LL3-DB09

Fiber-optic cables

FIBERS

SICK
Sensor Intelligence.

LL3-DB09 | Fiber-optic cables
FIBERS
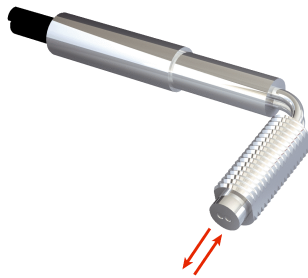
Ordering information

Type	Part no.
LL3-DB09	5325991

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, 90° deflection
Application	Standard
Compatible fiber-optic amplifiers	WLL80, WLL180, GLL170(T), WLL24 Ex, KTL180
Sensing range max.	1,100 mm (Sensing range of WLL80 at 8 ms)
Minimal object diameter	0.02 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, 1 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	Radial
Thread diameter (housing)	M6
Optical fiber taper diameter	≥ 4 mm
Optical fiber taper length after 2 mm	≥ 2 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	Singlefiber
Core structure	2 x Ø 1,0 mm Singlefiber

Material	
Optical fiber head	Copper-zinc alloy (CuZn)
Sheath	Polyethylen (PE)
Fibers	Polymethylmethacrylat (PMMA)
Weight	52 g

Ambient data

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

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

Sensing ranges with WLL80

Operating mode 16 µs	90 mm
Operating mode 70 µs	265 mm
Operating mode 250 µs	450 mm
Operating mode 500 µs	545 mm
Operating mode 1 ms	595 mm
Operating mode 2 ms	750 mm
Operating mode 8 ms	1,100 mm

Sensing ranges with WLL180T

Operating mode 16 µs	47 mm
Operating mode 70 µs	165 mm
Operating mode 250 µs	285 mm
Operating mode 2 ms	575 mm
Operating mode 8 ms	610 mm
Note	Sensing ranges related to fiber-optic sensors with type of light: visible red light

Sensing ranges with GLL170

Operating mode 250 µs	170 mm

Sensing ranges with GLL170T

Operating mode 50 µs	110 mm
Operating mode 250 µs	200 mm

Sensing ranges with KTL180

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

Dimensional drawing (Dimensions in mm (inch))

LL3-DB09
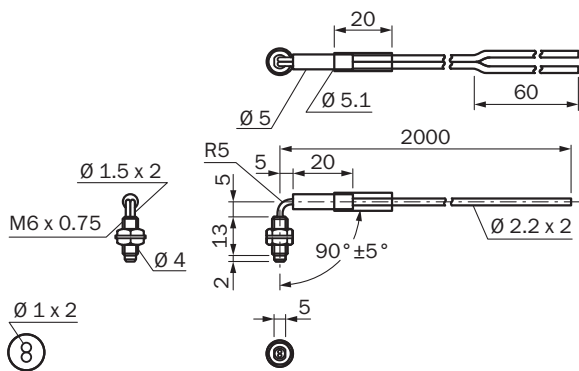
Recommended accessories

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

	Brief description	Type	Part no.
Device protection (mechanical)			
	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**

SICK AG | Waldkirch | Germany | www.sick.com

SICK
Sensor Intelligence.