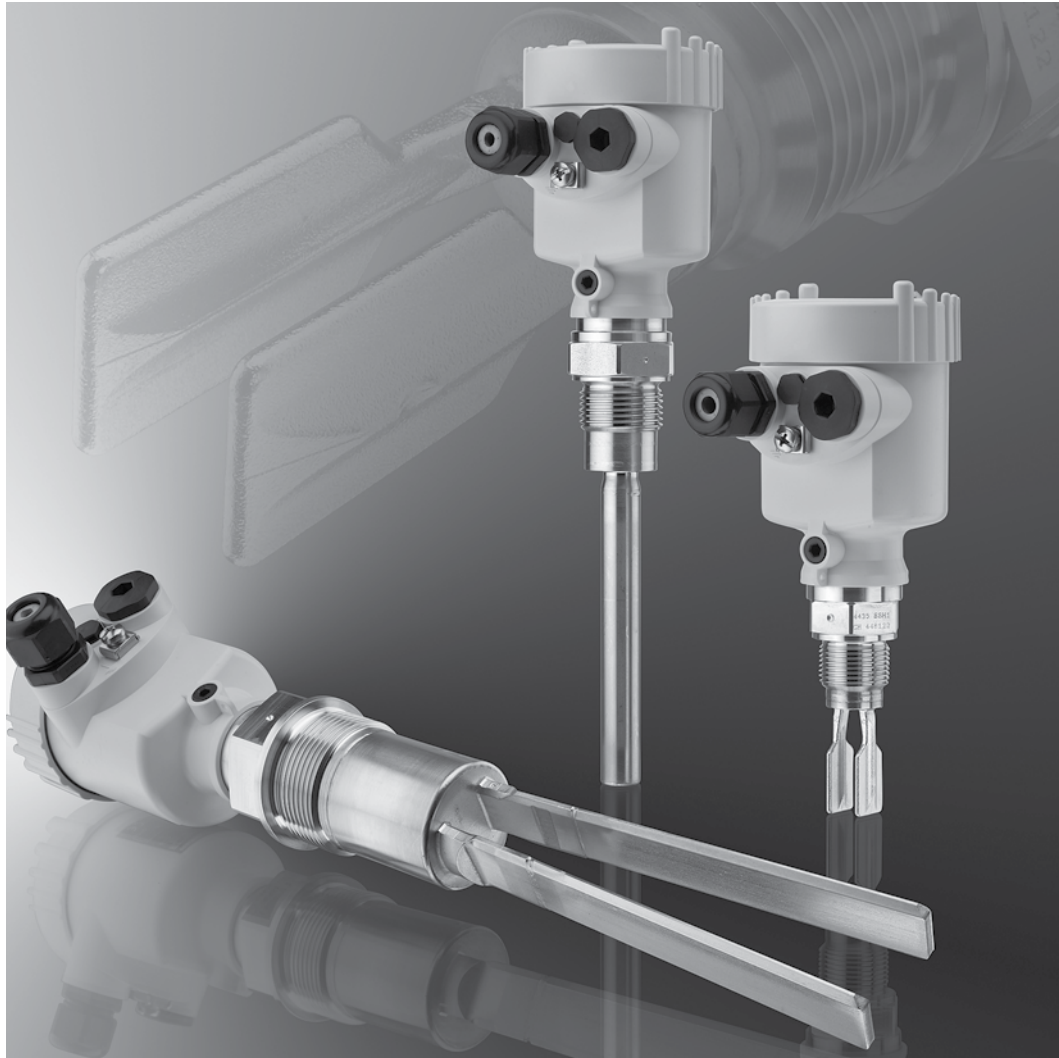


# Vibration

## Level detection



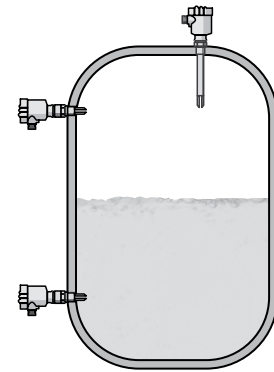
<b>Overview</b>	<b>Page 112</b>
<b>VEGASWING series 50</b>	<b>Page 116</b>
<b>VEGASWING series 60</b>	<b>Page 118</b>
<b>VEGAVIB series 60</b>	<b>Page 122</b>
<b>VEGAWAVE series 60</b>	<b>Page 128</b>
<b>Accessory</b>	<b>Page 134</b>
<b>Level switches VEGATOR</b>	<b>Page 138</b>
<b>Amplifier NAMUR</b>	<b>Page 139</b>

## VEGASWING

For manifold applications in liquids

### Measuring principle and applications

The piezo drive is the heart of the sensor, activating the tuning fork to vibrate on its resonance frequency. The frequency of the fork reduces with the immersion. The frequency change is evaluated by the integrated electronics and converted into a switching signal. With the tuning fork of only 40 mm length, VEGASWINGS work reliably in all liquids independent of the installation position. Pressure, temperature, foam, viscosity and composition of the liquid do not influence the switching accuracy. The price-favourable setup is hence restricted to a simple electrical connection. The high degree of an integrated self-monitoring ensures always a safe and reliable function. Typical applications are overflow and dry run protection systems in liquids, but also in safety-relevant applications up to SIL2.

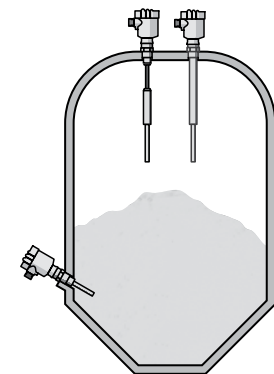


## VEGAVIB

Reliable switching in granulated bulk solids

### Measuring principle and applications

The vibrating rod of VEGAVIB is activated to vibrate via the piezo drive. If the vibrating rod is immersed, the amplitude will be damped. The electronics detects this damping and converts it into a switching command. The installation position and granulation size do not influence the reliability. The ideal rod design ensures a reliable function in granulated bulk solids. The vibrating element of VEGASWING is always free and operates reliably. Due to the simple cleanability, it fulfils all requirements for use in the food processing and pharmaceutical industry. Mounting and setup are very easy, an adjustment with medium is not necessary. The VEGAVIB is used as overflow protection and empty alarm in silos and bunkers, also in safety-relevant applications up to SIL2. Typical applications are bulk solids such as plastic granules, pellets and non-adhesive powder products.

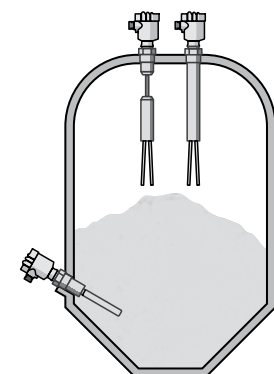


## VEGAWAVE




Robust and reliable for powdery bulk solids

### Measuring principle and applications







A tuning fork is used as sensor element for the VEGAWAVE series. The principle of amplitude processing corresponds to that of VEGAVIB series. The advantages of this series are ruggedness as well as insensitivity to buildup. Therefore, it is the ideal sensor for powders and fine-grained products. Mounting and setup are very easy, an adjustment with medium is not necessary. The VEGAWAVE is used as overflow protection and empty alarm in silos and bunkers, also in safety-relevant applications up to SIL2. Typical applications are products such as flour, cement and sand as well as fine-grained bulk solids such as plastic granules, grit and styrofoam.





