

# Vibration level switch for liquids

## VibraFox® GVG



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



**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 suited 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

#### Minimum density of medium

0.7 kg/dm<sup>3</sup>

#### Dynamic viscosity of the medium

Max. 10,000 mPa • s

#### Operating temperature range

Medium: -40/+100 °C

Ambient: -40/+70 °C

#### Process pressure

-1/+64 bar

#### Process connection

G<sup>3</sup>/<sub>4</sub>A or G1A (PN 64)

#### Vibration fork

Stainless steel 316 L

Installation length 69 mm or 117 mm

#### 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

Vertical installation: 13 mm

(in water at 25 °C)

#### Switching hysteresis

Vertical installation: 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 1.4435, cover PEI

#### Electrical connection

Connector and junction box as per ISO 4400

(DIN 43650-A) IP 65 or M 12 x 1 (IP 67)

#### Technical Approval of the German Institute for Building Technology

Z-65.11-412

### Options

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



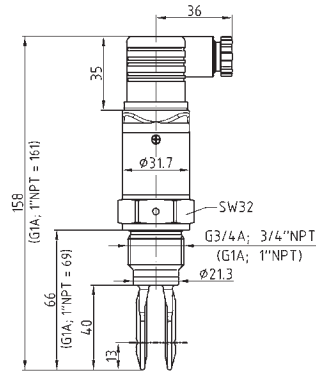
See page 47 for prices.

# Vibration level switch for liquids

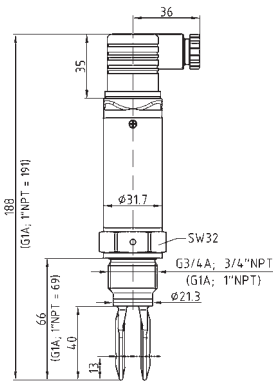
## VibraFox® GVG

### 1 Electrical connections and dimensions (mm)

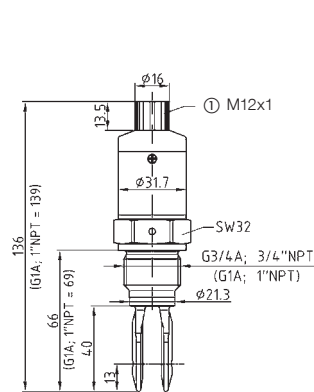
GVG 10/12  
Standard version



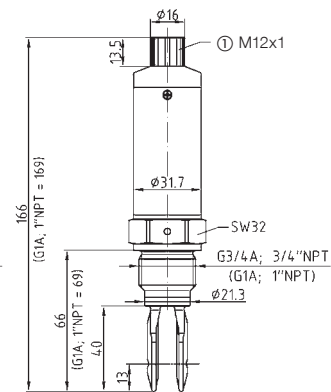
GVG 10 HT/12 HT  
High temperature version



GVG 11  
Standard version

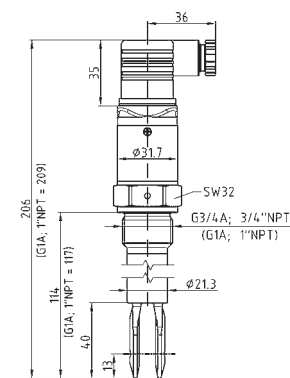


GVG 11 HT  
High temperature version

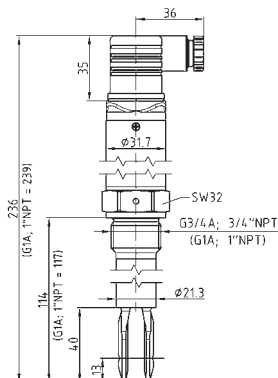


① Protective cover thread

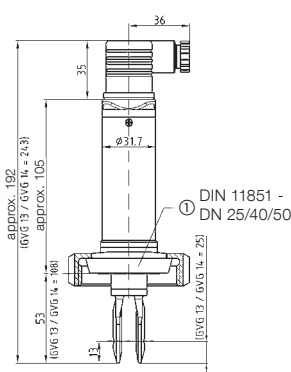
GVG 13/14  
Standard version



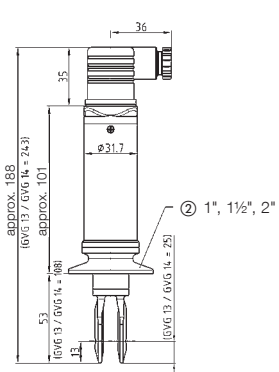
GVG 13 HT/14 HT  
High temperature version



