Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin
Nationales Metrologieinstitut

(1) # EU-TYPE EXAMINATION CERTIFICATE

(Translation)

(2) Equipment or Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number:

PTB 10 ATEX 1055 X **Issue: 2**

(4) Product: Vibration limit switch VEGAVIB type VB61/63 (*).L****C/R/T/N/Z***

(5) Manufacturer: VEGA Grieshaber KG

(6) Address: Am Hohenstein 113, 77761 Schiltach, Deutschland

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 17 of the 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 Test Report PTB Ex 21-11027.

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

EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-26:2015

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design and construction 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:

Ex II 1/2G Ex db IIC T6...T1 Ga/Gb bzw. Ex II 2G Ex db IIC T6...T1 Gb

ZSEx001e c

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Dr.-Ing. D. Markus
Direktor und Professor

Braunschweig, May 20, 2021

PHYSIKALISCH-TECHNISCHE BUNDESANSTALT

(13) # SCHEDULE

(14) **EU-Type Examination Certificate Number PTB 10 ATEX 1055 X, Issue: 2**

(15) Description of Product

The vibration limit switch VEGAVIB, type VB61/63 (*).L****C/R/T/N/Z***, is used for level monitoring and control in potentially explosive areas, also in connection with flammable liquids, gases, and vapours. The vibration limit switch VEGAVIB, type VB61/63 (*).L****C/R/T/N/Z***, comprises a metal enclosure with integrated WE60* electronics system. Together with the measuring sensor it is designed to Flameproof Enclosure "d" type of protection. It is equipment that is intended to be installed in the wall delimiting the potentially explosive area of category 1. The measuring sensor is located in the category-1 or 2 area, and the electronics enclosure in the category-2 area.

Electrical data

Type VB61/63(*).L****C***, with integrated VB60C electronics assembly

Supply voltage:	U = 20 to 253V AC, 50/60 Hz or
(terminals 1, 2)	U = 20 to 253V DC, max. 1 W
	U_m = 253V AC
Output	contact-less switch
Power consumption	< 5 mA (via load circuit)
Load current	min. 10 mA, max. 400 mA

Type VB61/63(*).L****R***, with integrated VB60R electronics assembly

Supply voltage:	U = 20 to 253V AC, 50/60 Hz or
(terminals 1, 2)	U = 20 to 72V DC
	U_m = 253V AC
Power input	1 to 8 VA, max. 1.6 W
Relay circuit	Maximum values:
Contact assembly 1; (terminals 3, 4, 5)	AC: 253 V, 3 A, 500 VA
Contact assembly 2; (terminals 6, 7, 8)	DC: 253 V, 1 A, 41 W

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 10 ATEX 1055 X, Issue: 2

Type VB61/63(*).L****T***, with integrated VB60T electronics assembly

Supply voltage:	10 to 55V DC
(terminals 1, 4)	U_m = 253V AC
Power input	max. 0.5 W
Load current, potential-free transistor output	max. 400 mA and 55V DC
(terminals 2, 3)	

Type VB61/63(*).L****Z***, with integrated VB60Z electronics assembly

Supply voltage:	U_i = 12 to 36V DC
(terminals 1+, 2-)	Um = 253V

Type VB61/63(*).L****N***, with integrated VB60N electronics assembly

Supply voltage:	U_i = 4 to 12.5V DC
(terminals 1+, 2-)	U_m = 253V AC

Permissible ambient temperatures depending on the temperature class

Temperature class	Permissible ambient temperature for the electronics	Permissible ambient temperature for the measuring sensor	
		without temperature adapter	**with** temperature adapter
T6	-40 °C to +77 °C	-50 °C to +85 °C	-50 °C to +85 °C
T5	-40 °C to +80 °C	-50 °C to +100 °C	-50 °C to +100 °C
T4	-40 °C to +80 °C	-50 °C to +135 °C	-50 °C to +135 °C
T3	-40 °C to +80 °C	-50 °C to +150 °C	-50 °C to +200 °C
T2, T1[2)]	-40 °C to +80 °C	-50 °C to +150 °C	-50 °C to +250 °C

