



# LFH-SBX40G1AS20SZ0

LFH

LEVEL SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

| Type               | part no. |
|--------------------|----------|
| LFH-SBX40G1AS20SZ0 | 6040945  |

Other models and accessories → [www.sick.com/LFH](http://www.sick.com/LFH)

## Detailed technical data

### Features

|                                            |                                                                                                                                                                                                                                                                                               |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Medium</b>                              | Fluids                                                                                                                                                                                                                                                                                        |
| <b>Measurement</b>                         | Continuous                                                                                                                                                                                                                                                                                    |
| <b>Process pressure</b>                    | 0 bar ... 0.4 bar                                                                                                                                                                                                                                                                             |
| <b>Process temperature</b>                 | -10 °C ... +50 °C                                                                                                                                                                                                                                                                             |
| <b>Maximum ohmic load <math>R_A</math></b> | 4 mA ... 20 mA, 2-wire, $R_A \leq (L^+ - 10 \text{ V}) / 0.02 \text{ A} - (0.14 \times \text{cable length in m}) [\text{Ohm}]$ , 0 V ... 10 V, 3-wire optional with enhanced variant, $R_A > 100 \text{ kOhm}$ , 0 V ... 5 V, 3-wire optional with enhanced variant, $R_A > 100 \text{ kOhm}$ |

### Performance

|                                                           |                                                                                                                                                      |
|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Non-linearity</b>                                      | $\leq \pm 0.2 \%$ , of span (Best Fit Straight Line, BFSL) according to IEC 61298-2                                                                  |
| <b>Accuracy of sensor element</b>                         | $\leq \pm 0.5 \%$ of the span <sup>1) 2)</sup>                                                                                                       |
| <b>Non-repeatability</b>                                  | $\leq \pm 0.1 \%$ of the span                                                                                                                        |
| <b>Long-term drift/one-year stability</b>                 | $\leq \pm 0.2 \%$ of span (at reference conditions)                                                                                                  |
| <b>Temperature coefficient in rated temperature range</b> | Mean TC of zero: $\leq 0.2 \%$ of span / 10 K (< 0.4 % for pressure ranges $\leq 0.25 \text{ bar}$ )<br>Mean TC of span $\leq 0.2 \%$ of span / 10 K |
| <b>Rated temperature range</b>                            | 0 °C ... +50 °C                                                                                                                                      |
| <b>MTTF</b>                                               | 403 years                                                                                                                                            |

<sup>1)</sup> Including non-linearity, hysteresis, zero point and full scale error (corresponds to error of measurement as per IEC 61298-2).

<sup>2)</sup> Adjusted in vertical mounting position with pressure connection facing downwards.

### Electronics

|                                |                                                                                                            |
|--------------------------------|------------------------------------------------------------------------------------------------------------|
| <b>Communication interface</b> | -                                                                                                          |
| <b>Supply voltage</b>          | 10 V DC ... 30 V DC                                                                                        |
| <b>Protection class III</b>    | ✓                                                                                                          |
| <b>Connection type</b>         | PUR cable connection                                                                                       |
| <b>Length of cable</b>         | 20 m                                                                                                       |
| <b>Output signal</b>           | 4 mA ... 20 mA, 2-wire                                                                                     |
| <b>Enclosure rating</b>        | IP68                                                                                                       |
| <b>Dielectric strength</b>     | 500 V DC, NEC Class 02 power supply (low voltage and low current max. 100 VA even in the event of a fault) |

|                          |                                                                                                                                                                                                                |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Electrical safety</b> | Protection class: III, Short-circuit protection: Q <sub>A</sub> towards M, Reverse polarity protection: L <sup>+</sup> to M, Surge protection: According to EN 61000-4-5 (1.5 J) optional for enhanced variant |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Mechanics

|                               |                                                                                |
|-------------------------------|--------------------------------------------------------------------------------|
| <b>Wetted parts</b>           | Stainless steel 1.4404 / 316L<br>PA                                            |
| <b>Process connection</b>     | Without process connection                                                     |
| <b>Housing material</b>       | Stainless steel 1.4404 / 316L                                                  |
| <b>Material coaxial cable</b> | PUR (tensile strength 1000 N), FEP optional available (tensile strength 500 N) |
| <b>Weight</b>                 | 0.18 kg                                                                        |
| <b>Cable weight</b>           | 0.08 kg/m                                                                      |

