



TiM561-2050101

TiM5xx

2D LIDAR SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
TiM561-2050101	1071419

Other models and accessories → [www.sick.com/TiM5xx](http://www.sick.com/TiM5xx)



### Detailed technical data

#### Features

<b>Field of application</b>	Outdoor
<b>Light source</b>	Infrared (850 nm)
<b>Laser class</b>	1 (IEC 60825-1:2014, EN 60825-1:2014)
<b>Aperture angle</b>	270°
<b>Scanning frequency</b>	15 Hz
<b>Angular resolution</b>	0.33°
<b>Operating range</b>	0.05 m ... 10 m
<b>Max. range with 10 % reflectivity</b>	8 m

#### Performance

<b>Response time</b>	Typ. 67 ms
<b>Detectable object shape</b>	Almost any
<b>Systematic error</b>	± 60 mm <sup>1)</sup>
<b>Statistical error</b>	20 mm <sup>1)</sup>
<b>Integrated application</b>	Output of measurement data

<sup>1)</sup> Technical data such as measurement errors and sensing range can only be guaranteed up to a sensing range of 10 m.

#### Interfaces

<b>Ethernet</b>	✓, TCP/IP
<b>USB</b>	✓
Remark	Micro USB
Function	AUX, parameterization
<b>Switching inputs</b>	0
<b>Switching outputs</b>	1 (PNP, "SYNC"/"device ready")
<b>Optical indicators</b>	2 LEDs (ON, "device ready")

#### Mechanics/electronics

<b>Electrical connection</b>	1 x "Ethernet" connection, 4-pin M12 female connector
------------------------------	-------------------------------------------------------

	1 x connection "Power/Synchronization output" 5-pin, M12 male connector 1 x Micro USB female connector, type B
<b>Operating voltage</b>	9 V DC ... 28 V DC
<b>Power consumption</b>	Typ. 4 W
<b>Housing color</b>	Gray (RAL 7032)
<b>Enclosure rating</b>	IP67 (IEC 60529:1989+AMD1:1999+AMD2:2013)
<b>Protection class</b>	III (IEC 61140:2016-1)
<b>Weight</b>	250 g, without connecting cables
<b>Dimensions (L x W x H)</b>	60 mm x 60 mm x 86 mm

#### Ambient data

<b>Object remission</b>	4 % ... > 1,000 % (reflectors)
<b>Electromagnetic compatibility (EMC)</b>	IEC 61000-6-3:2006+AMD1:2010 / IEC 61000-6-2:2005
<b>Vibration resistance</b>	IEC 60068-2-6:2007
<b>Shock resistance</b>	IEC 60068-2-27:2008
<b>Ambient operating temperature</b>	-25 °C ... +50 °C
<b>Storage temperature</b>	-40 °C ... +75 °C
<b>Ambient light immunity</b>	80,000 lx

