



LL3-TN011300

Fiber-optic cables

FIBER-OPTIC SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
LL3-TN011300	5338641

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	Vacuum zone, Heat-resistant ($\geq 100^\circ\text{C}$)
Special features	Vacuum resistance: $10^{-10}\text{ Pa} = 10^{-7}\text{ mbar}$
Compatible fiber-optic amplifiers	GLL70, WLL80, WLL180, GLL170(T), WLL24 Ex
Sensing range max.	Depending on the fiber optic amplifier used
Minimal object diameter	0.4 mm ¹⁾
Optical fiber head	
Angle of dispersion	60°
Integrated lens	No
Compatibility tip adapters	Yes
Optical fiber	
Compatibility with infrared light	No
Adapter end sleeves required	No
Items supplied	Fibers (vacuum side), vacuum leadthrough, fibers adapter cable (atmospheric side), mounting material

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	$\geq 2.6\text{ mm}$
Optical fiber taper length after 2 mm	$\geq 3\text{ mm}$
Optical fiber	
Fiber length	1,300 mm
Bending radius	23 mm
Dynamic flexibility (robotics)	No
Outside diameter, optical fiber cable connection	2.2 mm
Fiber arrangement	Multi-fiber
Core structure	$\varnothing 1.5\text{ mm}$ (multi-fiber) Multi-fiber
Material	

Optical fiber head	Stainless steel
Sheath	Stainless steel
Fibers	Glass
Weight	15 g

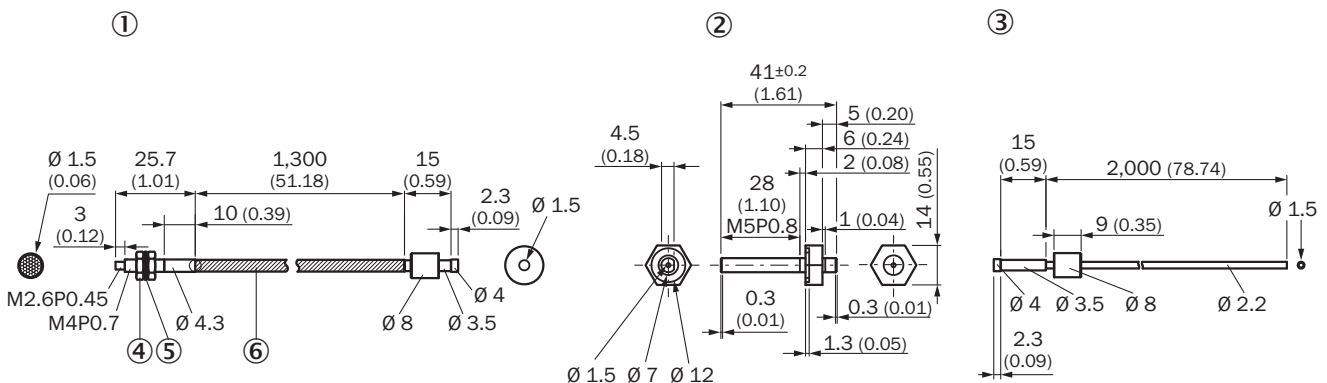
Ambient data

Ambient operating temperature	-40 °C ... +250 °C
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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



Dimensions in mm (inch)

① Fibers (vacuum side), jacket material: stainless steel, fiber material: glass, bending radius: 23 mm, ambient operating temperature: -40 °C ... +250 °C

② Vacuum leadthrough

③ Fiber optic adapter cable (atmospheric side), sheath material: PE, fiber material: PMMA, bend radius: 40 mm, ambient operating temperature: -55 °C ... +70 °C

④ width across flats 8 mm, thickness 2.3 mm

- ⑤ Toothed lock washer \varnothing 8,3 mm
- ⑥ Stainless steel protective tube \varnothing 3.8 mm

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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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