



# LBV320-GXTGDTAMX01000

LBV300

VIBRATING LEVEL SWITCH

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	Part no.
LBV320-GXTGDTAMX01000	6059747

Other models and accessories → [www.sick.com/LBV300](http://www.sick.com/LBV300)

### Detailed technical data

#### Features

<b>Medium</b>	Bulk solids
<b>Measurement</b>	Switch
<b>Probe length</b>	1,000 mm
<b>Process pressure</b>	-1 bar ... 6 bar
<b>Process temperature</b>	-20 °C ... +80 °C
<b>Fill material density</b>	≥ 0.008 g/cm <sup>3</sup>
<b>Particle size</b>	< 10 mm
<b>Tensile strength</b>	≤ 3,000 N
<b>ATEX approval</b>	ATEX II 1D, 1/2D, 2D Ex ta ta/tb tb IIIC Tx Da, Da/Db, Db
<b>Type examination</b>	BVS 17 ATEX E 099

#### Performance

<b>Accuracy of sensor element</b>	± 10 mm
<b>Reproducibility</b>	≤ 5 mm
<b>Response time</b>	500 ms when covered / 1,000 ms when uncovered
<b>MTBF</b>	4,61*10 <sup>6</sup> h

#### Electronics

<b>Residual ripple</b>	≤ 5 V <sub>pp</sub>
<b>Initialization time</b>	< 2 s
<b>VDE protection class 2</b>	✓
<b>Connection type</b>	M20 x 1.5
<b>Output signal</b>	1 x PNP/NPN
<b>Supply voltage</b>	Volt-free transistor output PNP/ NPN: 10 V DC ... 55 V DC
<b>Hysteresis</b>	10 mm
<b>Output current</b>	< 300 mA
<b>Inductive load</b>	≤ 1 H
<b>Capacitive load</b>	100 nF
<b>Enclosure rating</b>	IP66 / IP67

## Mechanics

<b>Process connection</b>	G 1½ A PN 25
<b>Housing material</b>	Aluminum
<b>Sensor material</b>	Stainless steel 316L, 318LN, PUR

## Ambient data

<b>Ambient operating temperature</b>	-40 °C ... +80 °C
<b>Ambient temperature, storage</b>	-40 °C ... +80 °C

## Classifications

<b>ECLASS 5.0</b>	27273202
<b>ECLASS 5.1.4</b>	27273202
<b>ECLASS 6.0</b>	27273202
<b>ECLASS 6.2</b>	27273202
<b>ECLASS 7.0</b>	27273202
<b>ECLASS 8.0</b>	27273202
<b>ECLASS 8.1</b>	27273202
<b>ECLASS 9.0</b>	27273202
<b>ECLASS 10.0</b>	27273202
<b>ECLASS 11.0</b>	27273202
<b>ECLASS 12.0</b>	27273106
<b>ETIM 5.0</b>	EC002654
<b>ETIM 6.0</b>	EC002654
<b>ETIM 7.0</b>	EC002654
<b>ETIM 8.0</b>	EC002654
<b>UNSPSC 16.0901</b>	41111938

## Type code

## LBV320 type code

## Certification

XX	without
CX	ATEX II 1G, ½ G, 2G Ex ia IIC T6
CK	ATEX II 1G, ½ G, 2G Ex ia IIC T6+ATEX II 1/2D IP6X T
GX	ATEX II ½ D IP6X T

## Execution / Process temperature

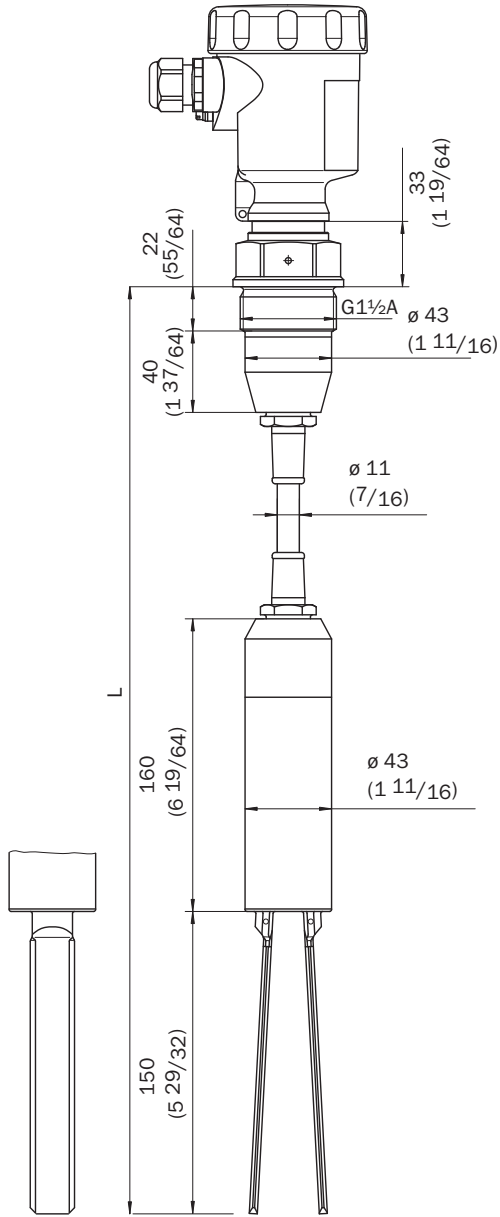
C	Cable PUR, detection of solids in water / -20 °C... +80 °C
H	Cable FEP / -40 °C ... +150 °C
T	Cable PUR / -20 °C ... +80 °C