[2)] At 150 °C and higher only with temperature adapter

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 10 ATEX 1055 X, Issue: 2

Nomenclature

Certification
- **LX** ATEX II 1/2G, 2G Ex db IIC T1...T6 Ga/Gb, Gb
- **LK** ATEX II 1/2G, 2G Ex db IIC T6 + ATEX II 1/2D, 2D, 2D IP6X T*[1)]

Design / process temperature
- **A** Standard / -50 to +150 °C
- **B** with adapter / -50 to +250 °C
- **C** solids detection in water /-50 to +150 °C
- **E** with Carbocer coat; scale-inhibiting, no corrosion/abrasion protection / -50 to +150 °C
- **F** with Carbocer coat; scale-inhibiting, no corrosion/abrasion protection / -50 to +250 °C
- **G** solids detection in water, with Carbocer coat, scale inhibiting, no corrosion/abrasion protection / -50 +150 °C

Process connection / material
- **GC** G1 PN16 thread, DIN3852-A / 316L
- **NC** 1NPT PN16 thread, ASME B1.20.1 / 316L
- **NR** 1NPT PN16 thread, ASME B1.20.1 / 316L (Ra<0.8µm)
- **GD** G1½ PN16 thread, DIN3852-A / 316L, switch point same as VEGAVIB 51
- **GT** G1½ PN16 thread, DIN3852-A / 316L (Ra<0.8µm), switch point same as VEGAVIB 51
- **ND** 1½ NPT PN16 thread, ASME B1.20.1 / 316L, switch point same as VEGAVIB 51
- **CD** 1½" PN16 (Ø 50.5 mm) clamp, DIN32676, ISO2852 / 316L
- **CT** 1½" PN16 (Ø 50.5 mm) clamp, DIN32676, ISO2852 / 316L (Ra<0.8µm)
- **RA** threaded DN40 PN40 pipe fitting, DIN11851 / 316L
- **RP** threaded DN40 PN40 pipe fitting, DIN11851 / 316L (Ra<0.8µm)
- **LA** aseptic F40PN16 connection; with groove union nut / 316L
- **TA** Varivent, type N DN40 (1.5"), D = 68 / 316L
- **C1** flanged DN40 PN40 terminal socket, type A, DIN11864-3 / 316L
- **BF** DN32 PN40 flange, type C, DIN2501 / 316L
- **DF** DN40 PN40 flange, type C, DIN2501 / 316L

**other industry-standard process connections available upon request

Electronics system
- **C** contact-less switch 20 to 253V AC/DC
- **R** relay (DPDT) 20 to 72V DC / 20 to 253V AC (3A)
- **T** transistor (NPN/PNP) 10 to 55V DC
- **Z** two-wire (8/16mA) 10 to 36V DC
- **N** NAMUR signal

Enclosure/ protection
- **A** aluminium, single compartment / IP66/IP67[1)]
- * other enclosures also with special coat of paint

Cable gland/screwed cable gland/plug connection
- **M** M20x1.5 / without / without
- **6** M20x1.5 / for armoured cable (6 to 12mm) with strain relief / w/o
- **7** M20x1.5 / type approved for cable (4 to 8.5mm) / w/o
- **N** ½ NPT / without / without
- **8** ½ NPT / for armoured cable (6 to 12mm) with strain relief / without
- **9** ½ NPT / type approved for cable (4 to 8.5mm) / w/o
- * other suitable threaded cable glands and plug connectors

Optional equipment
- **X**

VB61/63(*)	L*	*	**	*	*	*	*

[1)] The type approval for areas with potentially explosive dust is **not** the subject matter of the above type approval

Locking screw fittings

The following locking screw fitting is used:

Locking screw fitting	Pressure	Permissible ambient temperature at the locking screw fitting
Type ARV-VB63.2* (GE2162, Index 1)	Between vacuum and 16 bar	-50 °C ≤ T_{amb} ≤ +150 °C

Changes:
1) Standard update to latest ATEX standards
2) Change of the nomenclature

(16) Test Report PTB Ex 21-11027

(17) Specific conditions of use

Repairs on the flameproof joints may only be made in accordance with the manufacturer's structural specifications. Repairs on the basis of the values in table 2 or 3 of standard EN 60079-1:2014 are not permitted.

