



LBV310-XXCGDCKNX

LBV300

VIBRATING LEVEL SWITCH

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
LBV310-XXCGDCKNX	6038103

Other models and accessories → www.sick.com/LBV300

Detailed technical data

Features

Medium	Bulk solids
Measurement	Switch
Probe length	220 mm
Process pressure	-1 bar ... 25 bar
Process temperature	-50 °C ... +150 °C, detection of solids in water
Fill material density	≥ 0.008 g/cm ³
Particle size	< 10 mm

Performance

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

Electronics

Power consumption	< 4.2 mA
Initialization time	< 3 s
VDE protection class 1	✓
Connection type	½" NPT
Output signal	Non-contact switch
Supply voltage	Non-contact switch: 20 V AC/DC ... 253 V DC
Hysteresis	10 mm
Output current	< 400 mA
Inductive load	≤ 1 H
Capacitive load	100 nF
Enclosure rating	IP66 / IP67

Mechanics

Process connection	G 1½ A PN 25
Housing material	Plastic

Sensor material	Stainless steel 1.4404
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Ambient data

Ambient operating temperature	-40 °C ... +80 °C
Ambient temperature, storage	-40 °C ... +80 °C

Classifications

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

Type code

LBV310 type code

Certification

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

Execution / Process temperature

A	Standard / -50 °C ... +150 °C
B	With spacer / -50 °C ... +250 °C
C	Detection of solids in water / -50 °C ... +150 °C

Process connection / Material

GD	Thread G 1 ½ A, PN 25 / 316L
ND	Thread 1 ½" NPT, PN 25 / 316L
EF	Flange DN 50, PN 40, form C, DIN 2501 / 316L
No	Flange DN 80, PN 40, form C, DIN 2501 / 316L
er- ror	
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 DN 150, PN 16, form C, DIN 2501 / 316L
2F	Flange DN 200, PN 10, form C, DIN 2501 / 316L
EB	Flange DN 50, PN 40, EN 1092-1 Form B1 / 316L
HA	Flange 2", 150 lb RF, ANSI B16.5 / 316L
HE	Flange 2", 150 lb FF, ANSI B16.5 / 316L
IA	Flange 2", 300 lb RF, ANSI B16.5 / 316L
OA	Flange 3", 150 lb RF, ANSI B16.5 / 316L

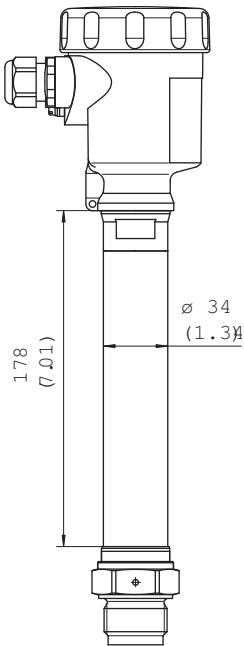
- OE Flange 3", 150 lb FF, ANSI B16.5 / 316L
 - PA Flange 3", 300 lb RF, ANSI B16.5 / 316L
 - JA Flange 3 ½", 150 lb RF, ANSI B16.5 / 316L
 - SA Flange 4", 150 lb RF, ANSI B16.5 / 316L
 - UA Flange 4", 300 lb RF, ANSI B16.5 / 316L
 - AU Flange DN 50, 10K RF, JIS / 316L
 - BU Flange DN 80, 10K RF, JIS / 316L
 - CU Flange DN 100, 10K RF, JIS / 316L
- Electronics**
- C Contact-free switch 20 ... 253 V AC (DC)
 - R Relay (DPDT) 20 ... 72 V DC / 20 ... 253 V AC (3A)
 - T Transistor (NPN/PNP) 10 ... 55V DC
 - N NAMUR signal
- Housing / Enclosure rating**
- K Plastic / IP 66, IP 67
 - A Aluminum / IP 66, IP 67
 - V Stainless steel (investment casting) 316L / IP 66, IP 67
 - 8 Stainless steel (electropolished) 316L / IP 66, IP 67
- Cable entry / Male connector connection**
- M M20 x 1.5 / Without
 - N ½" NPT / Without

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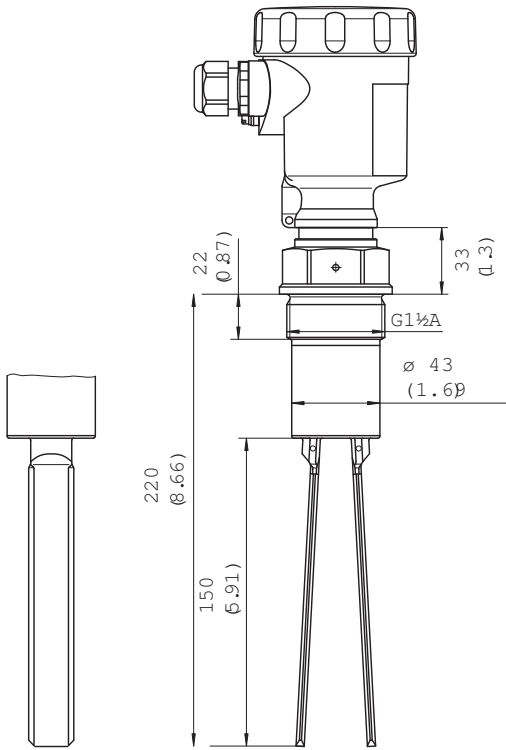
Not all variants of the type code can be combined!

[Dimensional drawing](#) (Dimensions in mm (inch))

Temperature adapter



LBV310 threaded version G 1½ A (DIN ISO 228/1)



Connection diagram

Contactless electronic switch connection diagram



① Shielding

Instruction for installation

Horizontal mounting



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


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

	Brief description	Type	Part no.
Electronic modules			
	Contactless switch: 20 V AC/DC ... 250 V AC/DC	ECD-RE-LB-VKOS-0001	6038665
Mounting brackets and plates			
	BEF-MU-316G20-ALBV	BEF-MU-316G20-ALBV	5322462

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