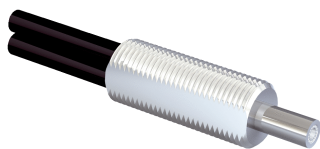


LL3-DB01-10

Fiber-optic cables

FIBER-OPTIC SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
LL3-DB01-10	5308075

Other models and accessories → 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.	700 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
Optical fiber taper length after 2 mm	≥ 5 mm
Optical fiber	
Fiber length	10,000 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

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

Material	Optical fiber head	Stainless steel
	Sheath	Polyethylen (PE)
	Fibers	Polymethylmethacrylat (PMMA)
Weight		97 g

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

Ambient data

Ambient operating temperature	-40 °C ... +70 °C
--------------------------------------	-------------------

Sensing ranges with WLL80

Operating mode 16 µs	65 mm
Operating mode 70 µs	200 mm
Operating mode 250 µs	285 mm
Operating mode 500 µs	335 mm
Operating mode 1 ms	370 mm
Operating mode 2 ms	460 mm
Operating mode 8 ms	700 mm
Note	Sensing ranges related to fiber-optic sensors with type of light: visible red light

Sensing ranges with WLL180T

Operating mode 16 µs	50 mm
Operating mode 70 µs	140 mm
Operating mode 250 µs	250 mm
Operating mode 2 ms	500 mm
Operating mode 8 ms	750 mm
Note	Sensing ranges related to fiber-optic sensors with type of light: visible red light

Sensing ranges with GLL170

Operating mode 250 µs	100 mm
------------------------------	--------

Sensing ranges with GLL170T

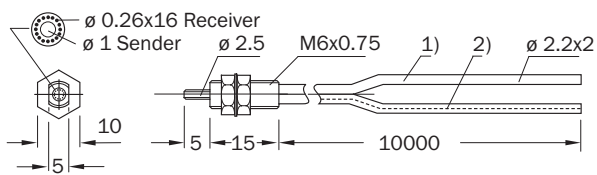
Operating mode 50 µs	70 mm
Operating mode 250 µs	150 mm

Classifications

ECLASS 5.0	27270905
ECLASS 5.1.4	27270905
ECLASS 6.0	27270905
ECLASS 6.2	27270905
ECLASS 7.0	27270905
ECLASS 8.0	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

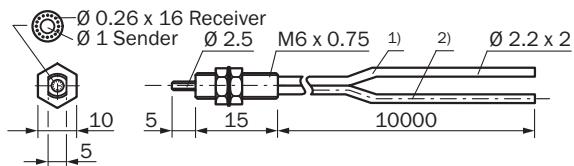
Dimensional drawing



- ¹⁾ Sender
- ²⁾ Receiver

Dimensions in mm (inch)

Dimensional drawing LL3-DB01-10





- ¹⁾ Receiver
- ²⁾ Sender

Dimensions in mm (inch)

Recommended accessories

Other models and accessories → www.sick.com/Fiber-optic_cables

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