## Overview

Instrument type		Material	Process fitting	Process temperature	Process pressure
<b>VEGASWING 51</b> Liquids Standard		316L	Thread from G½, ½ NPT, hygienic fittings	-40 ... +150 °C	-1 ... +64 bar (-100 ... +6400 kPa)
<b>VEGASWING 61</b> Liquids Standard		316L, Hastelloy, ECTFE, PFA, enamel, Monel	Thread from G¾, ¾ NPT, flange from DN 25, 1", hygienic fittings	-50 ... +250 °C	-1 ... +64 bar (-100 ... +6400 kPa)
<b>VEGASWING 63</b> Liquids Tube extension up to 6 m		316L, Hastelloy, ECTFE, PFA, enamel, Monel	Thread from G¾, ¾ NPT, flange from DN 25, 1", hygienic fittings	-50 ... +250 °C	-1 ... +64 bar (-100 ... +6400 kPa)

## Overview

Instrument type		Measuring range	Process fitting	Process temperature	Process pressure
<b>VEGAVIB 61</b> Standard		Bulk solids from 20 g/l	Thread from G1, 1 NPT, flange from DN 32, 1½", hygienic fittings	-50 ... +250 °C	-1 ... +16 bar (-100 ... +1600 kPa)
<b>VEGAVIB 62</b> Suspension cable up to 80 m		Bulk solids from 20 g/l	Thread from G1, 1 NPT, flange from DN 32, 1½", hygienic fittings	-40 ... +150 °C	-1 ... +6 bar (-100 ... +600 kPa)
<b>VEGAVIB 63</b> Tube extension up to 6 m		Bulk solids from 20 g/l	Thread from G1, 1 NPT, flange from DN 32, 1½", hygienic fittings	-50 ... +250 °C	-1 ... +16 bar (-100 ... +1600 kPa)
<b>VEGAWAVE 61</b> Standard		Bulk solids from 8 g/l	Thread G1½, 1½ NPT, flange from DN 50, 2", hygienic fittings	-50 ... +250 °C	-1 ... +25 bar (-100 ... +2500 kPa)
<b>VEGAWAVE 62</b> Suspension cable up to 80 m		Bulk solids from 8 g/l	Thread G1½, 1½ NPT, flange from DN 50, 2", hygienic fittings	-40 ... +150 °C	-1 ... +6 bar (-100 ... +600 kPa)
<b>VEGAWAVE 63</b> Tube extension up to 6 m		Bulk solids from 8 g/l	Thread G1½, 1 NPT, flange from DN 50, 2", hygienic fittings	-50 ... +250 °C	-1 ... +25 bar (-100 ... +2500 kPa)

## Overview

Instrument type	Input	Hysteresis	Output	Operating voltage
<b>VEGATOR 636 Ex</b> Signal conditioning instrument for vibrating level switches 	Single channel	fix	1 x relay output 1 x transistor output	20 ... 253 V AC, 50/60 Hz, 20 ... 72 V DC
<b>NAMUR amplifier</b> 	Single or double channel	fix	1 x relay output per channel	207 ... 253 V AC, 45/65 Hz, 20 ... 30 V DC

## VEGASWING 51



### Vibrating level switch for liquids

#### Application area

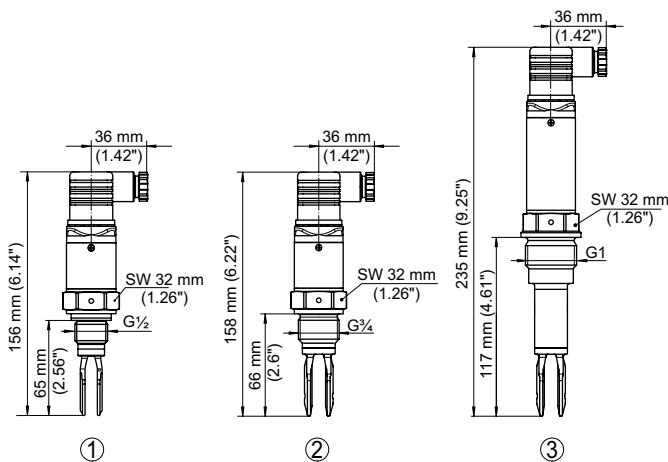
The VEGASWING 51 is a universal level switch with small dimensions for use in liquids. Independent of the mounting position, it detects reliably with millimetre accuracy the limit level. The instrument can be used as empty or full detector, as approved overfill protection, dry run protection or pump protection in vessels and pipelines. The VEGASWING 51 is an economical solution with maximum reliability and safety.

#### Your benefit

- Minimum time and cost expenditure thanks to simple setup without medium
- Precise and reliable function due to product-independent switching point
- Low maintenance costs

#### Technical data

Material:	316L
Process fitting:	thread from G $\frac{1}{2}$ , $\frac{1}{2}$ NPT hygienic fittings
Process temperature:	-40 ... +150 °C
Process pressure:	-1 ... +64 bar (-100 ... +6400 kPa)



- 1 Threaded version G $\frac{1}{2}$  up to 100 °C
- 2 Threaded version G1 up to 100 °C
- 3 Threaded version G1 up to 150 °C and switching point as SWING 71A

You will find further process fittings and options under [www.vega.com/configurator](http://www.vega.com/configurator).

You will find further drawings and tables under [www.vega.com/downloads](http://www.vega.com/downloads).

You will find mounting accessory, welded sockets and housing overviews in chapter "Accessory".

**Approval**

- XX without .....
- XM Ship approval .....
- XA Overfill protection acc. to WHG .....

**Version / Process temperature**

- S Standard / -40...100°C .....
- T Extended / -40...150°C .....
- H Hygienic applications / -40...150°C .....

**Process fitting / Material**

- GH Thread G½ (DIN 3852-A) PN64 / 316L .....
- NH Thread ½NPT (ASME B1.20.1) PN64 / 316L .....
- GB Thread G¾ (DIN 3852-A) PN64 / 316L .....
- NB Thread ¾NPT (ASME B1.20.1) PN64 / 316L .....
- GA Thread G1 (DIN 3852-A) PN64 / 316L .....
- NA Thread 1NPT (ASME B1.20.1) PN64 / 316L .....
- CL Clamp 1", 1½"PN16(ø50.5mm)DIN32676,ISO2852/316L Ra<0.8µm .....
- CN Clamp 2" PN16(ø64mm) DIN32676,ISO2852 /316L Ra <0.8µm .....
- RL Bolting DN25PN40 DIN11851 / 316L Ra<0.8µm .....
- RM Bolting DN40PN40 DIN11851 / 316L Ra<0.8µm .....
- RN Bolting DN50PN25 DIN11851 / 316L Ra<0.8µm .....

**Electronics**

- C Contactless electronic switch 20...253 V AC/DC .....
- T Transistor output PNP 9.6...35VDC .....

**Housing**

- P 316L .....

**Electrical connection / Protection**

- M M12x1 / IP67 .....
- V according to ISO4400 incl. plug / IP65 .....
- Q acc. to ISO4400 incl. plug with QuickOn connection/IP67 .....

**Switching point**

- Standard .....
- L Switching point as SWING71A .....



## VEGASWING 61



### Vibrating level switch for liquids

#### Application area

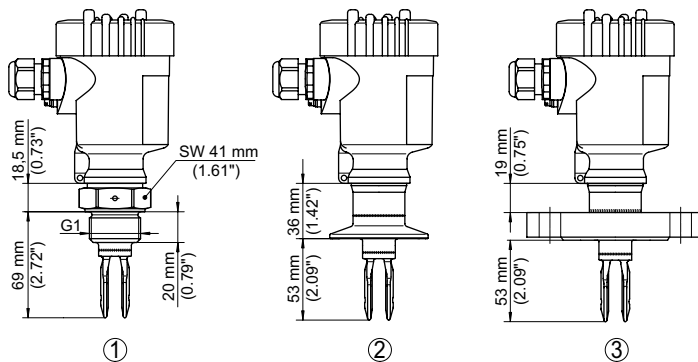
The VEGASWING 61 is a universal level switch for use in all liquids. Independent of the mounting position, it detects reliably with millimetre accuracy the limit level. The instrument can be used as empty or full detector, as approved overflow protection, dry run protection or pump protection in vessels and pipelines. The VEGASWING 61 offers maximum reliability in a wide application range.

#### Your benefit

- Minimum time and cost expenditure thanks to simple setup without medium
- Precise and reliable function through product-independent switching point
- Low maintenance costs

#### Technical data

Materials:	316L, Hastelloy, ECTFE, PFA, enamel, Monel
Process fitting:	thread from G $\frac{3}{4}$ , $\frac{3}{4}$ NPT flanges from DN 25, 1" hygienic fittings
Process temperature:	-50 ... +250 °C
Process pressure:	-1 ... +64 bar (-100 ... +6400 kPa)
SIL qualification:	optionally up to SIL2



- 1 Threaded version G1
- 2 Clamp version
- 3 Flange version

You will find further process fittings and options under [www.vega.com/configurator](http://www.vega.com/configurator).  
 You will find further drawings and tables under [www.vega.com/downloads](http://www.vega.com/downloads).  
 You will find mounting accessory, welded sockets and housing overviews in chapter "Accessory".



