



# LBV320-CXTGDNAMX33000

LBV300

LEVEL SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

| Type                  | Part no. |
|-----------------------|----------|
| LBV320-CXTGDNAMX33000 | 6058275  |

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>          | 33,000 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 1G, 1/2G, 2G Ex ia IIC T6 Ga, Ga/Gb, Gb |
| <b>Type examination</b>      | PTB 17 ATEX 2017 X                              |

#### 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>Power consumption</b>      | 1 mA / 2,5 mA                      |
| <b>Initialization time</b>    | < 2 s                              |
| <b>VDE protection class 2</b> | ✓                                  |
| <b>Connection type</b>        | M20 x 1.5                          |
| <b>Output signal</b>          | NAMUR signal                       |
| <b>Supply voltage</b>         | NAMUR signal: 4.5 V DC ... 12 V DC |
| <b>Hysteresis</b>             | 10 mm                              |
| <b>Output current</b>         | 1 mA / 2,5 mA                      |
| <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**

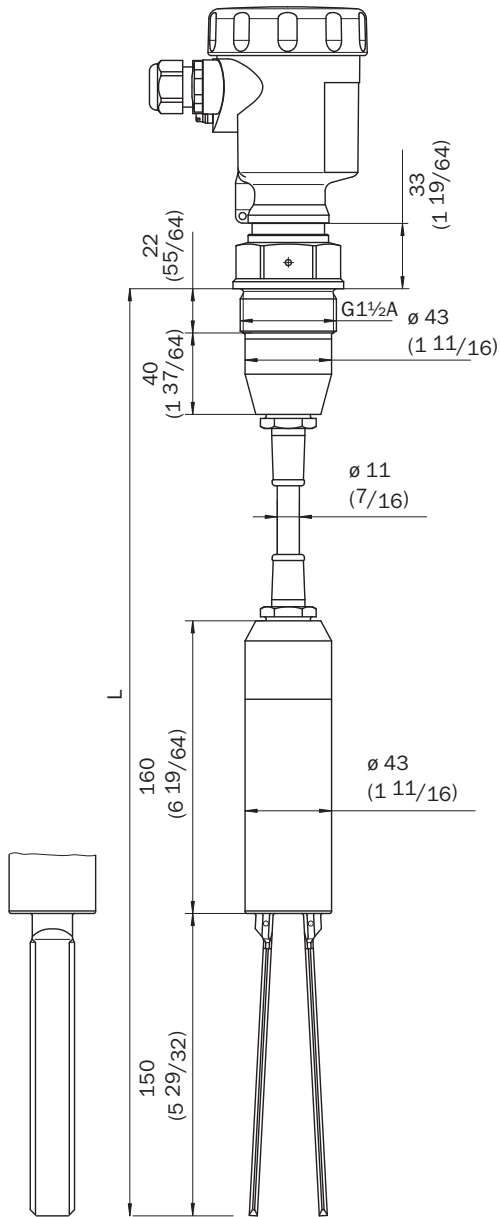
|   |   |
|---|---|
| C | Cable PUR, detection of solids in water / -20 °C ... +80 °C |
| H | Cable FEP / -40 °C ... +150 °C                              |
| T | Cable PUR / -20 °C ... +80 °C                               |

**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<br>er-<br>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  |
| 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        |

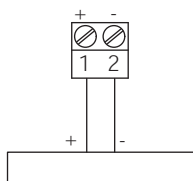


LBV320 with PUR suspension cable, threaded version G 1½ A (DIN ISO 228/1)



## Connection diagram

Namur connection diagram



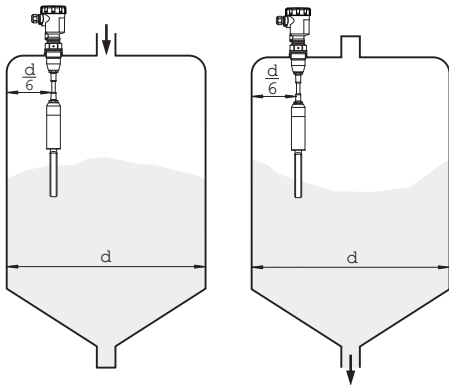
### Instruction for installation

#### 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  |                                    |                     |          |
|  | Namur signal: 4.5 V DC ... 12 V DC | ECD-RE-LB-VNAM-0001 | 6038668  |

|                              | Brief description  | Type               | Part no. |
|------------------------------|--------------------|--------------------|----------|
| Mounting brackets and plates |                    |                    |          |
|                              | BEF-MU-316G20-ALBV | BEF-MU-316G20-ALBV | 5322462  |



## SICK AT A GLANCE

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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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