

Ultrasonic

Continuous level measurement



Overview

VEGASON series 60

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VEGASON

Non-contact measurement with ultrasonics

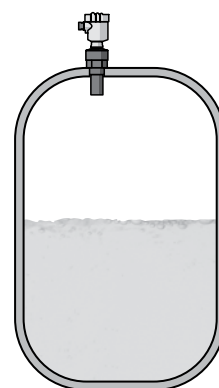
Measuring principle

Short ultrasonic impulses in the range of 35 to 70 kHz are emitted by the transducer to the measured product, reflected by the product surface and received again by the transducer. The pulses are spread with sound velocity. The time from emission to reception of the signals is proportional to the level in the vessel. The proven ECHOFOX signal processing analysis the reflections in the vessel based on long-standing experience and detects the level signal reliably. The adjustment of the sensors is very simple without changing the level.

Applications

Level in liquids

Sensors with higher frequencies are used for measurement of liquids. Independent of product properties they deliver a continuous measuring signal and are ideal for water/waste water applications and the measurement of slightly corrosive acids and lyes. Sensors with respective approval are available for applications in gas-Ex areas.






Level in bulk solids

Sensors with low frequencies and bigger transducers are used for measurement in bulk solids. Typical applications are level measurement of bulk solids containers, bulk solids silos with average size dimensions and open heaps. Approved sensors are available for applications in dust-Ex areas.



Overview

Instrument type		Measuring range Accuracy	Process fitting	Process temperature	Process pressure
VEGASON 61 Liquids and bulk solids in small vessels		Liquids: 0.25 ... 5 m Bulk solids: 0.25 ... 2 m +/- 10 mm	Thread G1½, 1½ NPT	-40 ... +80 °C	-0.2 ... +2 bar (-20 ... +200 kPa)
VEGASON 62 Liquids and bulk solids in small vessels		Liquids: 0.4 ... 8 m Bulk solids: 0.4 ... 3.5 m +/- 10 mm	Thread G2, 2 NPT	-40 ... +80 °C	-0.2 ... +2 bar (-20 ... +200 kPa)
VEGASON 63 Liquids and bulk solids in all industries		Liquids: 0.6 ... 15 m Bulk solids: 0.6 ... 7 m +/- 10 mm	Compression flange DN 100, mounting strap	-40 ... +80 °C	-0.2 ... +1 bar (-20 ... +100 kPa)

VEGASON 61



Ultrasonic sensor for continuous level measurement

Application area

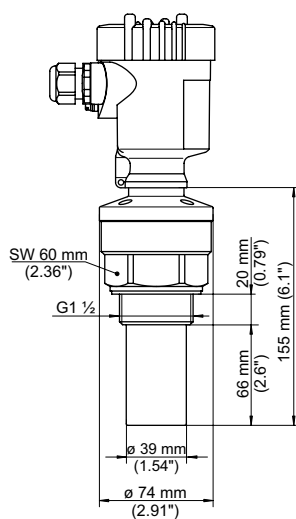
The VEGASON 61 is an ultrasonic sensor for continuous level measurement of liquids or bulk solids. Typical applications are the measurement of liquids in storage tanks or open basins. The sensor is also suitable for the detection of bulk solids in small vessels or open containers. The non-contact measuring principle is independent of product features and allows a setup without medium.

Your benefit

- Maintenance-free operation through non-contact measuring principle
- Reliable measurement independent of product features
- Price-favourable solution for simple applications

Technical data

Measuring range:	in liquids: 0.25 ... 5 m in bulk solids: 0.25 ... 2 m
Process fitting:	thread G1½, 1½ NPT
Process temperature:	-40 ... +80 °C
Process pressure:	-0.2 ... +2 bar (-20 ... +200 kPa)
Accuracy:	+/- 10 mm
SIL qualification:	optionally up to SIL2



You will find further process fittings and options under www.vega.com/configurator.

You will find further drawings and tables under www.vega.com/downloads.

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

Approval

- XX** without
- XM** Ship approval
- CX** ATEX II 1G, 1/2G, 2G Ex ia IIC T6
- CM** ATEX II 1G, 1/2G, 2G Ex ia IIC T6 + Ship approval
- CI** IEC Ex ia IIC T6

Version / Process temperature

- A** Seal EPDM / -40...80°C
- B** Seal FKM (Viton) / -20...80°C

Process fitting / Material

- G** Thread G1½ (DIN 3852-A-B) / PVDF
- N** Thread 1½"NPT (ASME B1.20.1) / PVDF

Electronics

- H** Two-wire 4...20mA/HART®
- V** Four-wire 4...20mA/HART®
- P** Profibus PA
- F** Foundation Fieldbus

Housing / Protection

- K** Plastic / IP66/IP67
- A** Aluminium / IP66/IP68 (0.2bar)
- D** Aluminium double chamber / IP66/IP68 (0.2bar)
- 8** StSt (electropolished) 316L / IP66/IP68 (0.2bar)
- W** StSt double chamber / IP66/IP68 (0.2bar)
- R** Plastic double chamber / IP66/IP67

Cable entry / Plug connection

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

Indicating/adjustment module (PLICSCOM)

- X** without
- A** Mounted

Additional equipment

- X** without

SN61.