**Approval**

- XX without .....
- XA Overfill protection according to WHG .....
- CA ATEX II 1G, 1/2G, 2G Ex ia IIC T6 + WHG .....
- DA ATEX II 1/2G, Ex d IIC T2...T6 + WHG .....
- CM ATEX II 1G, 1/2G, 2G Ex ia IIC T6 + Ship approval .....
- DM ATEX II 1/2G, Ex d IIC T2...T6 + Ship approval .....
- CI IECEX Ex ia IIC T6 .....
- DI IEC Ex Ex d IIC T6...T2 Ga/Gb .....
- GI IECEX Ex tD A20/21 IP66 T, A21 .....
- XM** Ship approval .....

**Process fitting / Material**

- GBV Thread G $\frac{3}{4}$  (DIN 3852-A) PN64 / 316L .....
- NBV Thread  $\frac{3}{4}$ NPT (ASME B1.20.1) PN64 / 316L .....
- GAV Thread G1 (DIN 3852-A) PN64 / 316L .....
- NAV Thread 1NPT (ASME B1.20.1) PN64 / 316L .....
- CCN Clamp 1" PN16( $\phi$ 50.5mm) DIN32676,ISO2852 / 316L Ra<0.3 $\mu$ m .....
- CCP Clamp 1" PN16( $\phi$ 50.5mm) DIN32676,ISO2852 / 316L Ra<0.8 $\mu$ m .....
- CAN Clamp 2" PN16( $\phi$ 64mm) DIN32676,ISO2852 / 316L Ra <0.3 $\mu$ m .....
- CAP Clamp 2" PN16( $\phi$ 64mm) DIN32676,ISO2852 / 316L Ra <0.8 $\mu$ m .....
- RAN Bolting DN40PN40 DIN11851 / 316L Ra<0.3 $\mu$ m .....
- RAP Bolting DN40PN40 DIN11851 / 316L Ra<0.8 $\mu$ m .....
- FPV Flange DN25PN40 Form C, DIN 2501 / 316L .....
- FPH Flange DN25PN40 Form C, DIN 2501 / ECTFE .....
- FEV Flange DN50PN40 Form C, DIN 2501 / 316L .....
- FEH Flange DN50PN40 Form C, DIN 2501 / ECTFE .....
- FEF Flange DN50PN40 Form C, DIN 2501 / PFA .....
- FPS Flange DN25PN40 Form B1, EN 1092-1 / Enamel .....
- FES Flange DN50PN40 Form B1, EN 1092-1 / Enamel .....
- APV Flange 1" 150lb RF, ANSI B16.5 / 316L .....
- APH Flange 1" 150lb RF, ANSI B16.5 / ECTFE .....
- APE Flange 1" 150lb RF, ANSI B16.5 / Enamel .....
- ACV Flange 2" 150lb RF, ANSI B16.5 / 316L .....
- ACH Flange 2" 150lb RF, ANSI B16.5 / ECTFE .....
- ACE Flange 2" 150lb RF, ANSI B16.5 / Enamel .....

**Adapter / Process temperature**

- X without / -50...150°C .....
- T with / -50...250°C .....
- G with gas-tight leadthrough / -50...150°C .....
- D with gas-tight leadthrough / -50...250°C .....

**Housing / Cable gland**

- P Plastic IP66/67 / M20x1.5 .....
- M Aluminium IP66/IP67 / M20x1.5 .....
- U Aluminium IP66/IP67 /  $\frac{1}{2}$ NPT .....
- 8 StSt (electropolished) 316L / IP66/IP67 / M20x1.5 .....

**Electronics**

- C Contactless electronic switch 20...250VAC/DC .....
- R Relay (DPDT) 20...72VDC/20...250VAC (3A) .....
- T Transistor (NPN/PNP) 10...55VDC .....
- Z Two-wire 8/16 mA 12...36VDC .....
- N NAMUR signal .....

**Switching point**

- X Standard .....
- L as SWING81 or 81A .....



## VEGASWING 63



### Vibrating level switch with tube extension for liquids

#### Application area

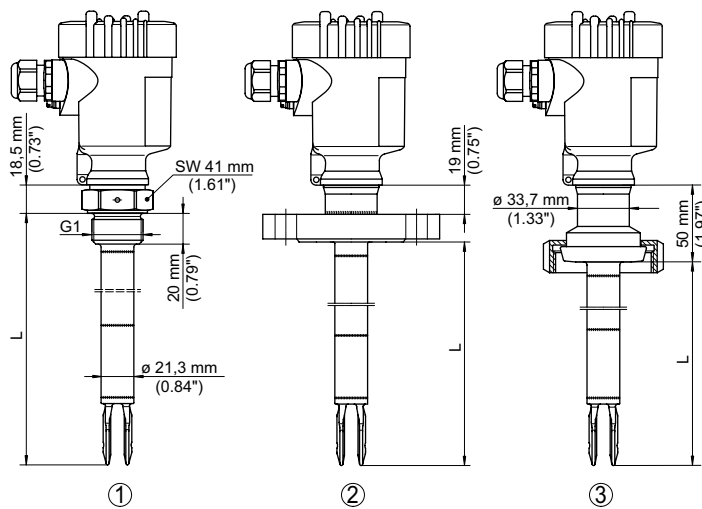
VEGASWING 63 is used as a universal level switch in all liquids. Independent of the mounting position it detects reliably with millimetre accuracy the level. The instrument can be used in vessels as empty or full detector, as approved overflow protection, dry run protection or pump protection. The position of the switching point is determined through the tube extension. The VEGASWING 63 offers high reliability and security in a wide application range.

#### Your benefit

- Minimum time and cost expenditure thanks to simple setup without medium
- Precise and reliable function through product-independent switching point
- Low maintenance costs

#### Technical data

Version:	tube extension up to 6 m
Materials:	316L, Hastelloy, ECTFE, PFA, enamel, Monel
Process fitting:	thread from G $\frac{3}{4}$ , $\frac{3}{4}$ NPT flanges from DN 25, 1" hygienic fittings
Process temperature:	-50 ... +250 °C
Process pressure:	-1 ... +64 bar (-100 ... +6400 kPa)
SIL qualification:	optionally up to SIL2



- 1 Threaded version G1
- 2 Flange version
- 3 Bolting DN 50 PN 25

You will find further process fittings and options under [www.vega.com/configurator](http://www.vega.com/configurator).  
 You will find further drawings and tables under [www.vega.com/downloads](http://www.vega.com/downloads).  
 You will find mounting accessory, welded sockets and housing overviews in chapter "Accessory".

**Approval**

- XX without .....
- XA Overfill protection according to WHG .....
- CA ATEX II 1G, 1/2G, 2G Ex ia IIC T6 + WHG .....
- DA ATEX II 1/2G, Ex d IIC T2...T6 + WHG .....
- CM ATEX II 1G, 1/2G, 2G Ex ia IIC T6 + Ship approval .....
- DM ATEX II 1/2G, Ex d IIC T2...T6 + Ship approval .....
- CI IECEX Ex ia IIC T6 .....
- DI IECEX Ex d IIC T6...T2 Ga/Gb .....
- GI IECEX Ex tD A20/21 IP66 T, A21 .....
- XM** Ship approval .....

**Process fitting / Material**

- GBV Thread G<sup>3</sup>/<sub>4</sub> (DIN 3852-A) PN64 / 316L .....
- NBV Thread ¾NPT (ASME B1.20.1) PN64 / 316L .....
- GAV Thread G1 (DIN 3852-A) PN64 / 316L .....
- NAV Thread 1NPT (ASME B1.20.1) PN64 / 316L .....
- CCN Clamp 1" PN16(ø50.5mm) DIN32676,ISO2852 / 316L Ra<0.3µm .....
- CCP Clamp 1" PN16(ø50.5mm) DIN32676,ISO2852 / 316L Ra<0.8µm .....
- CAN Clamp 2" PN16(ø64mm) DIN32676,ISO2852 / 316L Ra <0.3µm .....
- CAP Clamp 2" PN16(ø64mm) DIN32676,ISO2852 / 316L Ra <0.8µm .....
- RAN Bolting DN40PN40 DIN11851 / 316L Ra<0.3µm .....
- RAP Bolting DN40PN40 DIN11851 / 316L Ra<0.8µm .....
- FPV Flange DN25PN40 Form C, DIN 2501 / 316L .....
- FPH Flange DN25PN40 Form C, DIN 2501 / ECTFE .....
- FEV Flange DN50PN40 Form C, DIN 2501 / 316L .....
- FEH Flange DN50PN40 Form C, DIN 2501 / ECTFE .....
- FEF Flange DN50PN40 Form C, DIN 2501 / PFA .....
- FPS Flange DN25PN40 Form B1, EN 1092-1 / Enamel .....
- FES Flange DN50PN40 Form B1, EN 1092-1 / Enamel .....
- APV Flange 1" 150lb RF, ANSI B16.5 / 316L .....
- APH Flange 1" 150lb RF, ANSI B16.5 / ECTFE .....
- APE Flange 1" 150lb RF, ANSI B16.5 / Enamel .....
- ACV Flange 2" 150lb RF, ANSI B16.5 / 316L .....
- ACH Flange 2" 150lb RF, ANSI B16.5 / ECTFE .....
- ACE Flange 2" 150lb RF, ANSI B16.5 / Enamel .....

