

LL3-TM03

Fiber-optic cables

FIBER-OPTIC SENSORS





Ordering information

Туре	part no.
LL3-TM03	5308070

Included in delivery: BF-WLL160-10 (1), FC (1)

Other models and accessories → 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	Smooth sleeve
Application	Standard
Compatible fiber-optic amplifiers	GLL70, WLL80, WLL180, GLL170(T)
Sensing range max.	1,540 mm (Sensing range of WLL80 at 8 ms)
Minimal object diameter	0.1 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	Yes
Included with delivery	Adapter sleeves, BF-WLL160-10 (1.0 mm) adapter sleeves, FC fiber cutter (5304141)

 $^{^{1)}}$ Minimum detectable object was determined at optimum measuring distance and optimum setting.

Mechanics

Optical fiber head	
Light emission	Axial
Smooth sleeve diameter	1.5 mm
Optical fiber	
Fiber length	2,000 mm
Bending radius	15 mm
Dynamic flexibility (robotics)	No
Outside diameter, optical fiber cable connection	1 mm
Fiber arrangement	Singlefiber
Core structure	Ø 0,5 mm Singlefiber
Material	
Optical fiber head	Stainless steel
Sheath	Polyethylen (PE)

Weight 17 g Ambient data Ambient operating temperature -40 °C+70 °C Classifications CECLASS 5.0 ECLASS 5.0 27270905 ECLASS 5.1.4 27270905 ECLASS 6.2 27270905 ECLASS 7.0 27270905 ECLASS 8.1 27270905 ECLASS 8.1 27270905 ECLASS 9.0 27270905 ECLASS 1.0 27270905 </th <th></th> <th>Fibers</th> <th>Polymethylmethacrylat (PMMA)</th>		Fibers	Polymethylmethacrylat (PMMA)
Ambient operating temperature	Weight		17 g
Classifications	Ambient data		
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Sensing ranges with WLL180T Operating mode 16 µs Operating mode 70 µs Operating mode 250 µs 300 mm	Operating mode 8 ms		
Operating mode 16 μs55 mmOperating mode 70 μs175 mmOperating mode 250 μs300 mm	Note		Sensing ranges related to fiber-optic sensors with type of light: visible red light
Operating mode 70 μs175 mmOperating mode 250 μs300 mm	Sensing ranges with WLL180T		
Operating mode 250 μs 300 mm	Operating mode 16 µs		55 mm
	Operating mode 70 μs		175 mm
Operating mode 2 ms 700 mm	Operating mode 250 μs		300 mm
	Operating mode 2 ms		700 mm

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 Operating mode 8 ms
 1,100 mm

 Note
 Sensing ranges related to fiber-optic sensors with type of light: visible red light

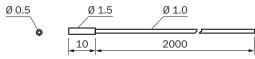
Sensing ranges with GLL170

Operating mode 250 μs 150 mm

Sensing ranges with GLL170T

Operating mode 50 μs140 mmOperating mode 250 μs230 mm

Dimensional drawing LL3-TM03



Dimensions in mm (inch)

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."

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