

Vibration level switch for liquids VibraFox® GVG



- Compact design
- WHG approval
- Maintenance-free
- High resistance to chemicals
- Various process connections
- Commissioning without calibration



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Application Suitable for detecting limit levels in liquids with a maximum dynamic viscosity of 10,000 mPa • s and a minimum density of 0.7 kg/dm³. Specially useful in applications in which float switches cannot be used due to liquid flow, turbulence or product adherence. Ideally suitable as an overflow alarm or for dry-run protection. Due to the WHG approval, VibraFox® can be used as part of an approved overflow prevention system.

Description The vibration fork of VibraFox® is excited to its resonance frequency. When the fork comes into contact with the medium, there is a change in frequency which is detected by the electronics and converted into a switching signal. The unique evaluation electronics enable the application of the system even under adverse conditions, e.g. in vibrating tanks or with turbulent liquid surfaces.

Technical specifications

Density of medium

0.7 kg/dm³ ... 2.5 kg/dm³

Dynamic viscosity of the medium

0.1 ... 10,000 mPa • s

Flow rate

Max. 6 m/s (at a viscosity of 10,000 mPa • s)

Operating temperature range

Medium: -40/+100 °C
Medium HT version: -40/+150 °C
Ambient: -40/+70 °C

Process pressure

-1/+64 bar

Process connection

G¾A or G1A (PN 64)

Vibration fork

Stainless steel 316 L

Supply voltage

AC/DC 20–253 V (2-wire)
Load current min. 10 mA max. 250 mA
or DC 10–55 V (3-wire)
Load current max. 250 mA

Power input

2-wire: Depending on external load
3-wire: Max. 0.6 W

Output

2-wire AC/DC
or 3-wire transistor (PNP) DC

Switching delay

After immersion: 0.5 s
After removal: 0.5 s

Switching point

Installation from top: 11 mm
Installation from bottom: 34 mm
(in water at 25 °C)

Switching hysteresis

Vertical installation: Approx. 2 mm
Horizontal installation: 2 mm
(in water at 25 °C)

Visual indication

Bi-colour LED green/red

Function test

With test magnet (included)

Housing

Stainless steel 316 L, cover PEI

Electrical connection

Connector and junction box as per ISO 4400
(DIN 43650-A) IP 65 or M 12 x 1 (IP 67)

Approval for construction products

DIBt: Z-65.11-412

Options

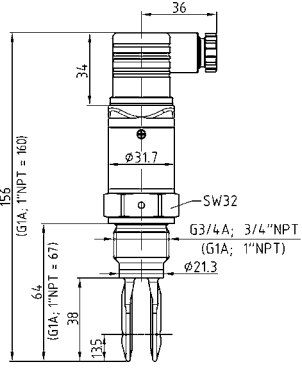
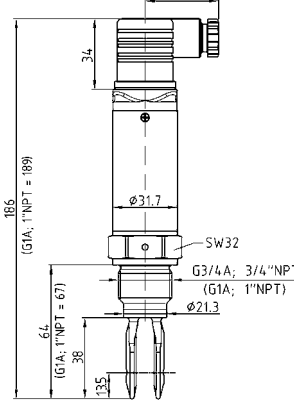
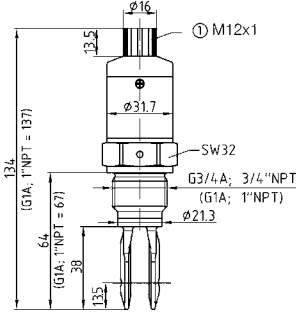
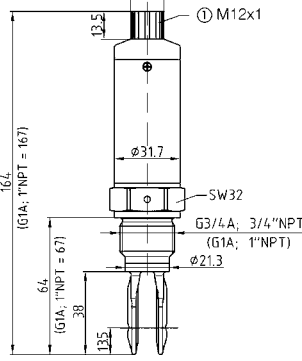
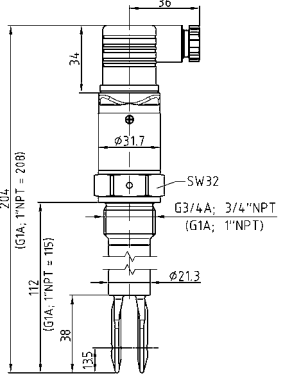
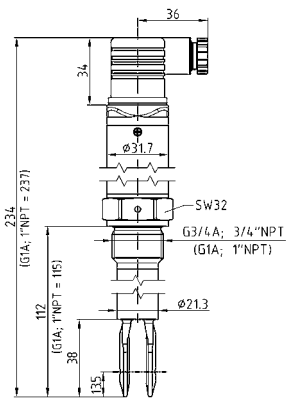
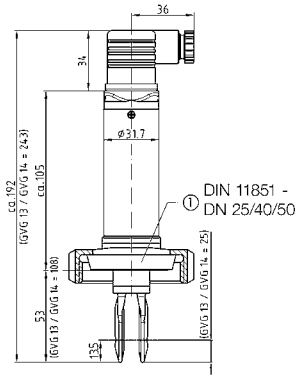
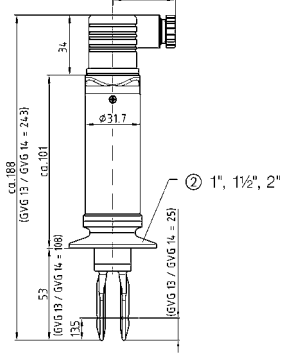
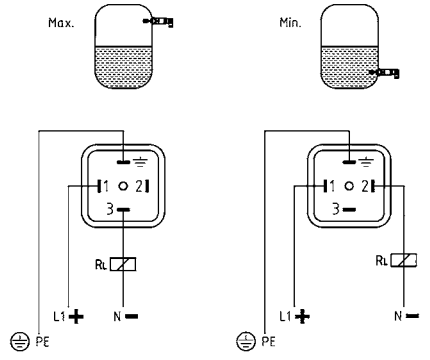
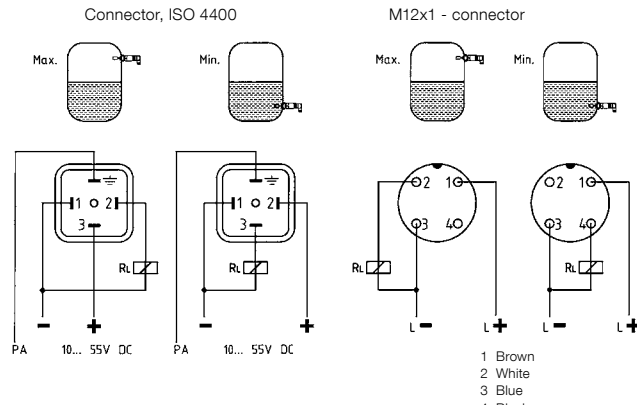
- Other process connections (e.g. NPT, Clamp, dairy fitting)
- Surface roughness Ra < 0.8 µm
- Other electrical connections
- Coupling relay (only for DC version)
- Extended operating temperature range -40/+150 °C (medium)