## Process connection / Material

XX	Without / 316L
GD	Thread G 1 ½ A, PN 16 / 316L
ND	Thread 1 ½" NPT, PN 16 / 316L
EF	Flange DN 50, PN 40, form C, DIN 2501 / 316L
No er- ror	Flange DN 80, PN 40, form C, DIN 2501 / 316L
ZF	Flange DN 100, PN 6, form C, DIN 2501 / 316L
MF	Flange DN 100, PN 16, form C, DIN 2501 / 316L
OF	Flange DN 100, PN 40, form C, DIN 2501 / 316L
QF	Flange DN150, PN 16, form C, DIN 2501 / 316L
2F	Flange DN 200, PN 10, form C, DIN 2501 / 316L

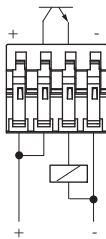


LBV320 with PUR suspension cable, threaded version G 1½ A (DIN ISO 228/1)

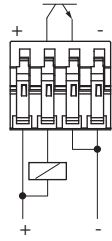


## Connection diagram

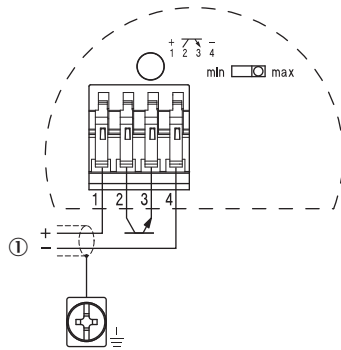
PNP action



NPN action

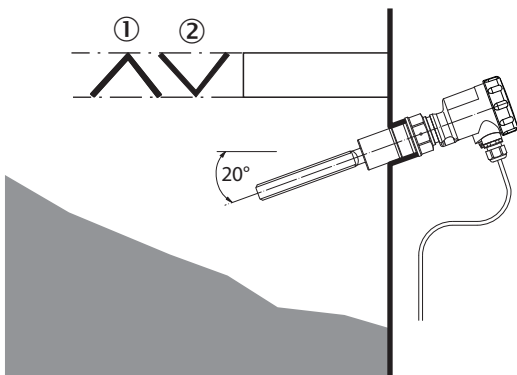


Transistor connection diagram



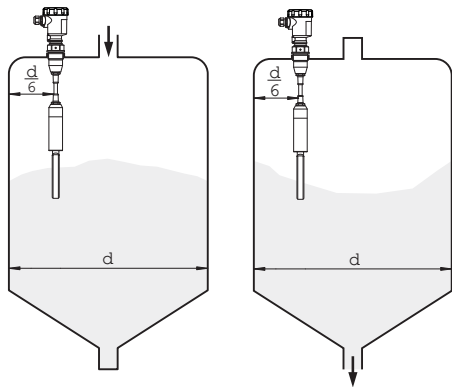
### Instruction for installation

Horizontal mounting

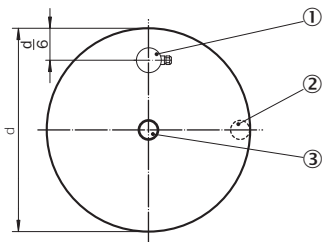
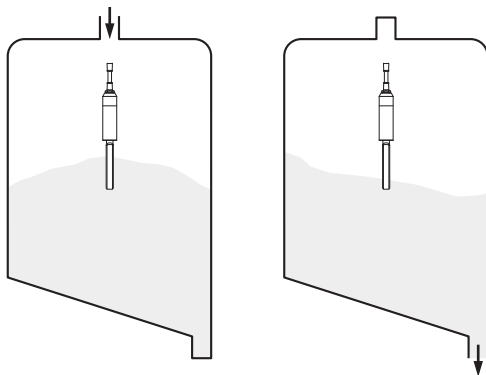


- ① Protective sheet
- ② Concave protective sheet for abrasive solids

LBV320 Filling and emptying centered

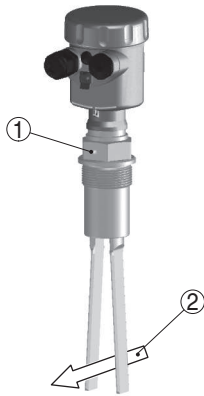


Filling in the center, emptying laterally



- ① LBV320
- ② Discharge opening
- ③ Filling opening


Flow orientation of the tuning fork



- ① Marking with screwed version
- ② Direction of flow

### Recommended accessories

Other models and accessories → [www.sick.com/LBV300](http://www.sick.com/LBV300)

	Brief description	Type	Part no.
Electronic modules			
	Transistor (PNP/NPN): 10 V DC ... 55 V DC	ECD-RE-LB-VPNP-0001	6038667
Mounting brackets and plates			
	BEF-MU-316G20-ALBV	BEF-MU-316G20-ALBV	5322462



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Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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