The warning markings required for the vibration limit switch are:

WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS

WARNING - DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT

The user shall be informed of these conditions in an appropriate form, e.g. with a note included in the operating instructions.

Additional notes for safe operation:

Connection conditions

1. The vibration limit switch, type VEGAVIB type VB61/63(*).L****C/R/T/N/Z***, must be connected with suitable cable glands or conduit systems that meet the requirements set forth in EN 60079-1:2014, sections 13.4 and 13.5, and for which a separate test certificate has been issued.
2. Cable glands (Pg type glands) and blanking plugs of a simple design must not be used. If the VEGAVIB vibration limit switch is connected by means of a conduit entry fitting which has been approved for this purpose, the required sealing device shall be provided immediately at the enclosure.
3. Openings that are not used must be closed in compliance with the specifications in EN 60079-1:2014, section 11.8.
4. The connecting cable of vibration limit switch, type VEGAVIB type VB61/63(*).L****C/R/T/N/Z***, shall be fixed and routed so it will be adequately protected against mechanical damage.

5. If the temperature at the input parts exceeds 70 °C, temperature-resistant connecting cables shall be used.

6. If connection is made in the potentially explosive area, the connecting cables of the vibration limit switch, type VEGAVIB type VB61/63(*).L****C/R/T/N/Z***, shall be connected in an enclosure that meets the requirements of an approved type of protection in accordance with EN IEC 60079-0:2018, section 1.

This information must accompany each device in an adequate form.

Components attached or installed (terminal compartments, bushings, Ex-type cable glands, connectors) shall be of a technical standard that at least complies with the specifications on the cover sheet, and they shall have a separate examination certificate. The operating conditions specified in the component certificates must be complied with.

(18) Essential health and safety requirements

Met by compliance with the aforementioned standards.

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, May 20, 2021

Dr.-Ing. D. Markus
Direktor und Professor

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin
Nationales Metrologieinstitut

(1) EU-TYPE-EXAMINATION CERTIFICATE

(Translation)

(2) Equipment or Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number:

PTB 10 ATEX 1055 X **Issue: 01**

(4) Equipment: Vibration limit switch, type VEGAVIB VB61/63(*).L****C/R/T/Z/N***

(5) Manufacturer: VEGA Grieshaber KG

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

(7) This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment 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 Test Report PTB Ex 16-16087.

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

EN 60079-0:2012+A11:2013, EN 60079-1:2014, EN 60079-26:2015

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to the Specific Conditions of Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified equipment in accordance to the Directive 2014/34/EU. 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:

Ex II 1/2G, 2G Ex db IIC T6...T1 Ga/Gb, Gb

Konformitätsbewertungsstelle, Sektor Explosionsschutz Braunschweig, December 12, 2016
On behalf of PTB:

Dr.-Ing. D. Markus
Oberregierungsrat

PHYSIKALISCH-TECHNISCHE BUNDESANSTALT 80

ZSEx001e c

(13) # SCHEDULE

(14) **EU-Type Examination Certificate Number PTB 10 ATEX 1055 X, Issue: 1**

(15) Description of Equipment

The vibration limit switch, type VEGAVIB VB61/63(*).L****C/R/T/Z/N*** is used for level monitoring and control in potentially explosive areas, also in connection with flammable liquids, gases, and vapours. The vibration limit switch, type VEGAVIB VB61/63(*).L***C/R/T/Z/N**, comprises a metal enclosure with integrated VIB60* electronics system. Together with the measuring sensor it is designed to Flameproof Enclosure "d" type of protection. It is equipment that is intended to be installed in the wall delimiting the potentially explosive area of category 1. The measuring sensor is located in the category-1 or 2 area, and the electronics enclosure in the category-2 area.

The VEGAVIB VB61/63(*).L****C/R/T/Z/N*** vibration limit switch is supplemented in the following respects:

1. Update of standards and application of Directive 2014/34/EU

Re-assessment on the basis of EN 60079-0:2012+A11:2013, EN 60079-1:2014 and EN 60079-26:2015.

