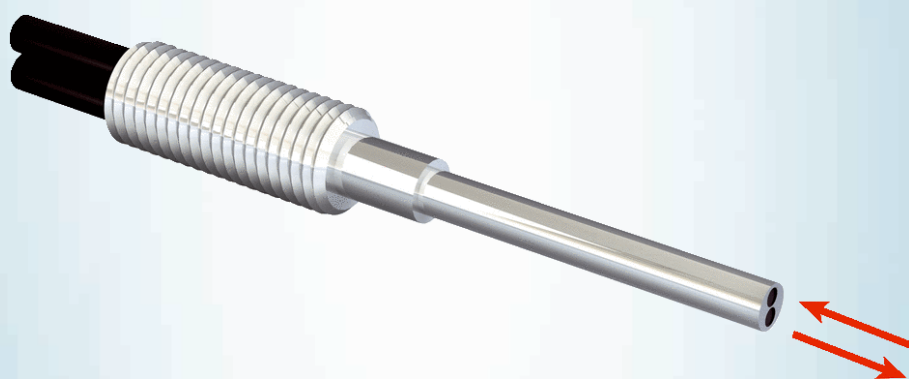




## LL3-DB06

Fiber-optic cables

FIBER-OPTIC SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

| Type     | part no. |
|----------|----------|
| LL3-DB06 | 5326006  |

Other models and accessories → [www.sick.com/Fiber-optic\\_cables](http://www.sick.com/Fiber-optic_cables)

### Detailed technical data

#### Features

|                                          |                                                                     |
|------------------------------------------|---------------------------------------------------------------------|
| <b>Device type</b>                       | Fiber-optic cables                                                  |
| <b>Functional principle</b>              | Proximity system                                                    |
| <b>Fiber-optic head design</b>           | Threaded sleeve, Long end sleeve, Bendable sleeve, 90° deflection   |
| <b>Application</b>                       | Standard                                                            |
| <b>Compatible fiber-optic amplifiers</b> | GLL70, WLL80, WLL180, GLL170(T), WLL24 Ex                           |
| <b>Sensing range max.</b>                | 1,250 mm (Sensing range of WLL80 at 8 ms)                           |
| <b>Minimal object diameter</b>           | 0.02 mm <sup>1)</sup>                                               |
| <b>Optical fiber head</b>                |                                                                     |
| Angle of dispersion                      | 60°                                                                 |
| Integrated lens                          | No                                                                  |
| Compatibility tip adapters               | No                                                                  |
| <b>Optical fiber</b>                     |                                                                     |
| Compatibility with infrared light        | No                                                                  |
| Optical fiber cable can be shortened     | ✓                                                                   |
| Adapter end sleeves required             | No                                                                  |
| <b>Included with delivery</b>            | Mounting, 2 x M6 hexagon nut, 1 x washer, FC fiber cutter (5304141) |

<sup>1)</sup> Minimum detectable object was determined at optimum measuring distance and optimum setting.

#### Mechanics

|                                                  |                          |
|--------------------------------------------------|--------------------------|
| <b>Optical fiber head</b>                        |                          |
| Light emission                                   | Axial                    |
| Thread diameter (housing)                        | M6                       |
| Optical fiber taper diameter                     | ≥ 2.5 mm                 |
| Optical fiber taper length after 2 mm            | ≥ 35 mm                  |
| Minimum bend radius of end sleeve                | 10 mm                    |
| <b>Optical fiber</b>                             |                          |
| Fiber length                                     | 2,000 mm                 |
| Bending radius                                   | 25 mm                    |
| Dynamic flexibility (robotics)                   | No                       |
| Outside diameter, optical fiber cable connection | 2.2 mm                   |
| Fiber arrangement                                | Singlefiber              |
| Core structure                                   | 2 x Ø 1,0 mm Singlefiber |
| <b>Material</b>                                  |                          |

|                    |                              |
|--------------------|------------------------------|
| Optical fiber head | Stainless steel              |
| Sheath             | Polyethylen (PE)             |
| Fibers             | Polymethylmethacrylat (PMMA) |
| <b>Weight</b>      | 52 g                         |

## Ambient data

|                                      |                   |
|--------------------------------------|-------------------|
| <b>Ambient operating temperature</b> | -40 °C ... +60 °C |
|--------------------------------------|-------------------|