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VEGASON 62



Ultrasonic sensor for continuous level measurement

Application area

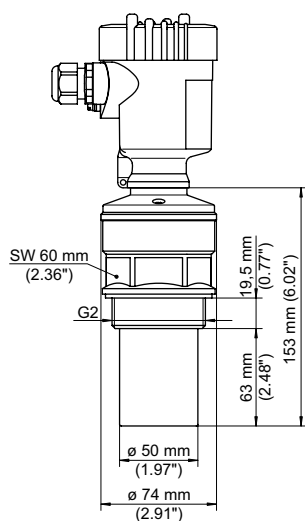
The VEGASON 62 is an ultrasonic sensor for continuous level measurement of liquids and bulk solids. Typical applications are the measurement of liquids in storage vessels or open basins. The sensor is also suitable for the detection of bulk solids in small vessels or silos. Application areas can be found in all industries. The non-contact measuring principle is unaffected by product features and allows a setup without medium.

Your benefit

- Maintenance-free operation through non-contact measuring principle
- Reliable measurement independent of product features
- Price-favourable solution for simple applications

Technical data

Measuring range:	in liquids: 0.4 ... 8 m in bulk solids: 0.4 ... 3.5 m
Process fitting:	thread G2, 2 NPT
Process temperature:	-40 ... +80 °C
Process pressure:	-0.2 ... +2 bar (-20 ... +200 kPa)
Accuracy:	+/- 10 mm
SIL qualification:	optionally up to SIL2



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Approval

- XX** without
- XM** Ship approval
- CX** ATEX II 1G, 1/2G, 2G Ex ia IIC T6
- CM** ATEX II 1G, 1/2G, 2G Ex ia IIC T6 + Ship approval
- CI** IEC Ex ia IIC T6

Version / Process temperature

- A** Seal EPDM / -40...80°C
- B** Seal FKM (Viton) / -20...80°C

Process fitting / Material

- G** Thread G2 (DIN 3852-A-B) / PVDF
- N** Thread 2"NPT (ASME B1.20.1) / PVDF

Electronics

- H** Two-wire 4...20mA/HART®
- V** Four-wire 4...20mA/HART®
- P** Profibus PA
- F** Foundation Fieldbus

Housing / Protection

- K** Plastic / IP66/IP67
- A** Aluminium / IP66/IP68 (0.2bar)
- D** Aluminium double chamber / IP66/IP68 (0.2bar)
- 8** StSt (electropolished) 316L / IP66/IP68 (0.2bar)
- W** StSt double chamber/ IP66/IP68 (0.2bar)
- R** Plastic double chamber / IP66/IP67

Cable entry / Plug connection

- M** M20x1.5 / without
- N** 1/2NPT / without

Indicating/adjustment module (PLICSCOM)

- X** without
- A** Mounted

Additional equipment

- X** without

SN62.

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VEGASON 63



Ultrasonic sensor for continuous level measurement

Application area

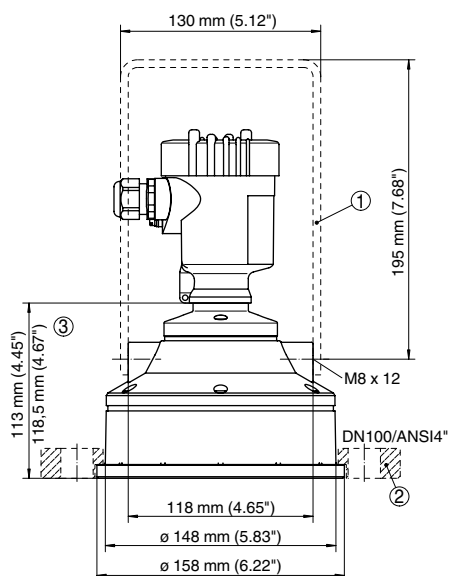
The VEGASON 63 is an ultrasonic sensor for continuous level measurement of liquids and bulk solids. Typical applications are the measurement of liquids in storage tanks and open basins. The sensor is suitable for continuous level measurement of bulk solids in small up to average-size vessels. The non-contact measuring principle is independent of product features and allows a setup without medium.

Your benefit

- Maintenance-free operation through non-contact measuring principle
- Reliable measurement, independent of product features
- Proven measurement technology for standard applications

Technical data

Measuring range:	in liquids: 0.6 ... 15 m in bulk solids: 0.6 ... 7 m
Process fitting:	compression flange DN 100 mounting strap
Process temperature:	-40 ... +80 °C
Process pressure:	-0.2 ... +1 bar (-20 ... +100 kPa)
Accuracy:	+/- 10 mm
SIL qualification:	optionally up to SIL2



- 1 Mounting strap
- 2 Compression flange
- 3 Dimension for Aluminium housing/adaptor

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Approval

XX without
XM Ship approval

Version / Process temperature

A Seal EPDM / -40...80°C

Process fitting / Material

X without compression flange

C Mounting strap / 1.4301

B Compression flange DN100PN16 / 316L

A Compression flange DN100PN16 / PPH

E Compression flange ANSI 4" 150psi / 316L

D Compression flange ANSI 4" 150psi / PPH

Electronics

H Two-wire 4...20mA/HART®

V Four-wire 4...20mA/HART®

P Profibus PA

F Foundation Fieldbus

Housing / Protection

K Plastic / IP66/IP67

A Aluminium / IP66/IP68 (0.2bar)

D Aluminium double chamber / IP66/IP68 (0.2bar)

8 StSt (electropolished) 316L / IP66/IP68 (0.2bar)

R Plastic double chamber / IP66/IP67

Cable entry / Plug connection

M M20x1.5 / without

N 1/2NPT / without

Indicating/adjustment module (PLICSCOM)

X without

A Mounted

Additional equipment

X without

SN63.

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