See page 328
for prices.

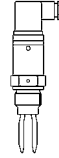




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Electrical connections and dimensions (mm)

<p>GVG 10/12 Standard version</p>  <p>GVG 10 HT/12 HT High temperature version</p> 	<p>GVG 11 Standard version</p>  <p>GVG 11 HT High temperature version</p>  <p>① Protective cover thread</p>
<p>GVG 13/14 Standard version</p>  <p>GVG 13 HT/14 HT High temperature version</p> 	<p>GVG 10 MR/GVG 12 MR Dairy fitting</p>  <p>GVG 10 CP/GVG 12 CP Tri-Clamp</p>  <p>① Screwed pipe connection ② Tri-Clamp</p>
<p>Wiring diagram non-contact switch AC/DC</p> 	<p>Wiring diagram transistor output (PNP) DC</p>  <p>1 Brown 2 White 3 Blue 4 Black</p>

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DG: H, PG: 4

Type	GVG 10	GVG 11	GVG 12	GVG 13	GVG 14
Version					
Process connection	G $\frac{3}{4}$ A	G $\frac{3}{4}$ A	G $\frac{3}{4}$ A	G $\frac{3}{4}$ A	G $\frac{3}{4}$ A
Price €					
Part no.	56164	56166	56168	56170	56172
Installation length	64 mm	64 mm	64 mm	112 mm	112 mm
Process connection	G1A	G1A	G1A	G1A	G1A
Price €					
Part no.	56165	56167	56169	56171	56173
Installation length	67 mm	67 mm	67 mm	115 mm	115 mm
Supply voltage	AC/DC 20–253 V	DC 10–55 V	DC 10–55 V	AC/DC 20–253 V	DC 10–55 V
Output	Non-contact switch	Transistor output PNP	Transistor output PNP	Non-contact switch	Transistor output PNP
Electrical connection	Connector and junction box as per ISO 4400 (DIN 43650-A)	M 12 x 1	Connector and junction box as per ISO 4400 (DIN 43650-A)	Connector and junction box as per ISO 4400 (DIN 43650-A)	Connector and junction box as per ISO 4400 (DIN 43650-A)
Extra charges	Price €	Price €	Price €	Price €	Price €
Extended operating temperature range (medium) -40 °C/+150 °C					
Process connection*					
$\frac{3}{4}$ " NPT	Without extra charge	Without extra charge	Without extra charge	Without extra charge	Without extra charge
1" NPT					
Tri-Clamp 1", PN 16, Ra ≤ 0.8 µm, -40/+150 °C**					
Tri-Clamp 2", PN 16, Ra ≤ 0.8 µm, -40/+150 °C**					
Dairy fitting DIN 11851 DN 25, PN 40, Ra ≤ 0.8 µm, -40/+150 °C**					
Dairy fitting DIN 11851, DN 40, PN 40, Ra ≤ 0.8 µm, -40/+150 °C**					
Dairy fitting DIN 11851, DN 50, PN 25, Ra ≤ 0.8 µm, -40/+150 °C**					
Accessories			Part no.	Price €	
Coupling relay KR 100 ST (only for DC versions) output: 1 x voltage-free changeover contact			53700		
Spare test magnet for function test			56155		

* Extra charge as compared to version with process connection G $\frac{3}{4}$ male.

** Extra charges already include extended operating temperature range -40 °C/+150 °C.

Blue part no. = in-stock items