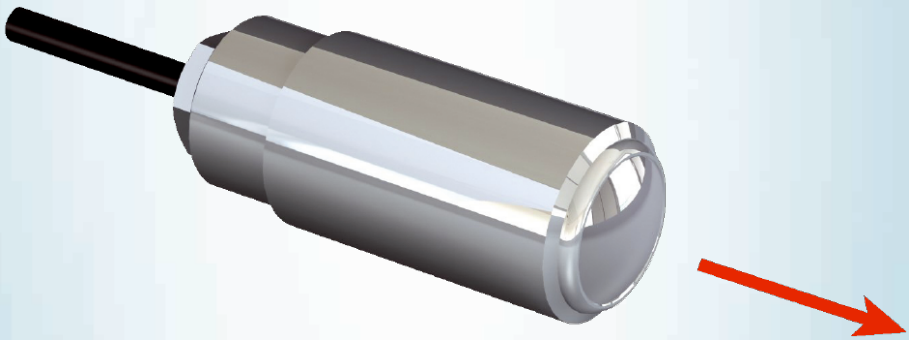
Data sheet



LL3-TX02

Fiber-optic cables

FIBER-OPTIC SENSORS

SICK
Sensor Intelligence.

Ordering information

Type	part no.
LL3-TX02	5325046

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	Threaded sleeve
Application	Standard
Special features	Bracket material, fiber head and mounting material made of stainless steel V4A (1.4404, 316L)
Compatible fiber-optic amplifiers	GLL70, WLL80, WLL180, GLL170(T), WLL24 Ex
Sensing range max.	38,000 mm (Sensing range of WLL80 at 8 ms)
Minimal object diameter	0.5 mm [1]
Optical fiber head	
Angle of dispersion	12°
Integrated lens	Yes
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	Mounting, 4 x M12 hexagon nut, FC fiber cutter (5304141), protective cladding for fiber head

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

Mechanics

Optical fiber head	
Light emission	Axial
Thread diameter (housing)	M12
Optical fiber	
Fiber length	20,000 mm
Bending radius	25 mm
Dynamic flexibility (robotics)	No
Outside diameter, optical fiber cable connection	2.2 mm
Fiber arrangement	Singlefiber
Core structure	Ø 1.5 mm Singlefiber
Material	

[1] Glass.

Optical fiber head	Stainless steel [1]
Sheath	Polyethylen (PE) / Polyvinylchlorid (PVC)
Fibers	Polymethylmethacrylat (PMMA)
Weight	118 g

[1] Glass.

Ambient data

Ambient operating temperature	–40 °C ... +60 °C

Sensing ranges with GLL70

Operating mode 50 µs	9,000 mm
Operating mode 250 µs	28,000 mm
Operating mode 1 ms	38,000 mm
Operating mode 4 ms	38,000 mm

Sensing ranges with WLL80

Operating mode 16 µs	6,900 mm
Operating mode 70 µs	23,000 mm
Operating mode 250 µs	32,630 mm
Operating mode 500 µs	38,000 mm
Operating mode 1 ms	38,000 mm
Operating mode 2 ms	38,000 mm
Operating mode 8 ms	38,000 mm
Note	Sensing ranges related to fiber-optic sensors with type of light: visible red light

Sensing ranges with WLL180T

Operating mode 16 µs	1,800 mm
Operating mode 70 µs	7,000 mm
Operating mode 250 µs	12,000 mm
Operating mode 2 ms	25,000 mm
Operating mode 8 ms	38,000 mm
Note	Sensing ranges related to fiber-optic sensors with type of light: visible red light

Sensing ranges with GLL170

Operating mode 250 µs	2,700 mm

Sensing ranges with GLL170T

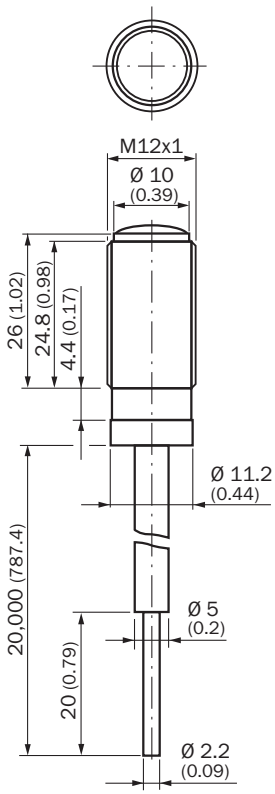
Operating mode 50 µs	6,890 mm
Operating mode 250 µs	10,810 mm

Classifications

ECLASS 5.0	27270905
ECLASS 5.1.4	27270905
ECLASS 6.0	27270905
ECLASS 6.2	27270905

ECLASS 7.0	27270905
ECLASS 8.0	27270905
ECLASS 8.1	27270905
ECLASS 9.0	27270905
ECLASS 10.0	27270905
ECLASS 11.0	27270905
ECLASS 12.0	27270905
ETIM 5.0	EC002651
ETIM 6.0	EC002651
ETIM 7.0	EC002651
ETIM 8.0	EC002651
UNSPSC 16.0901	39121528

Dimensional drawing LL3-TX02



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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