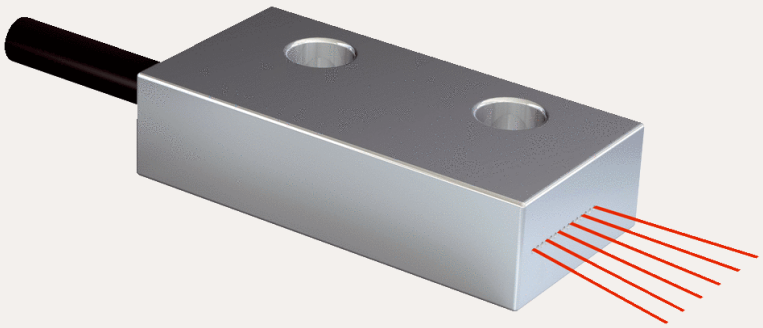
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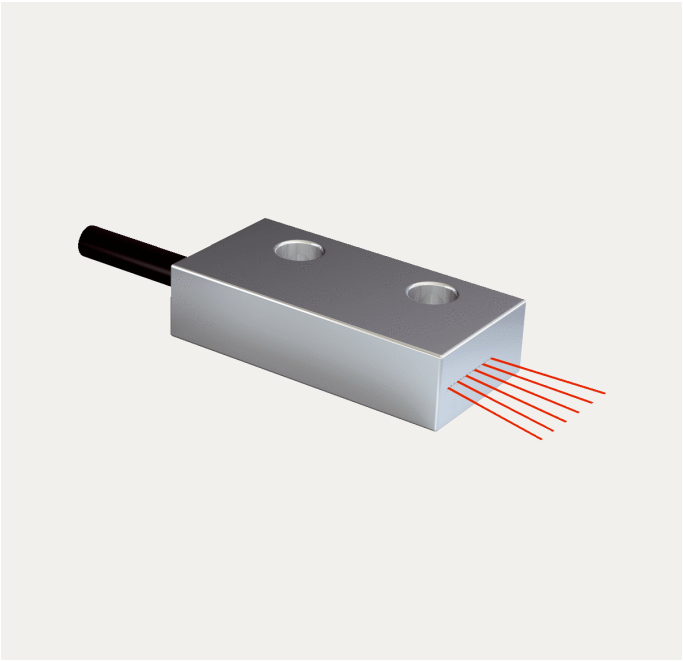


DATA SHEET

LL3-TS10

Fiber-optic cables
Fiber-optic sensors

SICK Sensor Intelligence



FIBER-OPTIC SENSORS

LL3-TS10

ORDERING INFORMATION

Type	part no.
LL3-TS10	5308063

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

DETAILED TECHNICAL DATA

FEATURES

Device type	Fiber-optic cables
Functional principle	Through-beam system, consisting of a sender and a receiver
Fiber-optic head design	Flat type, 90° deflection, Array
Application	Area detection
Special features	Small fiber optic cable cell
Compatible fiber-optic amplifiers	GLL70, WLL80, WLL180, GLL170(T), WLL24 Ex
Sensing range max.	2,530 mm (Sensing range of WLL80 at 8 ms)
Minimal object diameter	1 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
Fiber-optic head array width	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	Multi-fiber

Core structure	16 x Ø 0,25 mm Multi-fiber
Material	
Optical fiber head	Copper-zinc alloy (CuZn)
Sheath	Polyethylen (PE)
Fibers	Polymethylmethacrylat (PMMA)
Weight	41 g

AMBIENT DATA

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

SENSING RANGES WITH GLL70

Operating mode 50 µs	480 mm
Operating mode 250 µs	1,410 mm
Operating mode 1 ms	1,960 mm
Operating mode 4 ms	3,500 mm

SENSING RANGES WITH WLL80

Operating mode 16 µs	165 mm
Operating mode 70 µs	490 mm
Operating mode 250 µs	775 mm
Operating mode 500 µs	955 mm
Operating mode 1 ms	1,080 mm
Operating mode 2 ms	1,600 mm
Operating mode 8 ms	2,530 mm
Note	Sensing ranges related to fiber-optic sensors with type of light: visible red light

SENSING RANGES WITH WLL180T

Operating mode 16 µs	130 mm
Operating mode 70 µs	400 mm
Operating mode 250 µs	800 mm
Operating mode 2 ms	2,000 mm
Operating mode 8 ms	3,500 mm
Note	Sensing ranges related to fiber-optic sensors with type of light: visible red light

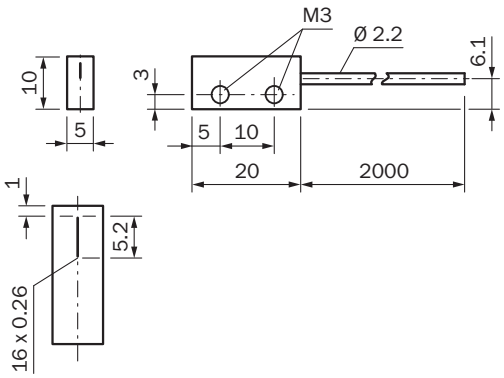
SENSING RANGES WITH GLL170

Operating mode 250 µs	220 mm

SENSING RANGES WITH GLL170T

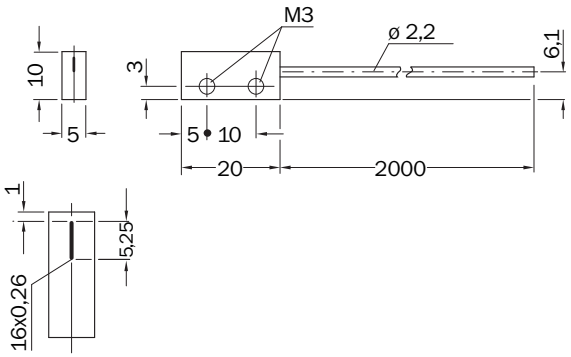
Operating mode 50 µs	230 mm
Operating mode 250 µs	370 mm

DIMENSIONAL DRAWING LL3-TS10



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/5308063

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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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