**Adapter / Process temperature**

- X without / -50...150°C .....
- T with / -50...250°C .....
- G with gas-tight leadthrough / -50...150°C .....
- D with gas-tight leadthrough / -50...250°C .....

**Housing / Cable gland**

- P Plastic IP66/67 / M20x1.5 .....
- M Aluminium IP66/IP67 / M20x1.5 .....
- U Aluminium IP66/IP67 / ½NPT .....
- 8 StSt (electropolished) 316L / IP66/IP67 / M20x1.5 .....

**Electronics**

- C Contactless electronic switch 20...250VAC/DC .....
- R Relay (DPDT) 20...72VDC/20...250VAC (3A) .....
- T Transistor (NPN/PNP) 10...55VDC .....
- Z Two-wire 8/16 mA 12...36VDC .....
- N NAMUR signal .....



**Total length (from seal surface)**

- 316L (80-6000 mm ) per 100 mm
- ECTFE coated (80-3000 mm) per 100 mm
- PFA coated (80-3000 mm) per 100 mm
- 316L Ra <0.8µm (80-6000 mm) per 100 mm
- 316L Ra <0.3µm (80-6000 mm) per 100 mm
- enamelled version (300, 400, 500, 600 mm) once

## VEGAVIB 61



### Vibrating level switch for granular bulk solids

#### Application area

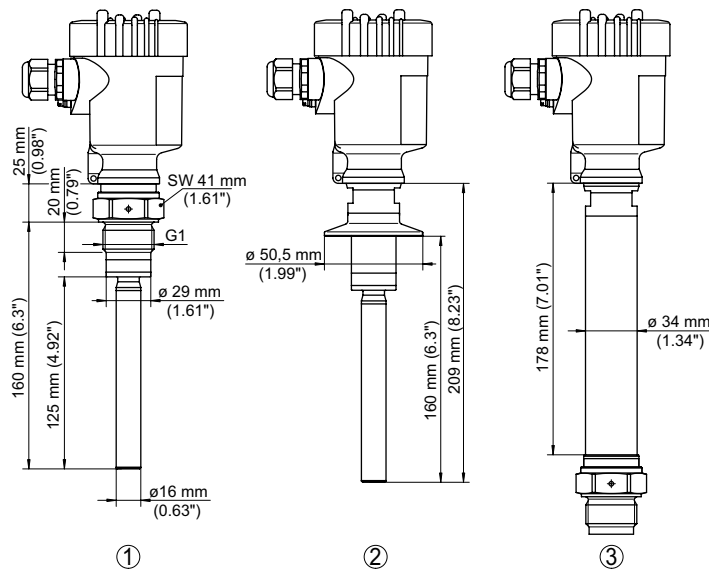
The VEGAVIB 61 is a level switch for granular and coarse-grained bulk solids. The VEGAVIB 61 detects reliably and accurately the min. or max. level. The smooth surface of the vibrating rod, without corners and edges, avoids jamming of the bulk solid and is easy to clean.

#### Your benefit

- Minimum time and cost expenditure thanks to simple setup without medium
- Reliable function through product-independent switching point
- Low maintenance costs

#### Technical data

Measuring range:	bulk solids from 20 g/l
Process fitting:	thread from G1, 1 NPT flanges from DN 32, 1½"
	hygienic fittings
Process temperature:	-50 ... +250 °C
Process pressure:	-1 ... +16 bar (-100 ... +1600 kPa)
SIL qualification:	optionally up to SIL2



- 1 Threaded version G1
- 2 Clamp version 1", 1½"
- 3 Version with temperature adapter

You will find further process fittings and options under [www.vega.com/configurator](http://www.vega.com/configurator).  
 You will find further drawings and tables under [www.vega.com/downloads](http://www.vega.com/downloads).  
 You will find mounting accessory, welded sockets and housing overviews in chapter "Accessory".

**Approval**

- XX without .....
- CX ATEX II 1G, 1/2G, 2G Ex ia IIC T6 .....
- CK ATEX II 1, 1/2, 2G Ex ia IIC T6+1, 1/2, 2D Ex tD IP66 T\* .....
- CI IECEx Ex ia IIC T6 .....
- LX ATEX II 1/2G, 2G Ex d IIC T1... T6 Ga/Gb, Gb .....
- GX ATEX II 1, 1/2, 2D Ex tD IP66 T\* .....
- GI IECEx Ex tD A20/21 IP66 T, A21 .....

**Version / Process temperature**

- A Standard / -50...150°C .....
- B With adapter / -50...+250°C .....
- C Detection of bulk solids in water / -50...+150°C .....

**Process fitting / Material**

- GC Thread G1 (DIN 3852-A) PN16 / 316L .....
- NC Thread 1NPT (ASME B1.20.1) PN16 / 316L .....
- GD Thread G1½ (DIN 3852-A)PN16 / 316Lswitching point VIB51 .....
- ND Thread 1½NPT(ASME B1.20.1)PN16 / 316Lswitching pt.VIB51 .....
- GG Thread G1½ (DIN 3852-A) PN16 / 316L .....
- NG Thread 1½NPT (ASME B1.20.1) PN16 / 316L .....
- CT Clamp 1½" PN16(ø50.5mm) DIN32676,ISO2852 /316L Ra<0.8µm .....
- CV Clamp 2" PN16(ø64mm) DIN32676,ISO2852 / 316L Ra <0.8µm .....
- RA Bolting DN40PN40 DIN11851 / 316L .....
- EF Flange DN50PN40 Form C, DIN2501 / 316L .....
- KF Flange DN80PN40 Form C, DIN2501 / 316L .....
- MF Flange DN100PN16 Form C, DIN2501 / 316L .....
- HA Flange 2"150lb RF, ANSI B16.5 / 316L .....
- OA Flange 3"150lb RF, ANSI B16.5 / 316L .....

**Electronics**

- C Contactless electronic switch 20...253VAC/DC .....
- R Relay (DPDT) 20...72VDC/20...253VAC(3A) .....
- T Transistor (NPN/PNP) 10...55VDC .....
- Z Two-wire 8/16 mA 10...36VDC .....
- N NAMUR signal .....

**Housing / Protection**

- K Plastic / IP66/IP67 .....
- A Aluminium / IP66/IP68 (0.2 bar) .....
- 8 StSt (electropolished) 316L / IP66/IP68 (0.2bar) .....

**Cable entry / Cable gland / Plug connection**

- M M20x1.5 / with / without .....
- N ½NPT / without / without .....

**Additional equipment**

- X Without .....

