

# 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/dm<sup>3</sup>. 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 overfill 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/dm<sup>3</sup> ... 2.5 kg/dm<sup>3</sup>

### 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)

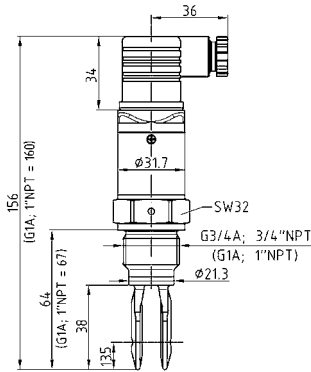


See page 328  
for prices.

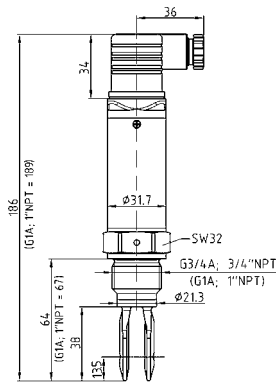
# Vibration level switch for liquids VibraFox® GVG

## Electrical connections and dimensions (mm)

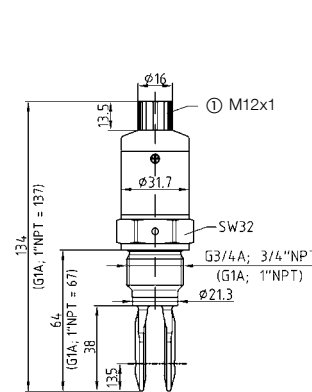
GVG 10/12  
Standard version



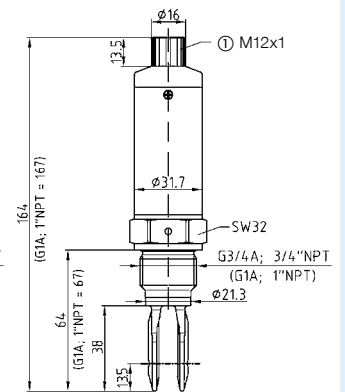
GVG 10 HT/12 HT  
High temperature version



GVG 11  
Standard version

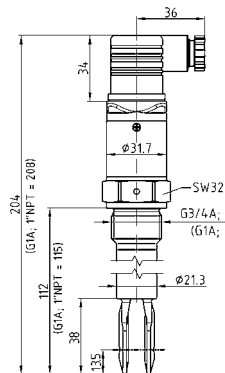


GVG 11 HT  
High temperature version

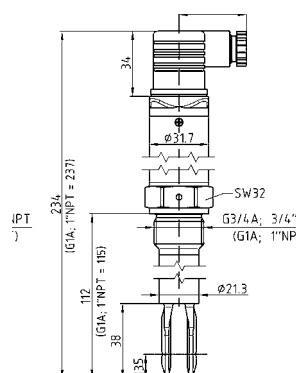


① Protective cover thread

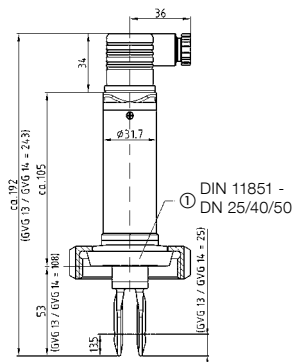
GVG 13/14  
Standard version



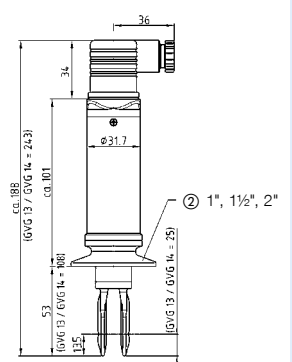
GVG 13 HT/14 HT  
High temperature version



GVG 10 MR/GVG 12 MR  
Dairy fitting

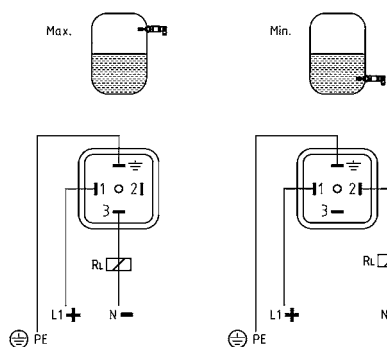


GVG 10 CP/GVG 12 CP  
Tri-Clamp

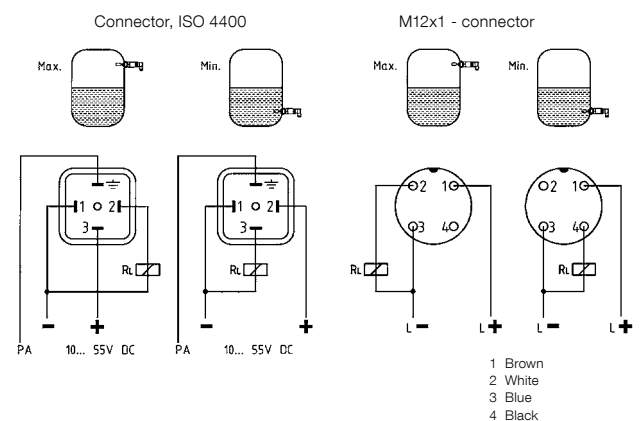


① Screwed pipe connection  
② Tri-Clamp

Wiring diagram non-contact switch AC/DC



Wiring diagram transistor output (PNP) DC

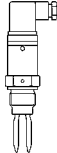

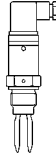
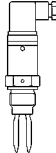
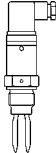


1 Brown  
2 White  
3 Blue  
4 Black

# Vibration level switch for liquids VibraFox® GVG

DG: H, PG: 4

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Type	GVG 10	GVG 11	GVG 12	GVG 13	GVG 14
Version					
Process connection	G¾A	G¾A	G¾A	G¾A	G¾A
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*					
¾" 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 G¾ male.

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

Blue part no. = in-stock items