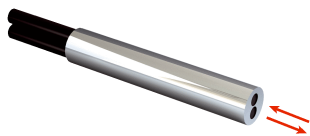


# LL3-DK04

LL3

FIBERS

**SICK**  
Sensor Intelligence.



## Ordering information

Type	Part no.
LL3-DK04	5313020

**Included in delivery:** BF-WLL160-13 (1), FC (1)

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, 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>	Stainless steel
<b>Outer diameter, fiber-optic cable connection</b>	1.3 mm
<b>Fiber-optic cable cuttable</b>	✓
<b>Smooth sleeve diameter (greatest diameter)</b>	3 mm
<b>Fiber-optic head design</b>	Smooth sleeve
<b>Fiber arrangement</b>	Monofiber
<b>Core structure</b>	2 x Ø 1,0 mm <sup>1)</sup> Monofiber
<b>Angle of dispersion &lt; 60°</b>	No
<b>Compatibility with infrared light (1,450 nm)</b>	No
<b>Application</b>	Lcd / clear material / semiconductor
<b>Highly flexible/elastic fibers (bend radius 1–4 mm)</b>	No
<b>Adapter end sleeves required</b>	Yes
<b>Angle of dispersion</b>	60°
<b>Integrated lens</b>	No
<b>Minimal object diameter</b>	0.015 mm <sup>2)</sup>
<b>Included with delivery</b>	Adapter sleeves, BF-WLL160-13 (1.3 mm) adapter sleeves, FC fiber cutter (5304141)
<b>Compatibility tip adapters</b>	No
<b>Special features</b>	Standard, compact, thin end sleeve, maximum sensing range

<sup>1)</sup> C = Coaxial, S = Sender, E = Receiver.

<sup>2)</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>	120 mm
<b>Operating mode 70 <math>\mu</math>s</b>	300 mm
<b>Operating mode 250 <math>\mu</math>s</b>	500 mm
<b>Operating mode 500 <math>\mu</math>s</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

## Sensing ranges with WLL180T

<b>Operating mode 16 <math>\mu</math>s</b>	100 mm
<b>Operating mode 70 <math>\mu</math>s</b>	300 mm
<b>Operating mode 250 <math>\mu</math>s</b>	500 mm
<b>Operating mode 2 ms</b>	900 mm
<b>Operating mode 8 ms</b>	1,400 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>	180 mm
<b>Operating mode 250 <math>\mu</math>s</b>	310 mm

## Sensing ranges with KTL180

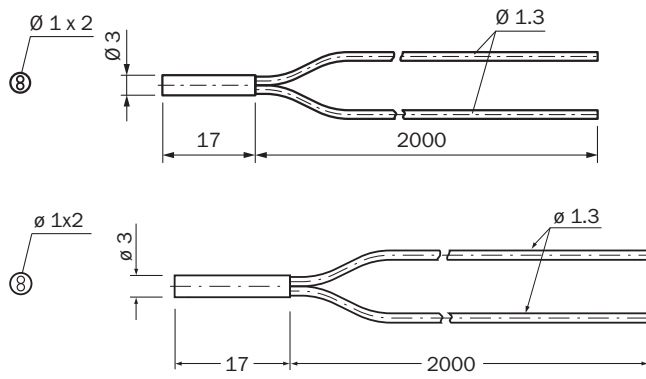
<b>Operating mode 16 <math>\mu</math>s</b>	2 mm
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Operating mode 200  $\mu$ s

2 mm

### Dimensional drawing (Dimensions in mm (inch))

LL3-DK04



## 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)