VB61.							
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## VEGAVIB 62



### Vibrating level switch with suspension cable for granular bulk solids

#### Application area

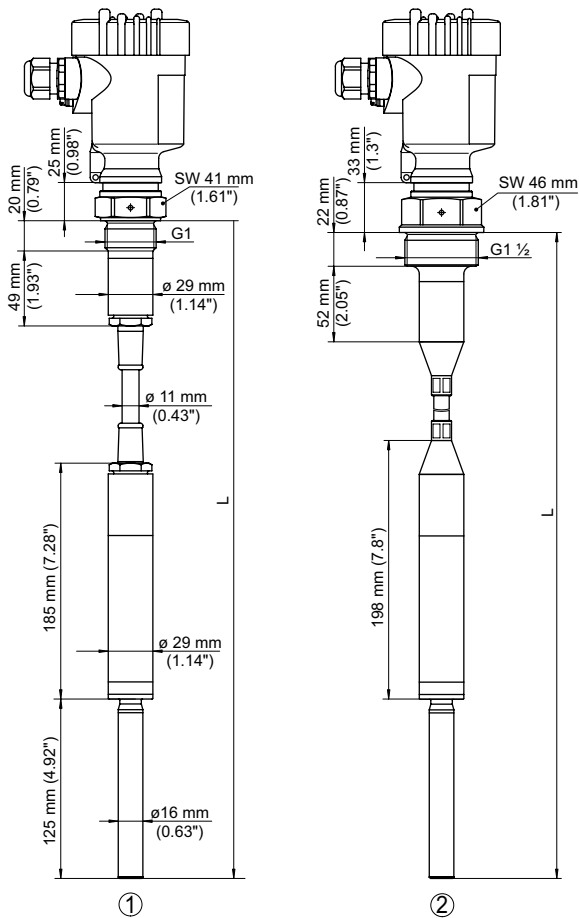
The VEGAVIB 62 is a level switch for granular and coarse-grained bulk solids. The optimized rod design without corners and edges avoids jamming of the bulk solids and is easy to clean. The VEGAVIB 62 detects reliably and accurately the min. or max. level in bulk solids. The position of the switching point is specified flexibly through the length of the suspension cable.

#### Your benefit

- Minimum time and cost expenditure thanks to simple setup without medium
- Reliable function through product-independent switching point
- Low maintenance costs

#### Technical data

Version:	suspension cable up to 80 m
Measuring range:	bulk solids from 20 g/l
Process fitting:	thread from G1, 1 NPT flanges from DN 32, 1½"
	hygienic fittings
Process temperature:	-50 ... +150 °C
Process pressure:	-1 ... +6 bar (-100 ... +600 kPa)
SIL qualification:	optionally up to SIL2



- 1 Version with PUR suspension cable
- 2 Version with FEP suspension cable

You will find further process fittings and options under [www.vega.com/configurator](http://www.vega.com/configurator).  
 You will find further drawings and tables under [www.vega.com/downloads](http://www.vega.com/downloads).  
 You will find mounting accessory, welded sockets and housing overviews in chapter "Accessory".

**Approval**

- XX** without .....
- CX** ATEX II 1G, 1/2G, 2G Ex ia IIC T6 .....
- CK** ATEX II 1, 1/2, 2G Ex ia IIC T6+1, 1/2, 2D Ex tD IP66 T\* .....
- CI** IECEx Ex ia IIC T6 .....
- GX** ATEX II 1, 1/2, 2D Ex tD IP66 T\* .....
- GI** IECEx Ex tD A20/21 IP66 T, A21 .....

**Version / Process temperature**

- T** Cable PUR / -20...80°C .....
- H** Cable FEP / -40...150°C .....
- C** Detection of solids in water / -20...80°C .....

**Process fitting / Material**

- GC** Thread G1 (DIN 3852-A) PN6 / 316L .....
- NC** Thread 1NPT (ASME B1.20.1) PN6 / 316L .....
- GD** Thread G1½ (DIN 3852-A) PN6 / 316L .....
- ND** Thread 1½NPT (ASME B1.20.1) PN6 / 316L .....
- EF** Flange DN50PN40 Form C, DIN2501 / 316L .....
- KF** Flange DN80PN40 Form C, DIN2501 / 316L .....
- MF** Flange DN100PN16 Form C, DIN2501 / 316L .....
- HA** Flange 2"150lb RF, ANSI B16.5 / 316L .....
- OA** Flange 3"150lb RF, ANSI B16.5 / 316L .....

**Electronics**

- C** Contactless electronic switch 20...253VAC/DC .....
- R** Relay (DPDT) 20...72VDC/20...253VAC(3A) .....
- T** Transistor (NPN/PNP) 10...55VDC .....
- Z** Two-wire 8/16 mA 10...36VDC .....
- N** NAMUR signal .....

**Housing / Protection**

- K** Plastic / IP66/IP67 .....
- A** Aluminium / IP66/IP68 (0.2 bar) .....
- 8** StSt (electropolished) 316L / IP66/IP68 (0.2bar) .....

**Cable entry / Cable gland / Plug connection**

- M** M20x1.5 / with / without .....
- N** ½NPT / without / without .....

**Additional equipment**

- X** without .....

VB62.								
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**Length (from seal surface)**

PUR (480-80000 mm) per 100 mm  
 FEP (480-80000 mm) per 100 mm

## VEGAVIB 63



### Vibrating level switch with tube extension for granular bulk solids

#### Application area

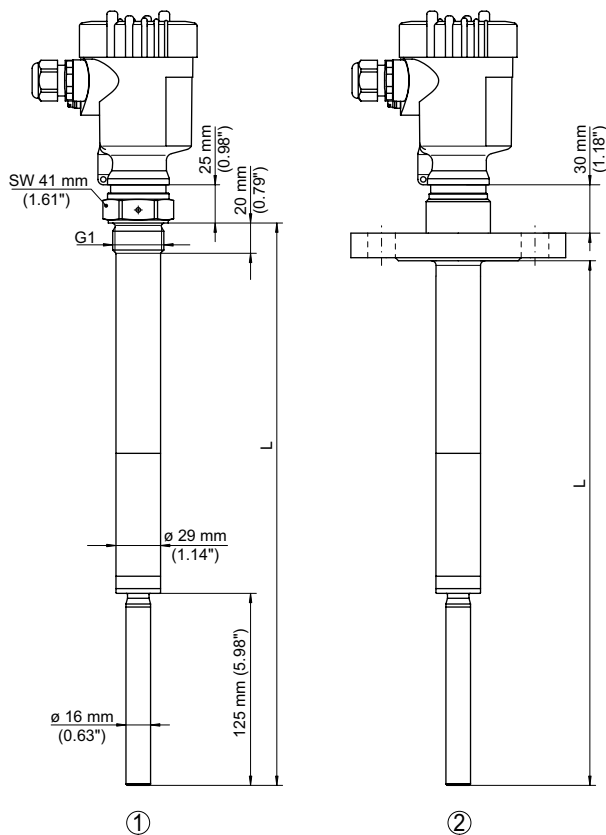
The VEGAVIB 63 is a level switch for granular and coarse-grained bulk solids. The VEGAVIB 63 detects reliably and accurately the min. or max. level. The smooth surface of the vibrating rod, without corners and edges, avoids jamming of the bulk solid and is easy to clean. The position of the switching point is specified through the tube extension.

#### Your benefit

- Minimum time and cost expenditure thanks to simple setup without medium
- Reliable function through product-independent switching point
- Low maintenance costs

#### Technical data

Version:	tube extension up to 6 m
Measuring range:	bulk solids from 20 g/l
Process fitting:	thread from G1, 1 NPT flanges from DN 32, 1½"
	hygienic fittings
Process temperature:	-50 ... +250 °C
Process pressure:	-1 ... +16 bar (-100 ... +1600 kPa)
SIL qualification:	optionally up to SIL2



- 1 Threaded version G1
- 2 Flange version

You will find further process fittings and options under [www.vega.com/configurator](http://www.vega.com/configurator).  
 You will find further drawings and tables under [www.vega.com/downloads](http://www.vega.com/downloads).  
 You will find mounting accessory, welded sockets and housing overviews in chapter "Accessory".



**Approval**

- XX** without .....
- CX** ATEX II 1G, 1/2G, 2G Ex ia IIC T6 .....
- CK** ATEX II 1, 1/2, 2G Ex ia IIC T6+1, 1/2, 2D Ex tD IP66 T\* .....
- CI** IECEx Ex ia IIC T6 .....
- LX** ATEX II 1/2G, 2G Ex d IIC T1... T6 Ga/Gb, Gb .....
- GX** ATEX II 1, 1/2, 2D Ex tD IP66 T\* .....
- GI** IECEx Ex tD A20/21 IP66 T, A21 .....

**Version / Process temperature**

- A** Standard / -50...150°C .....
- B** With adapter / -50...+250°C .....
- C** Detection of bulk solids in water / -50...+150°C .....

