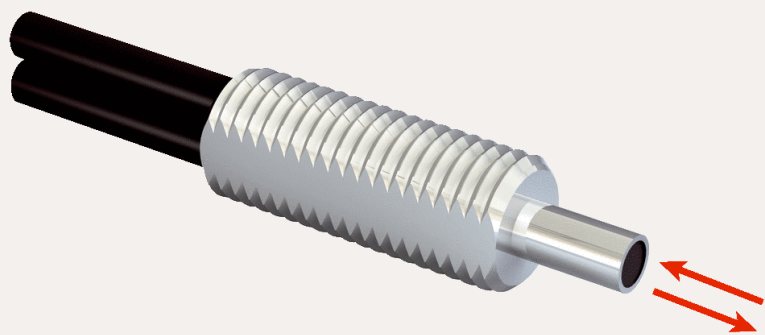




DATA SHEET

LL3-DB01

Fiber-optic cables
Fiber-optic sensors

SICK Sensor Intelligence



FIBER-OPTIC SENSORS

LL3-DB01

ORDERING INFORMATION

Type	part no.
LL3-DB01	5308074

Further device versions and accessories at www.sick.com/Fiber-optic_cables

DETAILED TECHNICAL DATA

FEATURES

Device type	Fiber-optic cables
Functional principle	Proximity system
Fiber-optic head design	Threaded sleeve
Application	Standard
Compatible fiber-optic amplifiers	GLL70, WLL80, WLL180, GLL170(T), WLL24 Ex, KTL180
Sensing range max.	1,250 mm (Sensing range of WLL80 at 8 ms)
Minimal object diameter	0.015 mm ¹⁾
Optical fiber head	
Angle of dispersion	60°
Integrated lens	No
Compatibility tip adapters	No
Optical fiber	
Compatibility with infrared light	No
Optical fiber cable can be shortened	✓
Adapter end sleeves required	No
Included with delivery	Mounting, 2 x M6 hexagon nut, 2 x washer, FC fiber cutter (5304141)

¹⁾ Minimum detectable object was determined at optimum measuring distance and optimum setting.

MECHANICS

Optical fiber head	
Light emission	Axial
Thread diameter (housing)	M6
Optical fiber taper diameter	≥ 2.8 mm

¹⁾ C = Coaxial, S = Sender, E = Receiver.

Optical fiber taper length after 2 mm		≥ 5 mm
Optical fiber	Fiber length	2,000 mm
	Bending radius	25 mm
	Dynamic flexibility (robotics)	No
	Outside diameter, optical fiber cable connection	2.2 mm
	Fiber arrangement	Coaxial
Core structure		S: Ø 1 mm, R: 16 x Ø 0,25 mm ¹⁾ Coaxial
Material	Optical fiber head	Stainless steel
	Sheath	Polyethylen (PE)
	Fibers	Polymethylmethacrylat (PMMA)
Weight		31 g

¹⁾ C = Coaxial, S = Sender, E = Receiver.

AMBIENT DATA

Ambient operating temperature	-40 °C ... +70 °C
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SENSING RANGES WITH GLL70

Operating mode 50 µs	200 mm
Operating mode 250 µs	500 mm
Operating mode 1 ms	700 mm
Operating mode 4 ms	1,250 mm

SENSING RANGES WITH WLL80

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

SENSING RANGES WITH WLL180T

Operating mode 16 µs	90 mm
Operating mode 70 µs	280 mm
Operating mode 250 µs	500 mm
Operating mode 2 ms	900 mm
Operating mode 8 ms	1,350 mm
Note	Sensing ranges related to fiber-optic sensors with type of light: visible red light

SENSING RANGES WITH GLL170

Operating mode 250 µs	160 mm
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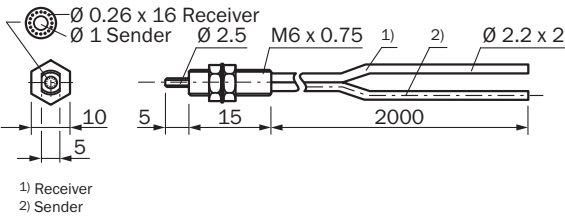
SENSING RANGES WITH GLL170T

Operating mode 50 µs	150 mm
Operating mode 250 µs	290 mm

SENSING RANGES WITH KTL180

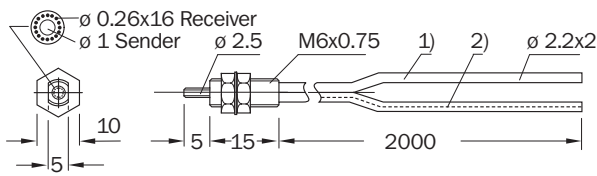
Operating mode 16 µs	2 mm
Operating mode 200 µs	2 mm

DIMENSIONAL DRAWING LL3-DB01



Dimensions in mm (inch)

DIMENSIONAL DRAWING



Dimensions in mm (inch)

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/5308074



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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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