2. Carbocer versions included in the nomenclature

The nomenclature for the vibration limit switch, type VEGAVIB VB61/63(*).L****C/R/T/Z/N***, now includes the Carbocer versions under DESIGN/PROCESS TEMPERATURE:

E	with Carbocer coat; scale-inhibiting, no corrosion/abrasion protection / -50 to +150 °C
F	with Carbocer coat; scale-inhibiting, no corrosion/abrasion protection / -50 to +250 °C
G	solids detection in water with Carbocer coat; scale-inhibiting, no corrosion/abrasion protection / -50 to +150 °C

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 10 ATEX 1055 X, Issue: 01

3. Updated nomenclature

Certification

LX ATEX II 1/2G, 2G Ex db IIC T1...T6 Ga/Gb, Gb
LK ATEX II 1/2G, 2G Ex db IIC T6 + ATEX II 1/2D, 2D, 2D IP6X T*[1)]

Design / process temperature

A standard / -50 to +150 °C
B with adapter / -50 to +250 °C
C solids detection in water /-50 to +150 °C
E with Carbocer coat; scale-inhibiting, no corrosion/abrasion protection / -50 to +150 °C
F with Carbocer coat; scale-inhibiting, no corrosion/abrasion protection / -50 to +250 °C
G solids detection in water with Carbocer coat; scale-inhibiting, no corrosion/abrasion protection / -50 to +150 °C

Process connection / material

GC G1 PN16 thread, DIN3852-A / 316L
NC 1NPT PN16 thread, ASME B1.20.1 / 316L
NR 1NPT PN16 thread, ASME B1.20.1 / 316L (Ra<0.8µm)
GD G1½ PN16 thread, DIN3852-A / 316L, switch point same as VEGAVIB 51
GT G1½ PN16 thread, DIN3852-A / 316L (Ra<0.8µm), switch point same as VEGAVIB 51
ND 1½ NPT PN16 thread, ASME B1.20.1 / 316L, switch point same as VEGAVIB 51
CD 1½" PN16 clamp (Ø 50.5 mm), DIN32676, ISO2852 / 316L
CT 1½" PN16 clamp (Ø 50.5 mm), DIN32676, ISO2852 / 316L (Ra<0.8µm)
RA threaded DN40 PN40 pipe fitting, DIN11851 / 316L
RP threaded DN40 PN40 pipe fitting, DIN11851 / 316L (Ra<0.8µm)
LA aseptic F40PN16 connection; with groove union nut / 316L
TA Varivent, type N DN40 (1.5"), D = 68 / 316L
C1 flanged DN40 PN40 terminal socket, type A, DIN11864-3 / 316L
BF DN32 PN40 flange, type C, DIN2501 / 316L
DF DN40 PN40 flange, type C, DIN2501 / 316L
** other industry-standard process connections available upon request

Electronics system

C contact-less switch 20 to 253V AC/DC
R relay (DPDT) 20 to 72V DC / 20 to 253V AC (3A)
T transistor (NPN/PNP) 10 to 55V DC
Z two-wire (8/16mA) 10 to 36V DC
N NAMUR signal

Enclosure/ protection

A aluminium, single compartment / IP66/IP67[1)]
* other enclosures also with special coat of paint

Cable gland/screwed cable gland/plug connection

M M20x1.5 / without / without
6 M20x1.5 / for armoured cable (6 to 12mm) with strain relief / without
7 M20x1.5 / type approved for cable (4 to 8.5mm) / w/o
N ½ NPT / without / without
8 ½ NPT / for armoured cable (6 to 12mm) with strain relief / without
9 ½ NPT / type approved for cable (4 to 8.5mm) / w/o
* other suitable threaded cable glands and plug connectors

Optional equipment

X

VB61/63(*)	**L***	*	**	*	*	*	*

[1)] The type approval for areas with potentially explosive dust is **not** the subject matter of the above type approval

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 10 ATEX 1055 X, Issue: 01

4. Locking screw fittings

The following locking screw fitting is used:

