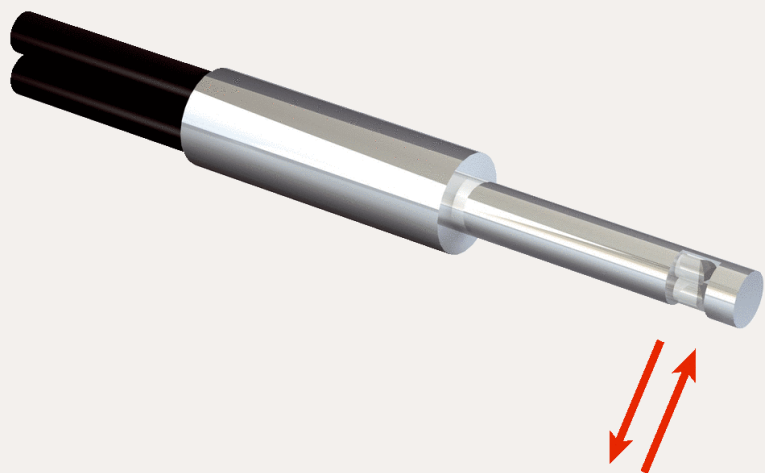




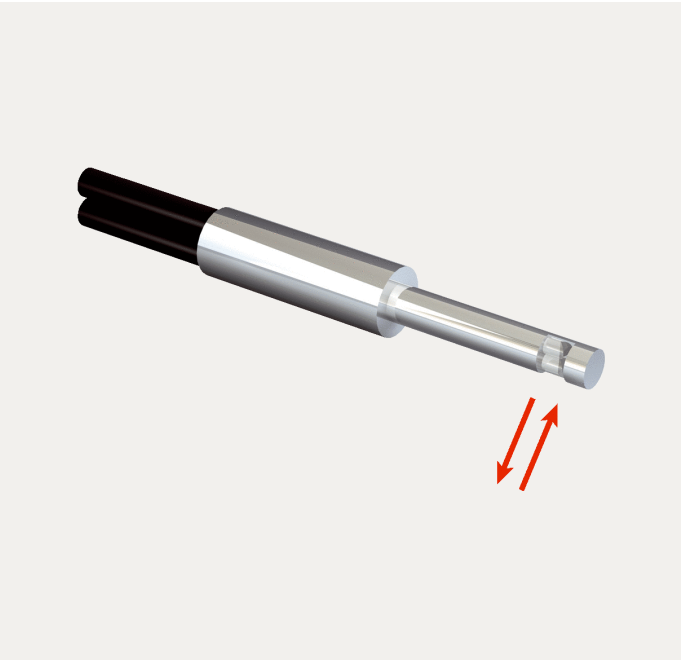
DATA SHEET

LL3-DV01

Fiber-optic cables
Fiber-optic sensors

SICK

Sensor Intelligence



FIBER-OPTIC SENSORS

LL3-DV01

ORDERING INFORMATION

Type	part no.
LL3-DV01	5308088

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	Smooth sleeve, Long end sleeve, 90° deflection
Application	Standard
Compatible fiber-optic amplifiers	GLL70, WLL80, WLL180, GLL170(T), WLL24 Ex
Sensing range max.	850 mm (Sensing range of WLL80 at 8 ms)
Minimal object diameter	0.025 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	FC fiber cutter (5304141)

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

MECHANICS

Optical fiber head	
Light emission	Radial
Smooth sleeve diameter	5 mm
Optical fiber taper diameter	≥ 2.7 mm

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

Optical fiber taper length after 2 mm		≥ 20 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 ¹⁾ Singlefiber
Material	Optical fiber head	Stainless steel
	Sheath	Polyethylen (PE)
	Fibers	Polymethylmethacrylat (PMMA)
Weight		28 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	145 mm
Operating mode 250 µs	345 mm
Operating mode 1 ms	450 mm
Operating mode 4 ms	810 mm

SENSING RANGES WITH WLL80

Operating mode 16 µs	90 mm
Operating mode 70 µs	235 mm
Operating mode 250 µs	345 mm
Operating mode 500 µs	415 mm
Operating mode 1 ms	450 mm
Operating mode 2 ms	605 mm
Operating mode 8 ms	850 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	135 mm
Operating mode 250 µs	180 mm
Operating mode 2 ms	270 mm
Operating mode 8 ms	330 mm
Note	Sensing ranges related to fiber-optic sensors with type of light: visible red light

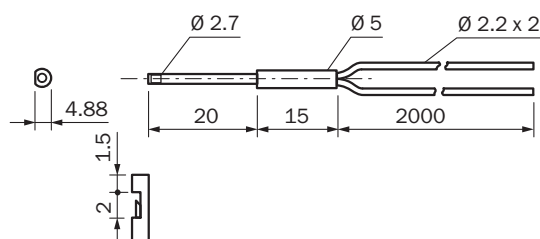
SENSING RANGES WITH GLL170

Operating mode 250 µs	150 mm
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SENSING RANGES WITH GLL170T

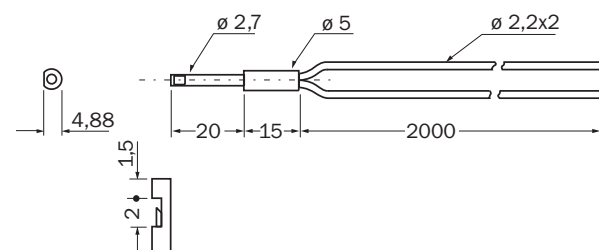
Operating mode 50 µs	200 mm
Operating mode 250 µs	300 mm

DIMENSIONAL DRAWING LL3-DV01



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/5308088



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SICK AT A GLANCE

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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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