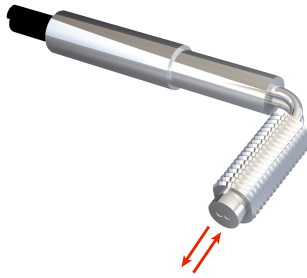


# LL3-DB09

LL3

FIBERS

**SICK**  
Sensor Intelligence.



## Ordering information

Type	Part no.
LL3-DB09	5325991

Other models and accessories → [www.sick.com/LL3](http://www.sick.com/LL3)

## Detailed technical data

## Features

<b>Device type</b>	Fibers, fiber suitable for WLL260
<b>Functional principle</b>	Proximity system
<b>For fiber-optic sensor</b>	GLL170(T), WLL180, WLL24 Ex, KTL180, WLL80
<b>Fiber length</b>	2,000 mm
<b>Fiber material</b>	Polymethylmethacrylat (PMMA)
<b>Jacket material</b>	Polyethylen (PE)
<b>Fiber head material</b>	Copper-zinc alloy (CuZn)
<b>Outer diameter, fiber-optic cable connection</b>	2.2 mm
<b>Fiber-optic cable cuttable</b>	✓
<b>Thread diameter (housing)</b>	M6
<b>Fiber-optic head design</b>	Threaded sleeve, 90° deflection
<b>Fiber arrangement</b>	Monofiber
<b>Core structure</b>	2 x Ø 1,0 mm Monofiber
<b>Angle of dispersion &lt; 60°</b>	No
<b>Compatibility with infrared light (1,450 nm)</b>	No
<b>Diameter/thread size from 2 mm taper</b>	≥ 4 mm
<b>Length of taper</b>	≥ 2 mm
<b>Highly flexible/elastic fibers (bend radius 1–4 mm)</b>	No
<b>Adapter end sleeves required</b>	No
<b>Angle of dispersion</b>	60°
<b>Integrated lens</b>	No
<b>Minimal object diameter</b>	0.02 mm <sup>1)</sup>
<b>Included with delivery</b>	Mounting, 2 x M6 hexagon nut, 1 x washer, FC fiber cutter (5304141)
<b>Compatibility tip adapters</b>	No

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

## Mechanics/electronics

<b>Bend radius, fibre-optic cable</b>	25 mm
<b>Ambient operating temperature</b>	-40 °C ... +70 °C

## 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
<b>ECLASS 8.1</b>	27270905
<b>ECLASS 9.0</b>	27270905
<b>ECLASS 10.0</b>	27270905
<b>ECLASS 11.0</b>	27270905
<b>ECLASS 12.0</b>	27270905
<b>ETIM 5.0</b>	EC002651
<b>ETIM 6.0</b>	EC002651
<b>ETIM 7.0</b>	EC002651
<b>ETIM 8.0</b>	EC002651
<b>UNSPSC 16.0901</b>	39121528

## Sensing ranges with WLL80

<b>Operating mode 16 <math>\mu</math>s</b>	90 mm
<b>Operating mode 70 <math>\mu</math>s</b>	265 mm
<b>Operating mode 250 <math>\mu</math>s</b>	450 mm
<b>Operating mode 500 <math>\mu</math>s</b>	545 mm
<b>Operating mode 1 ms</b>	595 mm
<b>Operating mode 2 ms</b>	750 mm
<b>Operating mode 8 ms</b>	1,100 mm

## Sensing ranges with WLL180T

<b>Operating mode 16 <math>\mu</math>s</b>	47 mm
<b>Operating mode 70 <math>\mu</math>s</b>	165 mm
<b>Operating mode 250 <math>\mu</math>s</b>	285 mm
<b>Operating mode 2 ms</b>	575 mm
<b>Operating mode 8 ms</b>	610 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 <math>\mu</math>s</b>	170 mm
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## Sensing ranges with GLL170T

<b>Operating mode 50 <math>\mu</math>s</b>	110 mm
<b>Operating mode 250 <math>\mu</math>s</b>	200 mm

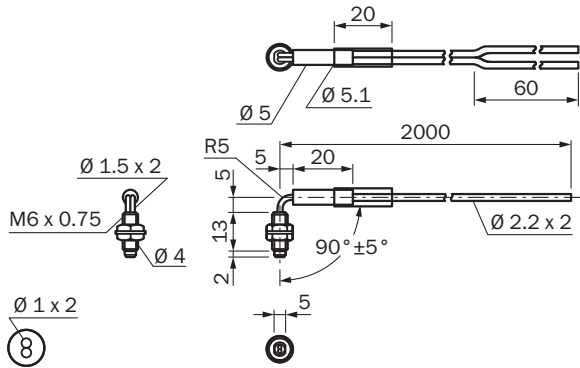
## Sensing ranges with KTL180

<b>Operating mode 16 <math>\mu</math>s</b>	2 mm
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<b>Operating mode 200 μs</b>	2 mm
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**Dimensional drawing** (Dimensions in mm (inch))

LL3-DB09



**Recommended accessories**

Other models and accessories → [www.sick.com/LL3](http://www.sick.com/LL3)

	<b>Brief description</b>	<b>Type</b>	<b>Part no.</b>
<b>Device protection (mechanical)</b>			
	Metal protection hose for LL3-Fibers with M6 threaded head; length 1000 mm, stainless steel, 1 pieces	BEF-LL3M61000	5331291
	Metal protection hose for LL3-Fibers with M6 threaded head; length 500 mm, stainless steel, 1 pieces	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)