Locking screw fitting	Pressure	Permissible ambient temperature at the locking screw fitting
Type ARV-VB63.2* (GE2161)	Between vacuum and 16 bar	-50 °C ≤ T_{amb} ≤ +150 °C

5. New circuit diagrams

The N (NAMUR) and Z (ZWEILEITER) electronics systems are produced on the basis of the following circuit diagrams:

N electronics	Circuit diagram:	SB1251, index 1-01-0
Z electronics	Circuit diagram:	SB1212, index 1-00-0
	Circuit diagram:	SB1222, index 1-04-0
	Circuit diagram:	SB1222, index 2-01-0

Electrical data

Type VEGAVIB VB61/63(*).L****C***, with integrated VB60C electronics assembly

Power supply: (terminals 1, 2)	U = 20 to 253V AC, 50/60 Hz or U = 20 to 253V DC, max. 1 W U_m = 253V AC
Output	contact-less switch
Power consumption	< 5 mA (via load circuit)
Load current	min. 10 mA, max. 400 mA

Type VEGAVIB VB61/63(*).L****R***, with integrated VB60R electronics assembly

Power supply: (terminals 1, 2)	U = 20 to 253V AC, 50/60 Hz or U = 20 to 72V DC U_m = 253V AC
Power input	1 to 8 VA, max. 1.6 W
Relay circuit	Maximum values:
Contact assembly 1; (terminals 3, 4, 5)	AC: 253 V, 3 A, 500 VA
Contact assembly 2; (terminals 6, 7, 8)	DC: 253 V, 1 A, 41 W

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 10 ATEX 1055 X, Issue: 01

Type VEGAVIB VB61/63(*).L****T***, with integrated VB60T electronics assembly

Power supply: (terminals 1, 4) Power input	10 to 55V DC U_m = 253V AC max. 0.5 W
Load current, potential-free transistor output (terminals 2, 3)	max. 400 mA and 55V DC

Type VEGAVIB VB61/63(*).L****Z***, with integrated VB60Z electronics assembly

Power supply: (terminals 1+, 2-)	U_i = 12 to 36V DC Um = 253V

Type VEGAVIB VB61/63(*).L****N***, with integrated VB60N electronics assembly

Power supply: (terminals 1+, 2-)	U_i = 4 to 12.5V DC U_m = 253V AC

(16) Test Report PTB Ex 16-16087

(17) Special conditions for safe use

Repairs on the flameproof joints may only be made in accordance with the manufacturer's structural specifications. Repairs on the basis of the values in table 2 or 3 of standard EN 60079-1:2014 are not permitted.

Additional notes for safe operation

Connection conditions

1. The vibration limit switch, type VEGAVIB VB61/63(*).L****C/R/T/Z/N***, must be connected with suitable cable glands or conduit systems that meet the requirements set forth in EN 60079-1:2014, sections 13.4 and 13.5, and for which a separate test certificate has been issued.
2. Cable glands (Pg type glands) and blanking plugs of a simple design must not be used. If the VEGAVIB vibration limit switch is connected by means of a conduit entry fitting which has been approved for this purpose, the required sealing device shall be provided immediately at the enclosure.
3. Openings that are not used must be closed in compliance with the specifications in EN 60079-1:2014, section 11.8.
4. The connecting cable of vibration limit switch, type VEGAVIB VB61/63(*).L****C/R/T/N/Z***, shall be fixed and routed so it will be adequately protected against mechanical damage.
5. If the temperature at the input parts exceeds 70 °C, temperature-resistant connecting cables shall be used.

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 10 ATEX 1055 X, Issue: 01

6. If connection is made in the potentially explosive area, the connecting cables of the vibration limit switch, type VEGAVIB VB61/63(*).L****C/R/T/N/Z***, shall be connected in an enclosure that meets the requirements of an approved type of protection in accordance with EN 60079-0:2012+A11:2013, section 1.

This information must accompany each device in an adequate form.

Components attached or installed (terminal compartments, bushings, Ex-type cable glands, connectors) shall be of a technical standard that at least complies with the specifications on the cover sheet, and they shall have a separate examination certificate. The operating conditions specified in the component certificates must be complied with.