## Sensing ranges with GLL70

|                              |          |
|------------------------------|----------|
| <b>Operating mode 50 µs</b>  | 185 mm   |
| <b>Operating mode 250 µs</b> | 500 mm   |
| <b>Operating mode 1 ms</b>   | 700 mm   |
| <b>Operating mode 4 ms</b>   | 1,200 mm |

## Sensing ranges with WLL80

|                              |                                                                                     |
|------------------------------|-------------------------------------------------------------------------------------|
| <b>Operating mode 16 µs</b>  | 120 mm                                                                              |
| <b>Operating mode 70 µs</b>  | 300 mm                                                                              |
| <b>Operating mode 250 µs</b> | 500 mm                                                                              |
| <b>Operating mode 500 µs</b> | 600 mm                                                                              |
| <b>Operating mode 1 ms</b>   | 700 mm                                                                              |
| <b>Operating mode 2 ms</b>   | 800 mm                                                                              |
| <b>Operating mode 8 ms</b>   | 1,250 mm                                                                            |
| <b>Note</b>                  | Sensing ranges related to fiber-optic sensors with type of light: visible red light |

## Sensing ranges with WLL180T

|                              |                                                                                     |
|------------------------------|-------------------------------------------------------------------------------------|
| <b>Operating mode 16 µs</b>  | 60 mm                                                                               |
| <b>Operating mode 70 µs</b>  | 210 mm                                                                              |
| <b>Operating mode 250 µs</b> | 360 mm                                                                              |
| <b>Operating mode 2 ms</b>   | 700 mm                                                                              |
| <b>Operating mode 8 ms</b>   | 760 mm                                                                              |
| <b>Note</b>                  | Sensing ranges related to fiber-optic sensors with type of light: visible red light |

## Sensing ranges with GLL170

|                              |        |
|------------------------------|--------|
| <b>Operating mode 250 µs</b> | 210 mm |
|------------------------------|--------|

## Sensing ranges with GLL170T

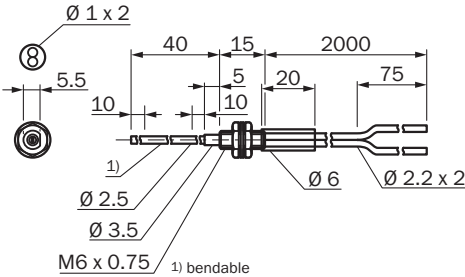
|                              |        |
|------------------------------|--------|
| <b>Operating mode 50 µs</b>  | 140 mm |
| <b>Operating mode 250 µs</b> | 250 mm |

## Classifications

|                     |          |
|---------------------|----------|
| <b>ECLASS 5.0</b>   | 27270905 |
| <b>ECLASS 5.1.4</b> | 27270905 |
| <b>ECLASS 6.0</b>   | 27270905 |
| <b>ECLASS 6.2</b>   | 27270905 |
| <b>ECLASS 7.0</b>   | 27270905 |
| <b>ECLASS 8.0</b>   | 27270905 |

|                |          |
|----------------|----------|
| ECLASS 8.1     | 27270905 |
| ECLASS 9.0     | 27270905 |
| ECLASS 10.0    | 27270905 |
| ECLASS 11.0    | 27270905 |
| ECLASS 12.0    | 27270905 |
| ETIM 5.0       | EC002651 |
| ETIM 6.0       | EC002651 |
| ETIM 7.0       | EC002651 |
| ETIM 8.0       | EC002651 |
| UNSPSC 16.0901 | 39121528 |

Dimensional drawing LL3-DB06



Dimensions in mm (inch)

Recommended accessories

Other models and accessories → [www.sick.com/Fiber-optic\\_cables](http://www.sick.com/Fiber-optic_cables)

|                                                                                     | Brief description                                                                                                                                                                          | Type          | part no. |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| device protection and care                                                          |                                                                                                                                                                                            |               |          |
|  | <ul style="list-style-type: none"><li>• <b>Description:</b> Metal protection hose for LL3-Fibers with M6 threaded head; length 1000 mm</li><li>• <b>Items supplied:</b> 1 pieces</li></ul> | BEF-LL3M61000 | 5331291  |
|  | <ul style="list-style-type: none"><li>• <b>Description:</b> Metal protection hose for LL3-Fibers with M6 threaded head; length 500 mm</li><li>• <b>Items supplied:</b> 1 pieces</li></ul>  | BEF-LL3M6500  | 5331290  |

## 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)