. surface temperature T at the probe	process temperature +3	K
15.3.2.3	Permitted ambient temperature at the electronics enclosure (category 3D)	- 30 °C... +60	°C
15.3.2.4	Maximum surface temperature at the electronics enclosure with thermo fuse limited to	98	°C
15.3.3	Degrees of protection according to EN 60529	IP66	

(16) Test and assessment report
BVS PP 07.2011 EG as of 12.02.2007

(17) Special conditions for safe use
none

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.

44809 Bochum, 12.02.2007
BVS-Hk/Mi A 20060702

EXAM BBG Prüf- und Zertifizier GmbH

Certification body

Special services unit

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