

# LL3-TX02-01

Fiber-optic cables

**FIBERS** 





## Ordering information

| Туре        | Part no. |
|-------------|----------|
| LL3-TX02-01 | 5328256  |

Other models and accessories → www.sick.com/Fiber-optic\_cables

#### Detailed technical data

#### **Features**

| Device type                          | Fiber-optic cables   |
|--------------------------------------|--|
| Functional principle                 | Through-beam system  |
| 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    | WLL80, WLL180, GLL170(T)   |
| Sensing range max.                   | Depending on the fiber optic amplifier used  |
| Minimal object diameter              | 0.5 mm <sup>1)</sup>   |
| Optical fiber head                   |  |
| Angle of dispersion                  | 11.42°   |
| 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)   |

 $<sup>^{1)}</sup>$  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                                     | 1,000 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   |                      |

<sup>1)</sup> Glass.

| Optical fiber head | Stainless steel <sup>1)</sup>             |
|--------------------|---|
| Sheath             | Polyethylen (PE) / Polyvinylchlorid (PVC) |
| Fibers             | Polymethylmethacrylat (PMMA)              |
| Weight             | 13 g                                      |

<sup>1)</sup> Glass.

#### Ambient data

| Ambient operating temperature | -40 °C +60 °C |
|-------------------------------|---------------|
|                               |               |

## Classifications

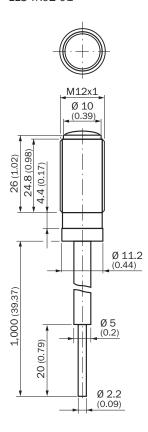
| ECLASS 5.0     | 27270905 |
|----------------|----------|
| ECLASS 5.1.4   | 27270905 |
| ECLASS 6.0     | 27270905 |
| ECLASS 6.2     | 27270905 |
| ECLASS 7.0     | 27270905 |
| ECLASS 8.0     | 27270905 |
| ECLASS 8.1     | 27270905 |
| ECLASS 9.0     | 27270905 |
| ECLASS 10.0    | 27270905 |
| 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 WLL180T

| Operating mode 16 µs  | 2,000 mm  |
|-----------------------|---|
| Operating mode 70 µs  | 7.5 mm  |
| Operating mode 250 µs | 13.5 mm   |
| Operating mode 2 ms   | 27 mm   |
| Operating mode 8 ms   | 40,000 mm   |
| Note                  | Sensing ranges related to fiber-optic sensors with type of light: visible red light |

#### Dimensional drawing (Dimensions in mm (inch))

LL3-TX02-01



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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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