**Process fitting / Material**

- GC** Thread G1 (DIN 3852-A) PN16 / 316L .....
- NC** Thread 1NPT (ASME B1.20.1) PN16 / 316L .....
- GD** Thread G1½ (DIN 3852-A) PN16 / 316L .....
- ND** Thread 1½NPT (ASME B1.20.1) PN16 / 316L .....
- CA** Clamp 2" PN16(ø64mm) DIN32676, ISO2852 / 316L .....
- RA** Bolting DN40PN40 DIN11851 / 316L .....
- DF** Flange DN40PN40 Form C, DIN2501 / 316L .....
- EF** Flange DN50PN40 Form C, DIN2501 / 316L .....
- KF** Flange DN80PN40 Form C, DIN2501 / 316L .....
- MF** Flange DN100PN16 Form C, DIN2501 / 316L .....
- HA** Flange 2"150lb RF, ANSI B16.5 / 316L .....
- IA** Flange 2"300lb RF, ANSI B16.5 / 316L .....
- OA** Flange 3"150lb RF, ANSI B16.5 / 316L .....

**Electronics**

- C** Contactless electronic switch 20...253VAC/DC .....
- R** Relay (DPDT) 20...72VDC/20...253VAC(3A) .....
- T** Transistor (NPN/PNP) 10...55VDC .....
- Z** Two-wire 8/16 mA 10...36VDC .....
- N** NAMUR signal .....

**Housing / Protection**

- K** Plastic / IP66/IP67 .....
- A** Aluminium / IP66/IP68 (0.2 bar) .....
- 8** StSt (electropolished) 316L / IP66/IP68 (0.2bar) .....

**Cable entry / Cable gland / Plug connection**

- M** M20x1.5 / with / without .....
- N** ½NPT / without / without .....

**Additional equipment**

- X** Without .....

VB63.									
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Length (from seal surface)  
316L (180-6000 mm) per 100 mm

## VEGAWAVE 61



### Vibrating level switch for powders

#### Application area

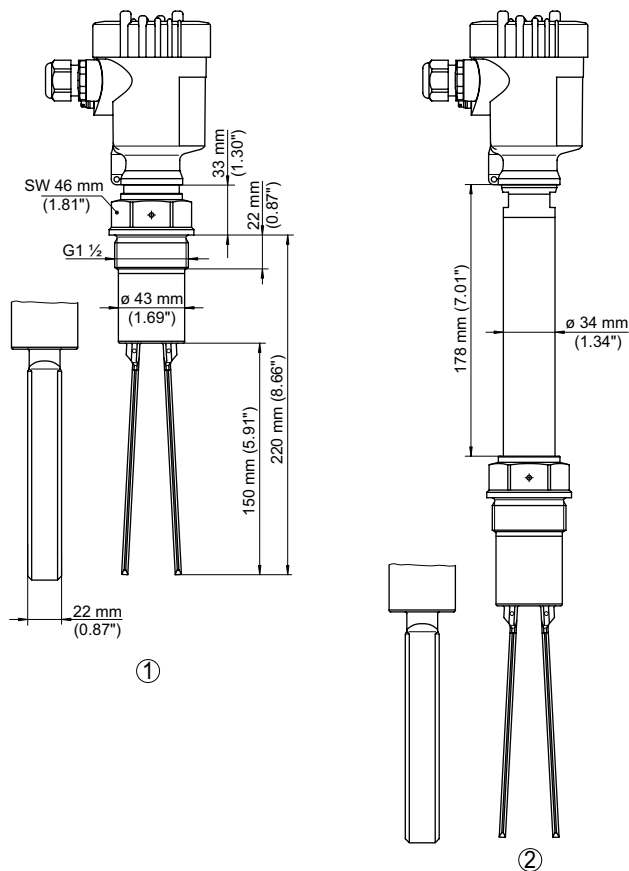
The VEGAWAVE 61 is a level switch for universal use in powders and fine-grained bulk solids. The level switch detects reliably and robust the min. or max. level. The tuning fork is ideal for use either in adhesive and abrasive products as well as in bulk solids with very low density.

#### Your benefit

- Minimum time and cost expenditure thanks to simple setup without medium
- Reliable function through product-independent switching point
- Low costs for maintenance through robust design

#### Technical data

Measuring range:	bulk solids from 8 g/l
Process fitting:	thread G1½, 1½ NPT flanges from DN 50, 2"
Process temperature:	-50 ... +250 °C
Process pressure:	-1 ... +25 bar (-100 ... +2500 kPa)
SIL qualification:	optionally up to SIL2



- 1 Threaded version G1½
- 2 Threaded version G1½ with temperature adapter up to +250 °C

You will find further process fittings and options under [www.vega.com/configurator](http://www.vega.com/configurator).  
 You will find further drawings and tables under [www.vega.com/downloads](http://www.vega.com/downloads).  
 You will find mounting accessory, welded sockets and housing overviews in chapter "Accessory".

**Approval**

- XX without .....
- CX ATEX II 1G, 1/2G, 2G Ex ia IIC T6 .....
- CK ATEX II 1G, 1/2G, 2G Ex ia IIC T6+ATEX II 1/2D IP6X T .....
- CI IECEx Ex ia IIC T6 .....
- LX ATEX II 1/2G, 2G Ex d IIC T6 .....
- GX ATEX II 1,1/2,2D Ex tD IP66 T\* .....
- GI IECEx Ex tD A20/21 IP66 T, A21 .....

**Version / Process temperature**

- A Standard / -50...150°C .....
- B with adapter / -50...250°C .....
- C Detection of solids in water / -50...150°C .....
- D Detection of solids in water / -50...250°C .....

**Process fitting / Material**

- GD Thread G1½ (DIN 3852-A) PN25 / 316L .....
- ND Thread 1½NPT (ASME B1.20.1) PN25 / 316L .....
- EF Flange DN50PN40 Form C, DIN2501 / 316L .....
- KF Flange DN80PN40 Form C, DIN2501 / 316L .....
- MF Flange DN100PN16 Form C, DIN2501 / 316L .....
- HA Flange 2"150lb RF, ANSI B16.5 / 316L .....
- OA Flange 3"150lb RF, ANSI B16.5 / 316L .....

**Electronics**

- C Contactless electronic switch 20...253VAC/DC .....
- R Relay (DPDT) 20...72VDC/20...253VAC(3A) .....
- T Transistor (NPN/PNP) 10...55VDC .....
- Z Two-wire 8/16 mA 10...36VDC .....
- N NAMUR signal .....

**Housing / Protection**

- K Plastic / IP66/IP67 .....
- A Aluminium / IP66/IP68 (0.2 bar) .....
- 8 StSt (electropolished) 316L / IP66/IP68 (0.2bar) .....

**Cable entry / Cable gland / Plug connection**

- M M20x1.5 / with / without .....
- N ½NPT / without / without .....

**Additional equipment**

- X Without .....

WE61.									
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## VEGAWAVE 62



### Vibrating level switch with suspension cable for powders

#### Application area

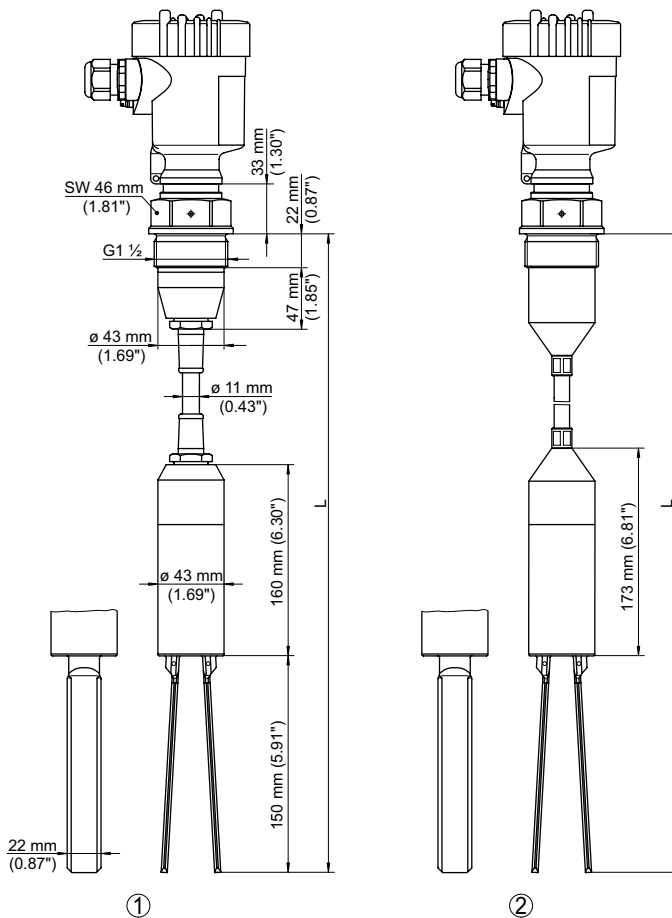
The VEGAWAVE 62 is a level switch for universal use in powders and fine-grained bulk solids. The level switch detects reliably and robust the min. or max. level. The tuning fork is ideal for use either in adhesive and abrasive products as well as in bulk solids with very low density. The position of the switching point is determined through the length of the suspension cable.