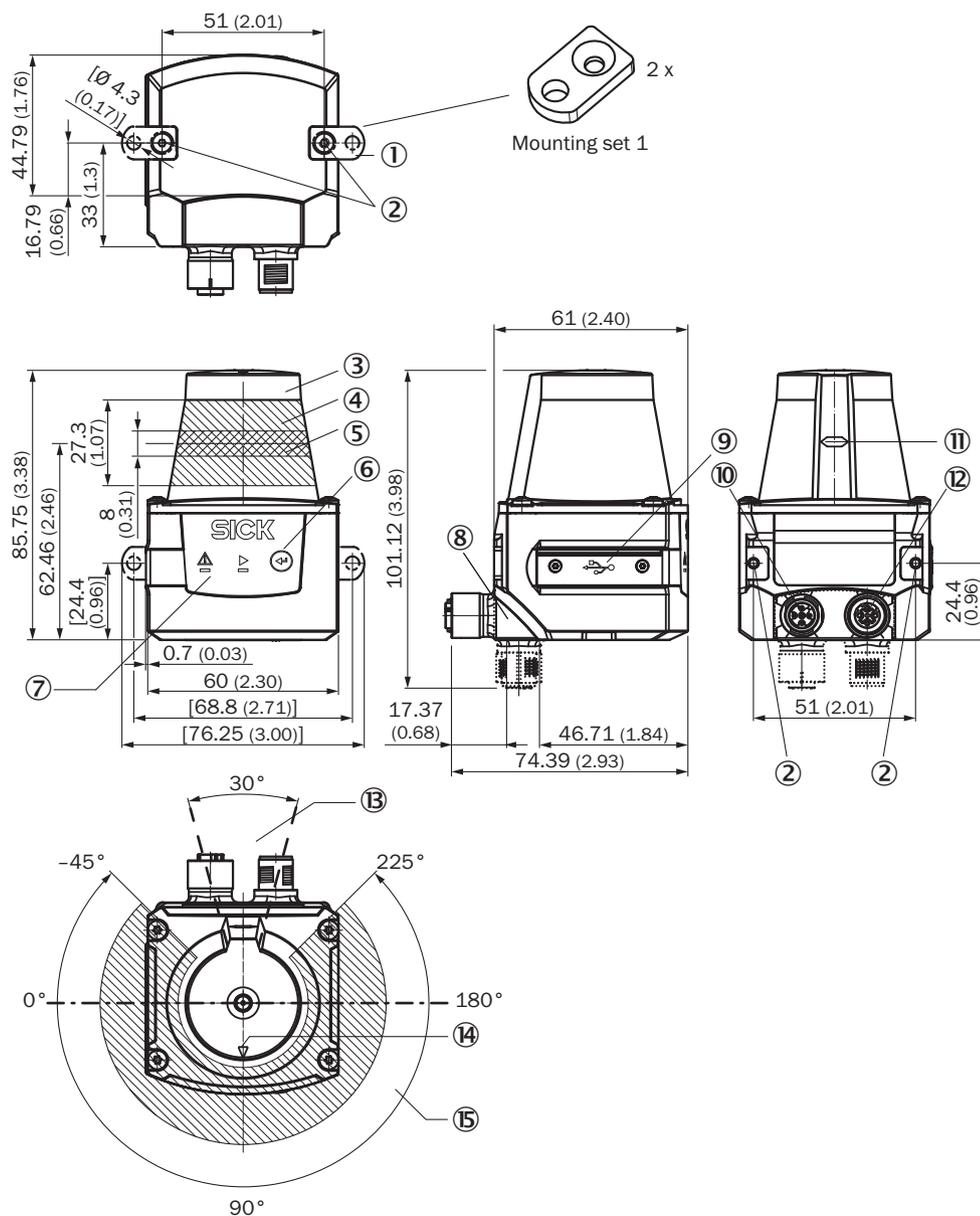
#### General notes

<b>Note on use</b>	The sensor does not constitute a safety component as defined by relevant legislation on machine safety.
--------------------	---------------------------------------------------------------------------------------------------------

#### Classifications

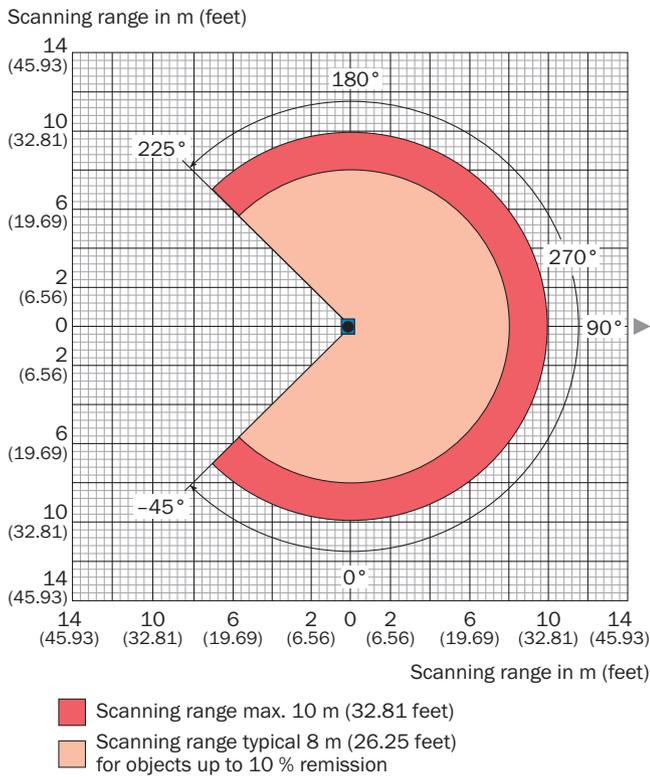
<b>ECl@ss 5.0</b>	27270990
<b>ECl@ss 5.1.4</b>	27270990
<b>ECl@ss 6.0</b>	27270913
<b>ECl@ss 6.2</b>	27270913
<b>ECl@ss 7.0</b>	27270913
<b>ECl@ss 8.0</b>	27270913
<b>ECl@ss 8.1</b>	27270913
<b>ECl@ss 9.0</b>	27270913
<b>ETIM 5.0</b>	EC002550
<b>ETIM 6.0</b>	EC002550
<b>UNSPSC 16.0901</b>	46171620

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



- ① 2 x straight plates with M3 x 4 mm screw (included in delivery)
- ② M3 threaded mounting hole, 2.8 mm deep (blind hole thread)
- ③ Optical hood
- ④ Receiving range (light inlet)
- ⑤ Transmission range (light emission)
- ⑥ Push-button (no function)
- ⑦ Red and green LED (status displays)
- ⑧ Swivel connector unit
- ⑨ Micro USB female connector, type B
- ⑩ Connection "Power/Synchronization output" 5-pin, M12 male connector
- ⑪ Marking for the position of the light emission level
- ⑫ "Ethernet" connection, 4-pin M12 female connector
- ⑬ Area in which no reflective surfaces are allowed for mounted devices
- ⑭ Bearing marking to support alignment (90° axis)
- ⑮ Aperture angle 270° (scanning angle)

## Operating range diagram



## Recommended accessories

Other models and accessories → [www.sick.com/TiM5xx](http://www.sick.com/TiM5xx)

	Brief description	Type	Part no.
<b>Mounting brackets and plates</b>			
	Mounting kit with sun shade/weather protection	Mounting kit	2068398
<b>Plug connectors and cables</b>			
	Head A: female connector, M12, 5-pin, straight, A-coding Head B: cable Cable: Power, shielded, 5 m	Connecting cable (female connector - open)	6036159
	Head A: male connector, M12, 4-pin, straight, D-coded Head B: male connector, RJ45, 8-pin, straight Cable: Ethernet, suitable for refrigeration, shielded, 5 m	Connection cable (male connector-male connector)	6050200

## 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](http://www.sick.com)