## Ambient data

|                                     |                   |
|-------------------------------------|-------------------|
| <b>Ambient temperature, storage</b> | -30 °C ... +80 °C |
|-------------------------------------|-------------------|

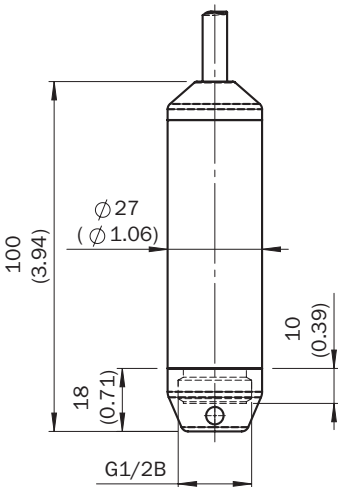
## Certificates

|                                     |   |
|-------------------------------------|---|
| <b>EU declaration of conformity</b> | ✓ |
| <b>UK declaration of conformity</b> | ✓ |
| <b>China RoHS</b>                   | ✓ |

## Classifications

|                       |          |
|-----------------------|----------|
| <b>ECLASS 5.0</b>     | 27200614 |
| <b>ECLASS 5.1.4</b>   | 27200614 |
| <b>ECLASS 6.0</b>     | 27200614 |
| <b>ECLASS 6.2</b>     | 27200614 |
| <b>ECLASS 7.0</b>     | 27200614 |
| <b>ECLASS 8.0</b>     | 27200614 |
| <b>ECLASS 8.1</b>     | 27200614 |
| <b>ECLASS 9.0</b>     | 27200614 |
| <b>ECLASS 10.0</b>    | 27200614 |
| <b>ECLASS 11.0</b>    | 27200614 |
| <b>ECLASS 12.0</b>    | 27200614 |
| <b>ETIM 5.0</b>       | EC011478 |
| <b>ETIM 6.0</b>       | EC011478 |
| <b>ETIM 7.0</b>       | EC011478 |
| <b>ETIM 8.0</b>       | EC011478 |
| <b>UNSPSC 16.0901</b> | 41111950 |

Dimensional drawing Standard version (Immersion depth up to 100 m)



Dimensions in mm (inch)

Recommended accessories

Other models and accessories → [www.sick.com/LFH](http://www.sick.com/LFH)

|                                                                                     | Brief description                                                                                                                                                                                                                                                                                                                                          | Type                | part no. |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------|
| device protection and care                                                          |                                                                                                                                                                                                                                                                                                                                                            |                     |          |
|  | <ul style="list-style-type: none"><li>• <b>Product family:</b> Protection filter</li><li>• <b>Description:</b> Protection filter for connection cable. Prevents humidity from entering the ventilation tube of the connection cable. For self-mounting at cable end.</li></ul>                                                                             | APR-VF-LFH001-0001  | 5324309  |
| Mounting systems                                                                    |                                                                                                                                                                                                                                                                                                                                                            |                     |          |
|  | <ul style="list-style-type: none"><li>• <b>Description:</b> Cable tension clamp for mounting the connection cable of the level sensor, max. ten-sile load = 2.5 kN (not to be used with FEP cable)</li><li>• <b>Material:</b> Steel, plastic</li><li>• <b>Details:</b> Steel, zinc coated, plastic</li></ul>                                               | BEF-CC-LFH001-0001  | 5324307  |
|  | <ul style="list-style-type: none"><li>• <b>Description:</b> Additional weight for stabilizing the LFH level sensor in moving liquids. Interior process connection G ½, is fastened to the level sensor instead of the protective cap. Weight: 500 g.</li><li>• <b>Material:</b> Stainless steel</li><li>• <b>Details:</b> Stainless steel 1.4571</li></ul> | BEF-AW-LFHSST-0001  | 5324308  |
| connectors and cables                                                               |                                                                                                                                                                                                                                                                                                                                                            |                     |          |
|  | <ul style="list-style-type: none"><li>• <b>Items supplied:</b> With integrated pressure compensation and terminal block</li><li>• <b>Note:</b> Dimensions (W x D x H) 57 mm x 130 mm x 94 mm, for electrical connection of level probe LFH</li></ul>                                                                                                       | ASK-CB-LFH-PC0-0001 | 5324310  |

## 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)