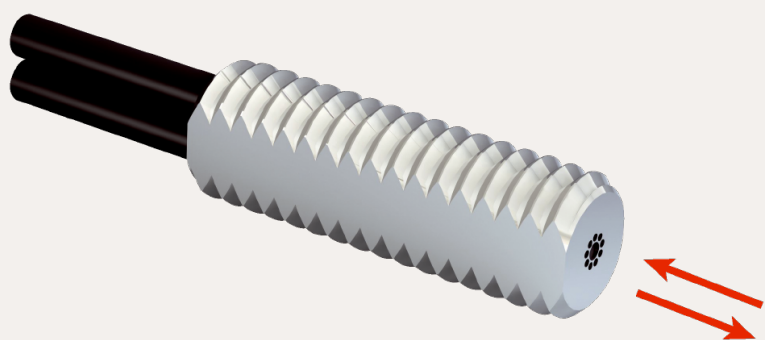




DATA SHEET

LL3-DM02

Fiber-optic cables
Fiber-optic sensors

SICK

Sensor Intelligence



FIBER-OPTIC SENSORS

LL3-DM02

ORDERING INFORMATION

Type	part no.
LL3-DM02	5308077

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.	710 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	Yes
Optical fiber	
Compatibility with infrared light	No
Optical fiber cable can be shortened	✓
Adapter end sleeves required	Yes
Included with delivery	Mounting, 2 x M4 hexagon nut, 2 x washer, adapter sleeves, BF-WLL160-13 (1.3 mm) adapter sleeves, FC fiber cutter (5304141)
For fiber-optic	LL3-DA06, LL3-DA09

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

MECHANICS

Optical fiber head	
Light emission	Axial

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

Thread diameter (housing)	M4
Optical fiber	
Fiber length	2,000 mm
Bending radius	15 mm
Dynamic flexibility (robotics)	No
Outside diameter, optical fiber cable connection	1.3 mm
Fiber arrangement	Coaxial
Core structure	S: Ø 0,5 mm, R: 9 x Ø 0,25 mm ¹⁾ Coaxial
Material	
Optical fiber head	Stainless steel
Sheath	Polyethylen (PE)
Fibers	Polymethylmethacrylat (PMMA)
Weight	21 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	70 mm
Operating mode 250 µs	245 mm
Operating mode 1 ms	365 mm
Operating mode 4 ms	600 mm

SENSING RANGES WITH WLL80

Operating mode 16 µs	45 mm
Operating mode 70 µs	170 mm
Operating mode 250 µs	265 mm
Operating mode 500 µs	320 mm
Operating mode 1 ms	380 mm
Operating mode 2 ms	505 mm
Operating mode 8 ms	710 mm
Note	Sensing ranges related to fiber-optic sensors with type of light: visible red light

SENSING RANGES WITH WLL180T

Operating mode 16 µs	40 mm
Operating mode 70 µs	130 mm
Operating mode 250 µs	200 mm
Operating mode 2 ms	350 mm
Operating mode 8 ms	600 mm
Note	Sensing ranges related to fiber-optic sensors with type of light: visible red light

SENSING RANGES WITH GLL170

Operating mode 250 µs	70 mm
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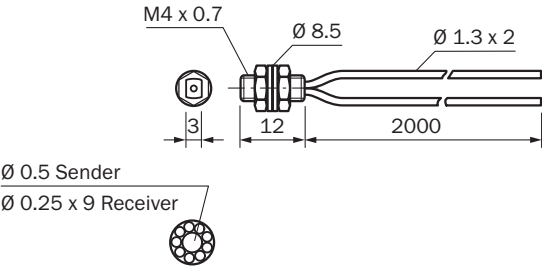
SENSING RANGES WITH GLL170T

Operating mode 50 µs	60 mm
Operating mode 250 µs	110 mm

SENSING RANGES WITH KTL180

Operating mode 16 µs	2 mm
Operating mode 200 µs	2 mm
When using LL3-DA06	16 mm
When using LL3-DA09	6 mm

DIMENSIONAL DRAWING LL3-DM02



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/5308077



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SICK AT A GLANCE

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