Appliance information

any mounting position

The Vibro level indicators are indicating the filling level as a limit switch in silos and containers.

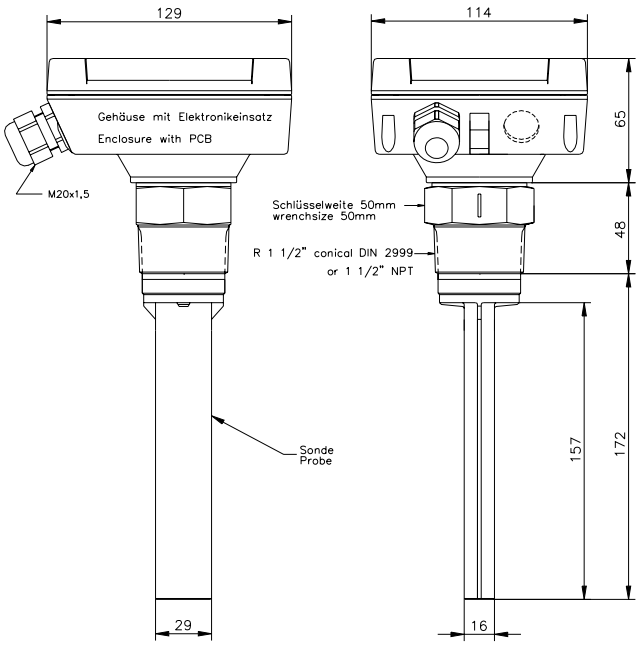
Use

The models of serie **VF10** are vibrating limit switches to be used for indicating the level in silos and containers, which are filled with all kinds of bulk goods.

Due to the compact design and little internal length the **VF12** is especially well qualified for use in small containers and vessels or hoppers and whereever limited mounting space is dedecated.

A typical application is e.g. the use of two **VF12** as full- and empty indicator in containers and silos.

Dimensions VF12



Function

The electronics of the **VF10** serie excites the vibrating rod to vibrate on its resonance frequency of approx. 285 Hz.

If material covers the vibrating rod, the vibration will be attenuated. This is sensed by the electronics and it will actuate a relay.

If the filling level sinks, the vibrating rod will swing on its resonance frequency again and the relay will switch back.

Technical data

Materials

housing	Aluminium
Process connection and probe	1.4301 stainless steel
Process connection	G1½ DIN 2999 or 1½" NPT
Ambient temperature	-20 °C ... +60 °C
Bulk goods temperature	-20 °C ... +80 °C
Option **E1**	-20 °C ... +150 °C
max. process pressure	10 bar
Supply voltage (multivoltage)	20 ... 250 V AC / DC
Power consumption	3 VA
Signal contact (relay)	change-over contact, potentialfree
Capacity of the contact	5 A / 250 V AC
Response delay	
attenuation	1 second
start of vibration	2 up to 5 seconds
min. density of material	0,02 kg/l (Optional >0,01 kg/l)
Cable entry	Cable gland M20x1,5
Type of protection	IP 66 acc. to DIN EN 60529
Maintenance	none
max. load upon the end of the vibrating rod	1000 N (from lateral 150 N)
Option B1	Ex II 1/2D T 80 °C IP66

Minimum-/Maximum alarm

The **VF10** serie can be used as maximum or minimum switch.

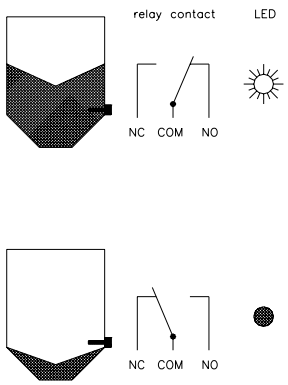
The way of function is adjusted by jumpers on the circuit board.

The status of the relay is shown at the circuit board by a red LED corresponding to the drawings adjacent.

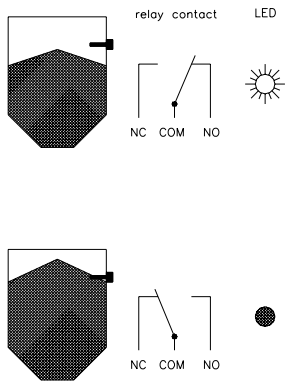
Minimum alarm L (Failsafe low)
The relay is deenergized (position NC, red LED off), when the filling level is as low as the probe is not covered with material and it is vibrating freely or it´s a failure of the supply voltage.

