



# LBV301

Rugged, flexible and cleanable

**SICK**  
Sensor Intelligence.



## Technical data overview

|                                   |   |
|-----------------------------------|---|
| <b>Measurement principle</b>      | Vibrating level switch  |
| <b>Detection principle</b>        | Contact   |
| <b>Medium</b>                     | Bulk solids   |
| <b>Measurement</b>                | Switch  |
| <b>Process temperature</b>        | -50 °C ... +250 °C, Temperature range with temperature adapter, detection of solids in water, Temperature adapter (depending on type) |
| <b>Process pressure</b>           | -1 bar ... 16 bar (depending on type)   |
| <b>Output signal</b>              | Non-contact switch<br>Double relay (DPDT)<br>1 x PNP/NPN<br>NAMUR signal (depending on type)  |
| <b>Accuracy of sensor element</b> | ± 10 mm   |

## Product description

The vibrating level switches in the LBV301 product family can be relied upon to signal full, empty, or demand states in bulk materials. The monoprobe design prevents bulk materials from jamming. The rugged stainless steel sensor design is piezo-electrically energized. When the probe is covered with bulk materials, the change in vibration amplitude is reliably detected and converted into a switching signal. As the monoprobe is easy to clean, the sensors are even suitable for use in the food industry. While the LBV311 compact device is used for horizontal mounting, the LBV321 cable-extended switch and the LBV331 tube-extended switch are used for vertical mounting in silos and bridge sensing ranges of up to 80 m and 6 m respectively. With a variety of process connections for hygienic applications and several electronic variants, the LBV301 can be used for nearly all applications, even in explosive atmospheres.

## At a glance

- Compact sensor from 1" thread
- Monoprobe design prevents bulk materials from sticking or jamming
- Polished monoprobe for food applications
- Commissioning without filling and medium calibration
- Process temperature up to 250 °C
- ATEX certifications (1D/2D/1G/2G) available
- Tube extension variant (LBV331) up to 6 m and cable extension model (LBV321) up to 80 m available for vertical mounting

## Your benefits

- Easy commissioning, no upstream calibration necessary
- Maintenance-free system
- Sensors can be tested while installed
- Flexible, reliable system suitable for many types of applications
- Vertical mounting, even in difficult installation and ambient conditions

## Fields of application

- Level measurement of pellets or wood chips in the wood industry
- Detection of basic substances in the food industry, such as milk powder
- Min./max. or demand signal in silos
- Explosive dust mixtures
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## 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](http://www.sick.com)