GVG 10 MR/GVG 12 MR  
Dairy fitting

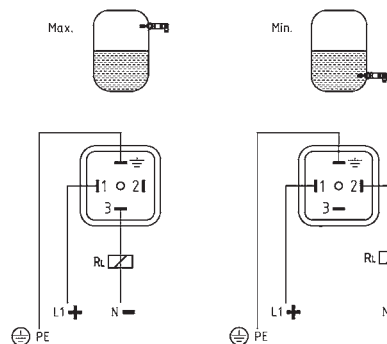


GVG 10 CP/GVG 12 CP  
Tri-Clamp

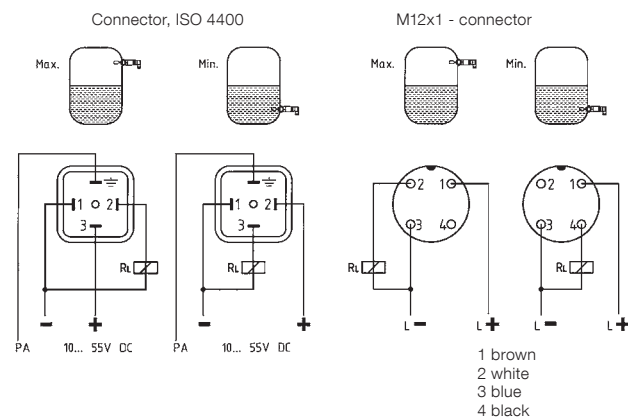


① Screwed pipe connection  
② Tri-Clamp

Wiring diagram non-contact switch AC/DC



Wiring diagram transistor output (PNP) DC

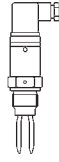
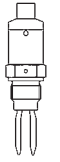
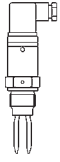
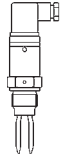
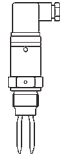


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## VibraFox® GVG

DG: E

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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
<b>Price €</b>					
Part no.	<b>56164</b>	<b>56166</b>	<b>56168</b>	56170	56172
Process connection	G1A	G1A	G1A	G1A	G1A
<b>Price €</b>					
Part no.	<b>56165</b>	<b>56167</b>	<b>56169</b>	56171	56173
Installation length	69 mm	69 mm	69 mm	117 mm	117 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)
<b>Extra charges</b>	<b>Price €</b>	<b>Price €</b>	<b>Price €</b>	<b>Price €</b>	<b>Price €</b>
Extended operating temperature range (medium) -40 °C/+150 °C					
<b>Process connection*</b>					
$\frac{3}{4}$ " NPT					
1" NPT					
Tri-Clamp 1", PN 16, Ra $\leq$ 0.8 $\mu$ m, -40/+150 °C**					
Tri-Clamp 2", PN 16, Ra $\leq$ 0.8 $\mu$ m, -40/+150 °C**					
Dairy fitting DIN 11851, DN 25, PN 40, Ra $\leq$ 0.8 $\mu$ m, -40/+150 °C**					
Dairy fitting DIN 11851, DN 40, PN 40, Ra $\leq$ 0.8 $\mu$ m, -40/+150 °C**					
Dairy fitting DIN 11851, DN 50, PN 25, Ra $\leq$ 0.8 $\mu$ m, -40/+150 °C**					
<b>Accessories</b>				Part no.	<b>Price €</b>
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 $\frac{3}{4}$ A

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