Maximum alarm H (Failsafe high)
The relay is deenergized (position NC, red LED off), when the filling level is as high as the probe is covered with material or it is a failure of the supply voltage.

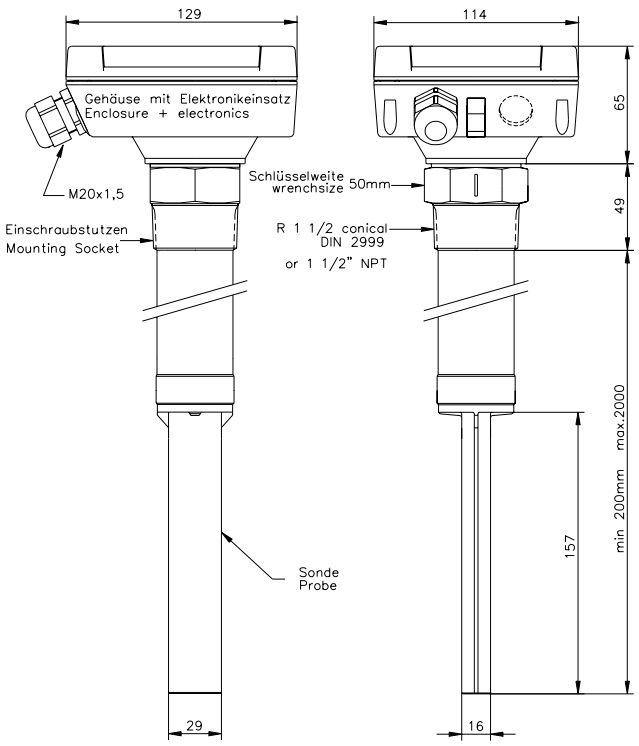
Minimum alarm L



Maximum alarm H



Dimensions VF13

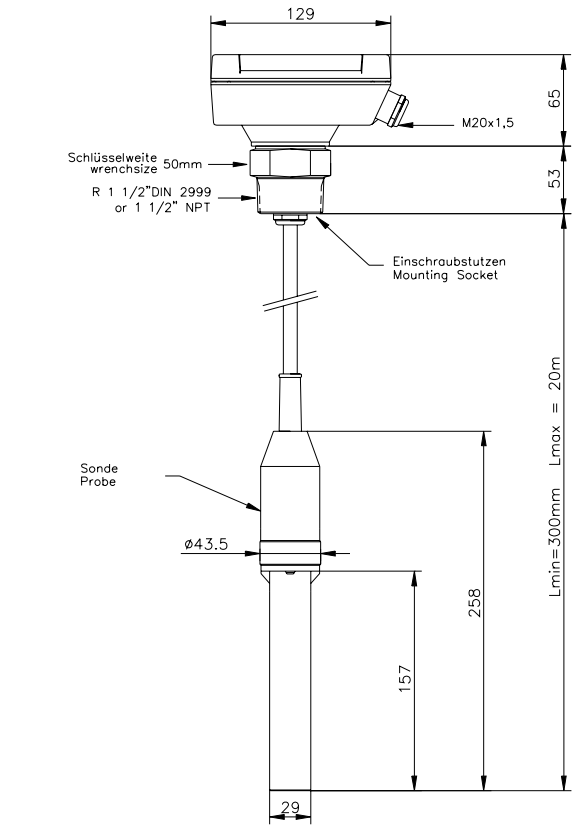


VF13 Tube jib

Use

- for vertical mounting in a silo resp. container
- to detect the filling level more inside of the container
- to penetrate the stickings of bulk goods on the wall inside of the container
- maximum jib length: 2000 mm
- any mounting position if jib length is less then 1000 mm
  (for these mounting positions the jib has to be supported in an appropriate way)

Dimensions VF15



VF15 Rope extension

Use

- for vertical mounting in a silo resp. container
- maximum rope length: 20 m
- maximum load onto the extension rope: 2000 N