#### Your benefit

- Minimum time and cost expenditure thanks to simple setup without medium
- Reliable function through product-independent switching point
- Low costs for maintenance through robust design

#### Technical data

Version:	suspension cable up to 80 m
Measuring range:	bulk solids from 8 g/l
Process fitting:	thread G1½, 1½ NPT flanges from DN 50, 2"
Process temperature:	-50 ... +150 °C
Process pressure:	-1 ... +6 bar (-100 ... +600 kPa)
SIL qualification:	optionally up to SIL2



- 1 Version with PUR suspension cable
- 2 Version with FEP suspension cable

You will find further process fittings and options under [www.vega.com/configurator](http://www.vega.com/configurator).  
 You will find further drawings and tables under [www.vega.com/downloads](http://www.vega.com/downloads).  
 You will find mounting accessory, welded sockets and housing overviews in chapter "Accessory".

**Approval**

- XX** without .....
- CX** ATEX II 1G, 1/2G, 2G Ex ia IIC T6 .....
- CK** ATEX II 1G, 1/2G, 2G Ex ia IIC T6+ATEX II 1/2D IP6X T .....
- CI** IECEx Ex ia IIC T6 .....
- GX** ATEX II 1, 1/2, 2D Ex tD IP66 T\* .....
- GI** IECEx Ex tD A20/21 IP66 T, A21 .....

**Version / Process temperature**

- T** Cable PUR / -20...80°C .....
- H** Cable FEP / -40...150°C .....
- C** Detection of solids in water / -20...80°C .....

**Process fitting / Material**

- GD** Thread G1½ (DIN 3852-A) PN16 / 316L .....
- ND** Thread 1½NPT (ASME B1.20.1) PN16 / 316L .....
- EF** Flange DN50PN40 Form C, DIN2501/316L .....
- KF** Flange DN80PN40 Form C, DIN2501/316L .....
- MF** Flange DN100PN16 Form C, DIN2501/316L .....
- HA** Flange 2"150lb RF, ANSI B16.5, 316L .....
- OA** Flange 3"150lb RF, ANSI B16.5/316L .....

**Electronics**

- C** Contactless electronic switch 20...253VAC/DC .....
- R** Relay (DPDT) 20...72VDC/20...253VAC(3A) .....
- T** Transistor (NPN/PNP) 10...55VDC .....
- Z** Two-wire 8/16 mA 10...36VDC .....
- N** NAMUR signal .....

**Housing / Protection**

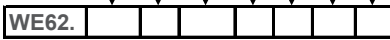
- K** Plastic / IP66/IP67 .....
- A** Aluminium / IP66/IP68 (0.2 bar) .....
- 8** StSt (electropolished) 316L / IP66/IP68 (0.2bar) .....

**Cable entry / Cable gland / Plug connection**

- M** M20x1.5 / with / without .....
- N** ½NPT / without / without .....

**Additional equipment**

- X** without .....



**Length (from seal surface)**

- PUR (480-80000 mm) per 100 mm
- FEP (480-80000 mm) per 100 mm

## VEGAWAVE 63



### Vibrating level switch with tube extension for powders

#### Application area

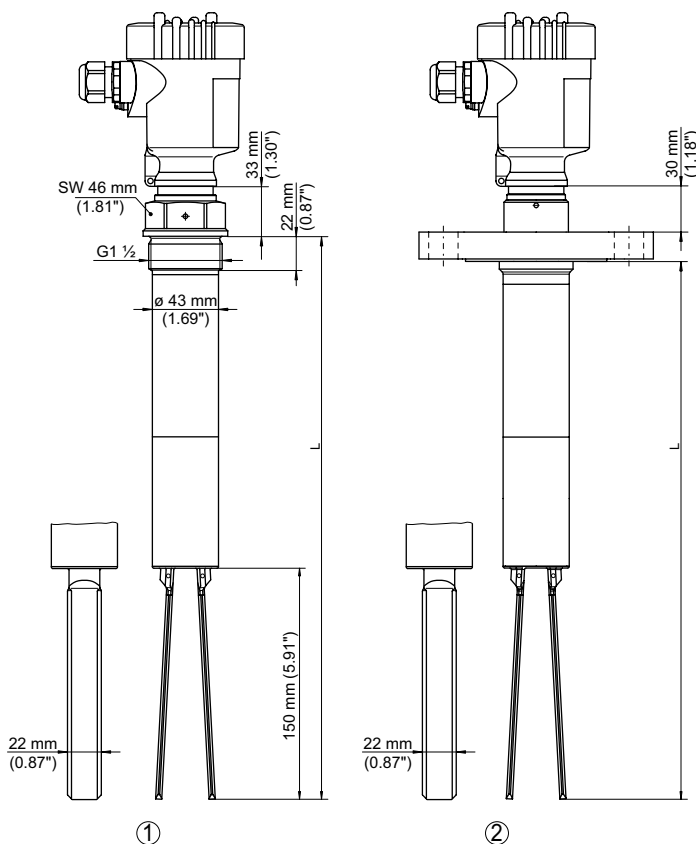
The VEGAWAVE 63 is a level switch for universal use in powders and fine-grained bulk solids. The level switch detects reliably and robust the min. or max. level. The tuning fork is ideal for use either in adhesive and abrasive products as well as in bulk solids with very low density. The position of the switching point can be determined through the length of the tube extension.

#### Your benefit

- Minimum time and cost expenditure thanks to simple setup without medium
- Reliable function through product-independent switching point
- Low costs for maintenance through robust design

#### Technical data

Version:	tube extension up to 6 m
Measuring range:	bulk solids from 8 g/l
Process fitting:	thread G1½, 1½ NPT flanges from DN 50, 2"
Process temperature:	-50 ... +250 °C
Process pressure:	-1 ... +25 bar (-100 ... +2500 kPa)
SIL qualification:	optionally up to SIL2



- 1 Threaded version G1½
- 2 Flange version

You will find further process fittings and options under [www.vega.com/configurator](http://www.vega.com/configurator).  
 You will find further drawings and tables under [www.vega.com/downloads](http://www.vega.com/downloads).  
 You will find mounting accessory, welded sockets and housing overviews in chapter "Accessory".

**Approval**

- XX without .....
- CX ATEX II 1G, 1/2G, 2G Ex ia IIC T6 .....
- CK ATEX II 1G, 1/2G, 2G Ex ia IIC T6+ATEX II 1/2D IP6X T .....
- CI IECEx Ex ia IIC T6 .....
- LX ATEX II 1/2G, 2G Ex d IIC T6 .....
- GX ATEX II 1,1/2,2D Ex tD IP66 T\* .....
- GI IECEx Ex tD A20/21 IP66 T, A21 .....

**Version / Process temperature**

- A Standard / -50...150°C .....
- B with adapter / -50...250°C .....
- C Detection of solids in water / -50...150°C .....
- D Detection of solids in water / -50...250°C .....

**Process fitting / Material**

- GD Thread G1½ (DIN 3852-A) PN25 / 316L .....
- ND Thread 1½NPT (ASME B1.20.1) PN25 / 316L .....
- EF Flange DN50PN40 Form C, DIN2501 / 316L .....
- KF Flange DN80PN40 Form C, DIN2501 / 316L .....
- MF Flange DN100PN16 Form C, DIN2501 / 316L .....
- HA Flange 2"150lb RF, ANSI B16.5 / 316L .....
- OA Flange 3"150lb RF, ANSI B16.5 / 316L .....

**Electronics**

- C Contactless electronic switch 20...253VAC/DC .....
- R Relay (DPDT) 20...72VDC/20...253VAC(3A) .....
- T Transistor (NPN/PNP) 10...55VDC .....
- Z Two-wire 8/16 mA 10...36VDC .....
- N NAMUR signal .....

**Housing / Protection**

- K Plastic / IP66/IP67 .....
- A Aluminium / IP66/IP68 (0.2 bar) .....
- 8 StSt (electropolished) 316L / IP66/IP68 (0.2bar) .....

