



LBV311-XXAGCTKMX

LBV301



THORNE &
DERRICK
INTERNATIONAL

LEVEL SENSORS

Thorne & Derrick
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www.heatingandprocess.com

SICK

Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
LBV311-XXAGCTKMX	6044865

Other models and accessories → www.sick.com/LBV301

Detailed technical data

Features

Medium	Bulk solids
Measurement	Switch
Probe length	160 mm
Process pressure	-1 bar ... 16 bar
Process temperature	-50 °C ... +150 °C
Fill material density	≥ 0.02 g/cm ³

Performance

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

Electronics

Residual ripple	≤ 5 V _{pp}
Power consumption	≤ 10 mA
Initialization time	< 2 s
VDE protection class 2	✓
Electrical connection	M20 x 1.5
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	IP 66 / IP 67

Mechanics

Process connection	G 1 A
Housing material	Plastic

Sensor material	Stainless steel 316L, 318S
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Ambient data

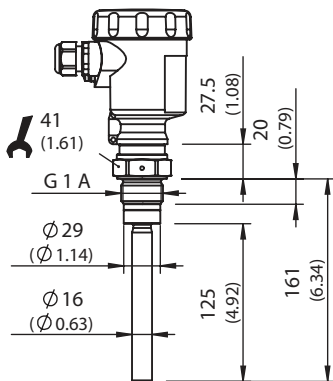
Ambient operating temperature	-40 °C ... +70 °C
Ambient storage temperature	-40 °C ... +80 °C

Classifications

ECI@ss 5.0	27273202
ECI@ss 5.1.4	27273202
ECI@ss 6.0	27273202
ECI@ss 6.2	27273202
ECI@ss 7.0	27273202
ECI@ss 8.0	27273202
ECI@ss 8.1	27273202
ECI@ss 9.0	27273202
ETIM 5.0	EC002654
ETIM 6.0	EC002654
UNSPSC 16.0901	41111938

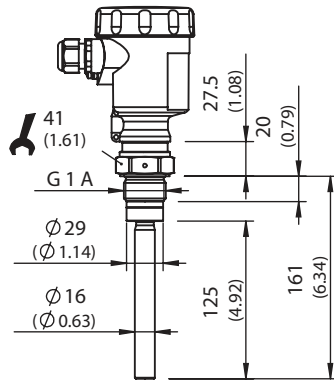
Dimensional drawing (Dimensions in mm (inch))

LBV311 threaded version G 1 ½ A



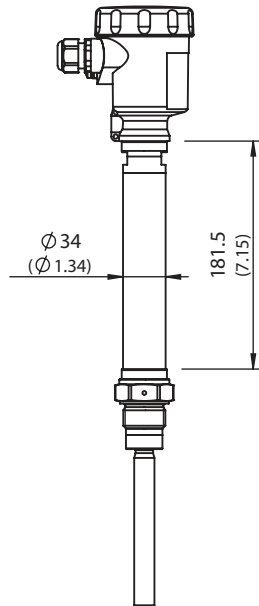
All dimensions in mm (inch)

LBV311 threaded version G 1 A



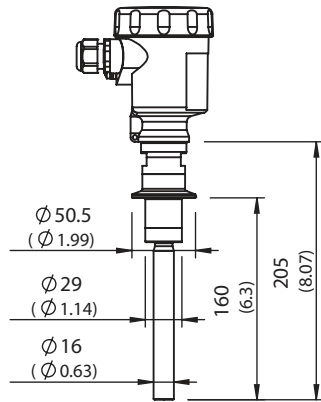
All dimensions in mm (inch)

LBV311 temperature adapter -50 °C ... +250 °C



All dimensions in mm (inch)

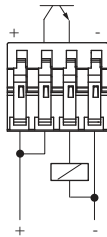
LBV311 threaded version Tri-Clamp



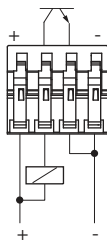
All dimensions in mm (inch)

Connection diagram

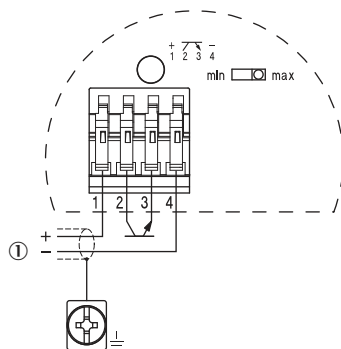
PNP action



NPN action

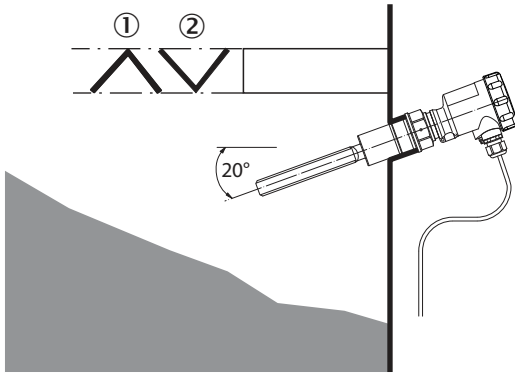


Transistor connection diagram



Instruction for installation

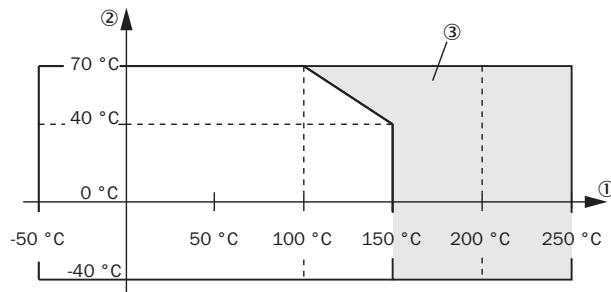
Horizontal mounting



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

Characteristic curve

Ambient temperature - process temperature



- ① Process temperature in °C (°F)
- ② Ambient temperature in °C (°F)
- ③ Temperature range with temperature adapter

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.”

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