

LL3-TK77

Fiber-optic cables

FIBER-OPTIC SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
LL3-TK77	5313035

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	High flexible (static)	
Compatible fiber-optic amplifiers	GLL70, WLL80, WLL180, GLL170(T), WLL24 Ex	
Sensing range max.	3,600 mm (Sensing range of WLL80 at 8 ms)	
Minimal object diameter	0.2 mm ¹⁾	
Optical fiber head		
Angle of dispersion	60°	
Integrated lens	No	
Compatibility tip adapters	Yes	
Optical fiber		
Compatibility with infrared light	No	
Optical fiber cable can be shortened	✓	
Adapter end sleeves required	No	
Included with delivery	Mounting, 4 x M4 hexagon nut, 4 x washer, FC fiber cutter (5304141)	

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

Mechanics

Optical fiber head		
Light emission	Axial	
Thread diameter (housing)	M4	
Optical fiber taper diameter	≥ 2.6 mm	
Optical fiber taper length after 2 mm	≥ 3 mm	
Optical fiber		
Fiber length	2,000 mm	
Bending radius	2 mm	
Dynamic flexibility (robotics)	No	
Outside diameter, optical fiber cable connection	2.2 mm	
Fiber arrangement	Singlefiber	
Core structure	Ø 1,0 mm Singlefiber	
Material		
Optical fiber head	Copper-zinc alloy (CuZn)	

	Sheath	Polyethylen (PE)
	Fibers	Polymethylmethacrylat (PMMA)
Weight		32 g

Ambient data

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

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

Sensing ranges with WLL80

Operating mode 16 µs	310 mm
Operating mode 70 µs	915 mm
Operating mode 250 µs	1,415 mm
Operating mode 500 µs	1,770 mm
Operating mode 1 ms	2,010 mm
Operating mode 2 ms	2,710 mm
Operating mode 8 ms	3,600 mm
Note	Sensing ranges related to fiber-optic sensors with type of light: visible red light

Sensing ranges with WLL180T

Operating mode 16 µs	220 mm
Operating mode 70 µs	650 mm
Operating mode 250 µs	1,200 mm
Operating mode 2 ms	2,750 mm
Operating mode 8 ms	4,000 mm
Note	Sensing ranges related to fiber-optic sensors with type of light: visible red light

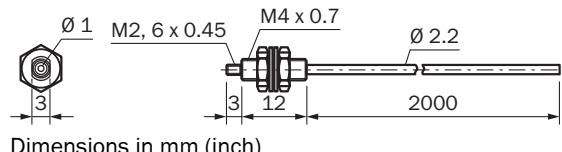
Sensing ranges with GLL170

Operating mode 250 µs	420 mm
------------------------------	--------

Sensing ranges with GLL170T

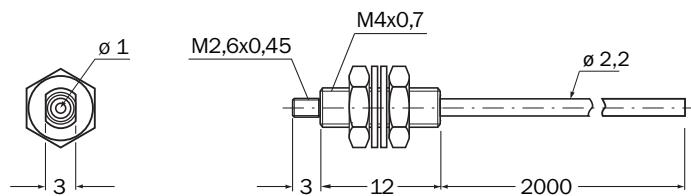
Operating mode 50 μs	450 mm
Operating mode 250 μs	760 mm

Dimensional drawing LL3-TK77



Dimensions in mm (inch)

Dimensional drawing



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."

WORLDWIDE PRESENCE:

Contacts and other locations www.sick.com