**Cable entry / Cable gland / Plug connection**

- M M20x1.5 / with / without .....
- N ½NPT / without / without .....

**Additional equipment**

- X Without .....

WE63.										
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Length (from seal surface)

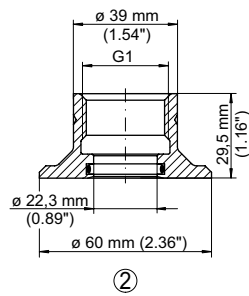
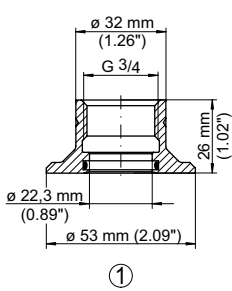
316L (240-6000 mm) per 100 mm



suitable for

- 1 VEGASWING 51/61/63 .....
- Version / Material**
- GB** Thread G $\frac{3}{4}$  (DIN 3852-A) / 316L .....
- GA** Thread G1 (DIN 3852-A) / 316L .....
- Test certificate**
- B** C 3.1-Certificate/Mat. ....
- A** H 2.2-Certificate/Mat. ....
- X** without .....
- Seal**
- 1** FKM .....
- 3** EPDM .....

ESTSG.



- 1 Thread G $\frac{3}{4}$ , version ESTSG.1GB\*\*
- 2 Thread G1, version ESTSG.1GA\*\*



## Lock fitting for VEGASWING 63



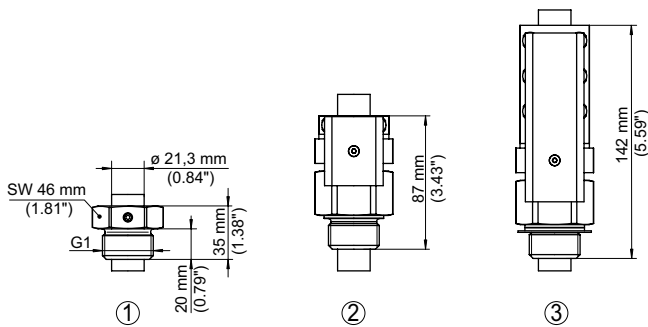
### Process pressure / Process temperature / suitable for

- 1 Unpressurised / -50...250°C / Approval XX, XA .....
- 2 -1...16 bar / -50...150°C / Approval XX,XA,CA,DA,GX,GK .....
- 3 -1...64 bar / -50...250°C / Approval XX,XA,CA,DA,GX,GK .....

### Process fitting / Material

- GC Thread G1 (DIN 3852-A) / 316L .....
- NC Thread 1NPT (ASME B1.20.1) / 316L .....
- GD Thread G1½ (DIN 3852-A) / 316L .....
- ND Thread 1½NPT (ASME B1.20.1) / 316L .....

ARV-SG63.



- 1 Version – unpressurized / -50 ... +250 °C
- 2 Version – -1 ... 16 bar / -50 ... +150 °C
- 3 Version – -1 ... 64 bar / -50 ... +250 °C

## Lock fitting for VEGAVIB 63



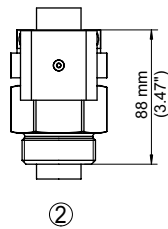
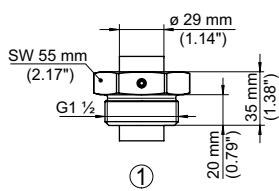
### Process pressure / Process temperature / suitable for

- 1 Unpressurised / -50...250°C / Approval XX .....
- 2 -1...16 bar / -50...150°C / Approval XX,CX,CK,LX,GX .....

### Process fitting / Material

- GD Thread G1½ (DIN 3852-A) / 316L .....
- ND Thread 1½NPT (ASME B1.20.1) / 316L .....

ARV-VB63.



- 1 Version – unpressurized / -50 ... +250 °C
- 2 Version – -1 ... 16 bar / -50 ... +150 °C

## Lock fitting for VEGAWAVE 63



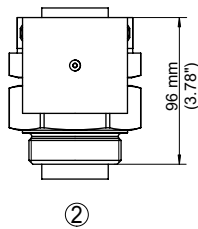
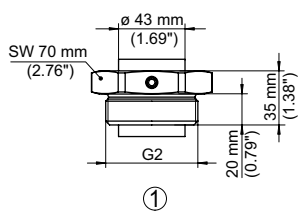
### Process pressure / Process temperature / suitable for

- 1 Unpressurised / -50...250°C / Approval XX .....
- 2 -1...16 bar / -50...150°C / Approval XX,CX,CK,LX,GX .....

### Process fitting / Material

- GA Thread G2 (DIN 3852-A)1) / 316L .....
- NA Thread 2NPT (ASME B1.20.1) / 316L .....

ARV-WE63.      



1 Version – unpressurized / -50 ... +250 °C

2 Version – -1 ... 16 bar / -50 ... +150 °C

## VEGATOR 636 Ex



### Signal conditioning instrument for limit level signal

#### Application area

The VEGATOR 636 Ex is a signal conditioning instrument for level detection for vibrating level switches VEGASWING, VEGAVIB and VEGAWAVE with electronics version "Two-wire". With this instrument simple control tasks can be solved. Typical applications are monitoring functions such as overflow and dry run protection.



#### Your benefit

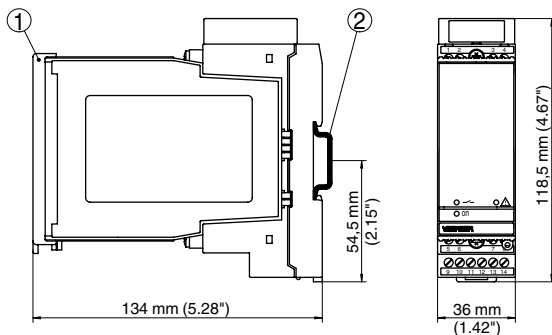
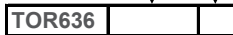
- Comprehensive monitoring detects short-circuit and line break of the measuring cable and interferences in the sensor
- Simple and comfortable SIL and WHG function test via test key
- Simple installation through carrier rail mounting

#### Technical data

Input:	1 x sensor input
Output:	1 x relay output 1 x transistor output
Operating voltage:	20 ... 253 V AC, 50/60 Hz 20 ... 72 V DC
Mounting:	carrier rail 35 x 7.5 acc. to EN 50022
SIL qualification:	optionally up to SIL2

#### Approval

<b>EX0.A</b>	ATEX II(1)G[Ex ia]IIC,II(1)D[Ex ia D](M1)[Ex ia]I+WHG	.....
<b>.CI</b>	IECEX [Ex ia] IIC	.....
<b>EX0.M</b>	ATEX II(1)G[Ex ia] IIC,II(1)D[Ex ia D]+Ship approval	.....
<b>Plug-in socket</b>		
<b>K</b>	Inclusive plug-in socket	.....



- 1 Transparent cover
- 2 Carrier rail 35 x 7.5 or 35 x 15 acc. to EN 50022

## Amplifier NAMUR



### NAMUR switching amplifier for limit level signal

#### Application area

The switching amplifier NAMUR is a signal conditioning instrument for limit level signal for VEGASWING, VEGAWAVE and VEGAVIB sensors with electronics version "NAMUR". It is ideal for simple control tasks. Typical applications are monitoring functions such as overflow or dry run protection.

#### Your benefit

- Economical unit of sensor and signal conditioning instrument for limit level signal
- Integrated fault monitoring of short-circuit or line break
- Simple installation through carrier rail mounting

#### Technical data

Input:	NAMUR interface acc. to IEC 60947-5-6 single or two-channel
Output:	1 x relay output per channel
Approval:	ATEX II (1) GD [EEx ia] IIC
Supply voltage:	207 ... 253 V AC, 45 ... 65 Hz, 20 ... 30 V DC
Mounting:	carrier rail 35 x 7.5 acc. to EN 50022
SIL qualification:	optionally up to SIL2



#### Amplifier version:

<b>A6-SR2-EX1.W</b>	1 channel, 230VAC, signal output: 1xspdt .....
<b>A6-SR2-EX2.W</b>	2 channel, 230 V AC, signal output: 2 x spdt .....
<b>D2-SR2-EX1.W</b>	1 channel, 24VDC, signal output: 1xspdt .....
<b>D2-SR2-EX2.W</b>	2 channel, 24VDC, signal output: 2xspdt .....

