



LBV310-LKAGDTAMX

LBV300

LEVEL SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
LBV310-LKAGDTAMX	6059943

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
Fill material density	≥ 0.008
Particle size	< 10 mm
ATEX approval	ATEX II 1/2G, 2G Ex db IIC T6...T1 Ga/Gb, Gb, ATEX II 1D, 1/2D, 2D Ex ta ta/tb tb IIIC Tx Da, Da/Db, Db
Type examination	PTB 17 ATEX 1002 X, BVS 17 ATEX E 099

Performance

Accuracy of sensor element	± 10 mm
Reproducibility	≤ 5 mm
Response time	500 ms when covered / 1,000 ms when uncovered

Electronics

Residual ripple	≤ 5 V _{pp}
Initialization time	< 2 s
VDE protection class 2	✓
Connection type	M20 x 1.5
Output signal	1 x PNP/NPN
Supply voltage	Volt-free transistor output PNP/ NPN: 10 V DC ... 55 V DC
Hysteresis	10 mm
Signal voltage HIGH	U _v -3 V
Signal voltage LOW	< 1 V
Output current	< 300 mA
Inductive load	≤ 1 H
Capacitive load	100 nF
Enclosure rating	IP66 / IP67

Mechanics

Process connection	G 1½ A PN 25
Housing material	Aluminum
Sensor material	Stainless steel 1.4404

Ambient data

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

Classifications

ECl@ss 5.0	27273202
ECl@ss 5.1.4	27273202
ECl@ss 6.0	27273202
ECl@ss 6.2	27273202
ECl@ss 7.0	27273202
ECl@ss 8.0	27273202
ECl@ss 8.1	27273202
ECl@ss 9.0	27273202
ECl@ss 10.0	27273202
ECl@ss 11.0	27273202
ETIM 5.0	EC002654
ETIM 6.0	EC002654
ETIM 7.0	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, ½ G, 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 1½ A, PN 25 / 316L
ND	Thread 1½" 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

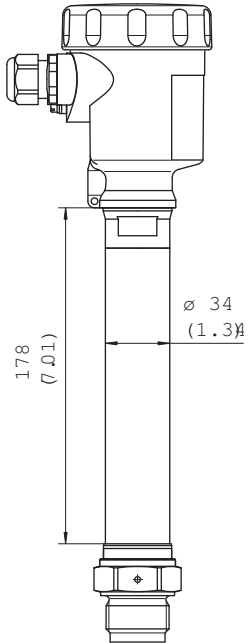
M	M20 x 1.5 / Without
N	½" NPT / Without

LBV310 - [] [] [] [] [] [] [] [] [] [] [] X

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

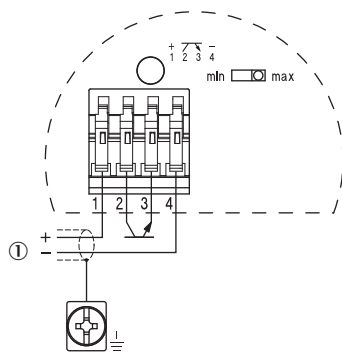
PNP action



NPN action

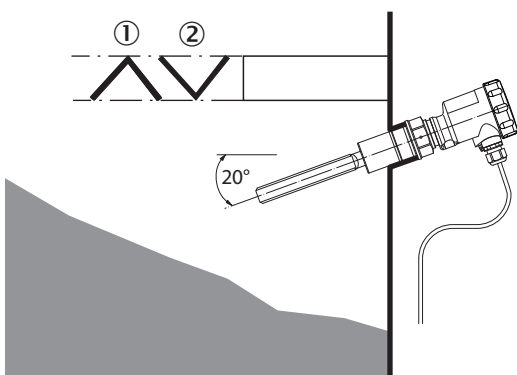


Transistor connection diagram



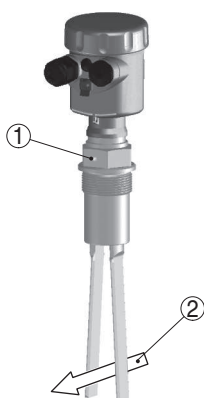
Instruction for installation

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.
Mounting brackets and plates			
	Locking screw connection, process pressure -1 bar to 16 bar, process connection G 2 A, inner thread G 1 1/2 A, stainless steel 316L	BEF-MU-316G20-ALBV	5322462
Electronic modules			
		ECD-RE-LB-VPNP-0001	6038667

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

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.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com