



LL3-TB03

LL3

FIBERS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
LL3-TB03	5308056

Other models and accessories → www.sick.com/LL3

Detailed technical data

Features

Device type	Fibers
Functional principle	Through-beam system
Functional principle detail	Consisting of a sender and a receiver
For fiber-optic sensor	GLL170(T), WLL180T, WLL24 Ex, WLL80
Fiber length	2,000 mm
Fiber material	Polymethylmethacrylat (PMMA)
Jacket material	Polyethylen (PE)
Fiber head material	Stainless steel ¹⁾
Outer diameter, fiber-optic cable connection	2.2 mm
Fiber-optic cable cuttable	✓
Thread diameter (housing)	M4
Fiber-optic head design	Threaded sleeve, Long end sleeve, Bendable sleeve
Fiber arrangement	Monofiber
Core structure	Ø 1,0 mm Monofiber
Angle of dispersion < 60°	No
Compatibility with infrared light (1,450 nm)	No
Diameter/thread size from 2 mm taper	≥ 1.5 mm
Length of taper	≥ 90 mm
Diameter of taper	≥ 1.5 mm
Highly flexible/elastic fibers (bend radius 1–4 mm)	No
Adapter end sleeves required	No
Angle of dispersion	60°
Integrated lens	No
Minimum bend radius of end sleeve	15 mm
Minimal object diameter	0.2 mm ²⁾
Included with delivery	Mounting, 4 x M4 hexagon nut, 4 x washer, FC fiber cutter (5304141)
Compatibility tip adapters	No
Special features	Bendable end sleeve, ideal for inaccessible objects

¹⁾ Stainless steel.

²⁾ Minimum detectable object was determined at optimum measuring distance and optimum setting.

Mechanics/electronics

Bend radius, fibre-optic cable	25 mm
Bend radius, end sleeve	15 mm
Ambient operating temperature	-40 °C ... +70 °C

Classifications

ECl@ss 5.0	27270905
ECl@ss 5.1.4	27270905
ECl@ss 6.0	27270905
ECl@ss 6.2	27270905
ECl@ss 7.0	27270905
ECl@ss 8.0	27270905
ECl@ss 8.1	27270905
ECl@ss 9.0	27270905
ECl@ss 10.0	27270905
ECl@ss 11.0	27270905
ECl@ss 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	325 mm
Operating mode 70 µs	975 mm
Operating mode 250 µs	1,455 mm
Operating mode 500 µs	1,960 mm
Operating mode 1 ms	2,215 mm
Operating mode 2 ms	2,780 mm
Operating mode 8 ms	3,600 mm

Sensing ranges with WLL180T

Operating mode 16 µs	240 mm
Operating mode 70 µs	700 mm
Operating mode 250 µs	1,400 mm
Operating mode 2 ms	2,500 mm
Operating mode 8 ms	2,900 mm
Note	Sensing ranges related to fiber-optic sensors with type of light: visible red light

Sensing ranges with GLL170

Operating mode 250 µs	550 mm
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Sensing ranges with GLL170T

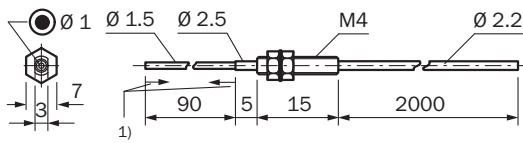
Operating mode 50 µs	580 mm
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Operating mode 250 μ s

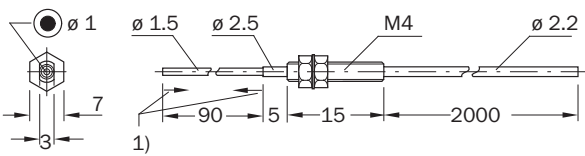
1,040 mm

Dimensional drawing (Dimensions in mm (inch))

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1) Flexible end tip, do not bend in this area (10 mm), bend radius R15 mm



1) Biegsame Endhülse, in diesem Bereich (10 mm) nicht biegen, Biegeradius R15 mm

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