Permissible ambient temperatures depending on the temperature class

Temperature class	Permissible ambient temperature for the electronics system	Permissible ambient temperature for the measuring sensor	
		without temperature adapter	**with** temperature adapter
T6	-40 °C to +77 °C	-50 °C to +85 °C	-50 °C to +85 °C
T5	-40 °C to +80 °C	-50 °C to +100 °C	-50 °C to +100 °C
T4	-40 °C to +80 °C	-50 °C to +135 °C	-50 °C to +135 °C
T3	-40 °C to +80 °C	-50 °C to +150 °C	-50 °C to +200 °C
T2, T1[2)]	-40 °C to +80 °C	-50 °C to +150 °C	-50 °C to +250 °C

[2)] At 150 °C and higher only with temperature adapter

Permissible operating pressure for the measuring sensor

Use as category-1/2 G equipment (measuring sensor in category 1)

No ignition risk results from the measuring sensor that is operated in category-1 atmospheres, even if it is operated at non-atmospheric pressures between 0 and 16 bar.

When used as category-1/2 G equipment of the type VEGAVIB VB61/63(*).L****C/R/T/N/Z***, pressures between 0 and 16 bar at temperatures that correspond to the values for temperature classes T6 to T1 as listed in the table are therefore permissible at the measuring sensor.

For the type VEGAVIB VB61/63(*).L****C/R/T/N/Z***, pressures between 0 and 16 bar corresponding to temperature classes T6 to T1 are permissible at the measuring sensor also for the version with ARV-VB63.2* locking screw fitting.

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 10 ATEX 1055 X, Issue: 01

Use as category-2 G equipment

When used as category-2 G equipment of the type VEGAVIB VB61/63(*).L****C/R/T/N/Z***, pressures between 0 and 16 bar are permissible at the measuring sensor.

For the type VEGAVIB VB61/63(*).L****C/R/T/N/Z***, pressures between 0 and 16 bar corresponding to temperature classes T6 to T1 are permissible at the measuring sensor also for the version with ARV-VB63.2* locking screw fitting.

For the permissible operating temperatures and pressures, reference is made to the specifications provided by the manufacturer.

Protection against risks resulting from static electricity

For the VEGAVIB VB61/63(*).L****C/R/T/N/Z***vibration limit switch types with plastic elements that may charge statically, e.g. plastic-sheathed measuring sensor or spacer tube, a warning plate on the enclosure shall indicate safety measures that have to be taken in respect of the electrostatic charging risk during operating or when carrying out maintenance work:

- Avoid friction
- Do not use dry cleaning methods
- Do not install in the pneumatic material current

Impact and friction sparking

The vibration limit switches, type VEGAVIB VB61/63(*).L****C/R/T/N/Z***, shall be installed, so contact of the measuring sensor with the tank wall can be excluded also with a view to tank installations and flow conditions inside the tank. This applies, in particular, to spacer tubes more than 3 m long.

When used as category-1/2 G equipment, the vibration limit switches of the type VEGAVIB VB61/63(*).L****C/R/T/N/Z*** that include aluminium shall be installed, so sparking as a result of impact or friction between aluminium and steel (with the exception of stainless steel, if the presence of rust particles can be excluded) is prevented.

Material resistance

When operated as category 1/2-G equipment, the VEGAVIB VB61/63(*).L****C/R/T/N/Z*** vibration limit switch may only be used in media against which the materials that are in contact with the media offer sufficient resistance.

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 10 ATEX 1055 X, Issue: 01

(18) Essential health and safety requirements

Met by compliance with the aforementioned standards.

According to Article 41 of Directive 2014/34/EU, EC-type examination certificates which have been issued according to Directive 94/9/EC prior to the date of coming into force of Directive 2014/34/EU (April 20, 2016) may be considered as if they were issued already in compliance with Directive 2014/34/EU. By permission of the European Commission supplements to such EC-type examination certificates and new issues of such certificates may continue to hold the original certificate number issued before April 20, 2016.

Konformitätsbewertungsstelle, Sektor Explosionsschutz — Braunschweig, December 12, 2016
On behalf of PTB:

Dr.-Ing. D. Markus
Oberregierungsrat