



# TiM240-2050300

TiM2xx

2D LIDAR SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
TiM240-2050300	1104981

Other models and accessories → [www.sick.com/TiM2xx](http://www.sick.com/TiM2xx)



### Detailed technical data

#### Features

<b>Measurement principle</b>	HDDM <sup>+</sup>
<b>Application</b>	Indoor
<b>Light source</b>	Infrared (850 nm)
<b>Laser class</b>	1 (IEC 60825-1:2014, EN 60825-1:2014)
<b>Aperture angle</b>	Horizontal 240°
<b>Scanning frequency</b>	14.5 Hz
<b>Angular resolution</b>	1°
<b>Working range</b>	0.05 m ... 10 m
<b>Scanning range</b>	At 10% remission 0.05 m ... 3 m, depending on the angle

#### Mechanics/electronics

<b>Connection type</b>	1 x "Ethernet" connection, 4-pin M12 female connector 1 x connection "Power", 12-pin, M12 male connector
<b>Supply voltage</b>	10 V DC ... 28 V DC
<b>Power consumption</b>	Typ. 2.9 W
<b>Housing color</b>	Light blue (RAL 5012)
<b>Enclosure rating</b>	IP65 (IEC 60529:1989+AMD1:1999+AMD2:2013)
<b>Protection class</b>	III (IEC 61140:2016-1)
<b>Weight</b>	150 g, without connecting cables
<b>Dimensions (L x W x H)</b>	60 mm x 60 mm x 75.8 mm

#### Performance

<b>Response time</b>	Typ. 70 ms
<b>Detectable object shape</b>	Almost any
<b>Systematic error</b>	± 40 mm <sup>1)</sup>

<sup>1)</sup> Typical value; actual value depends on environmental conditions.

<b>Statistical error</b>	30 mm <sup>1)</sup>
<b>Integrated application</b>	Output of measurement data

<sup>1)</sup> Typical value; actual value depends on environmental conditions.

## Interfaces

<b>Ethernet</b>	✓, TCP/IP
Function	Parameterization
<b>Digital inputs</b>	0
<b>Digital outputs</b>	1 (Push-pull, "Device Ready")
<b>Optical indicators</b>	2 LEDs ("device ready")

## 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>	
Sine resonance scan	10 Hz ... 1,000 Hz <sup>1)</sup>
Sine test	10 Hz ... 150 Hz, 5 g, 20 frequency cycles <sup>1)</sup>
Noise test	10 Hz ... 1,000 Hz, 3.38 g RMS, 8 h <sup>2)</sup>
<b>Shock resistance</b>	10 g, 16 ms, ± 1,000 continuous shocks/axis <sup>3)</sup> 15 g, 11 ms, ± 3 single shocks/axis <sup>3)</sup>
<b>Ambient operating temperature</b>	-10 °C ... +50 °C
<b>Storage temperature</b>	-30 °C ... +70 °C
<b>Ambient light immunity</b>	30,000 lx

<sup>1)</sup> IEC 60068-2-6:2007.

<sup>2)</sup> IEC 60068-2-64:2008.

<sup>3)</sup> IEC 60068-2-27:2008.

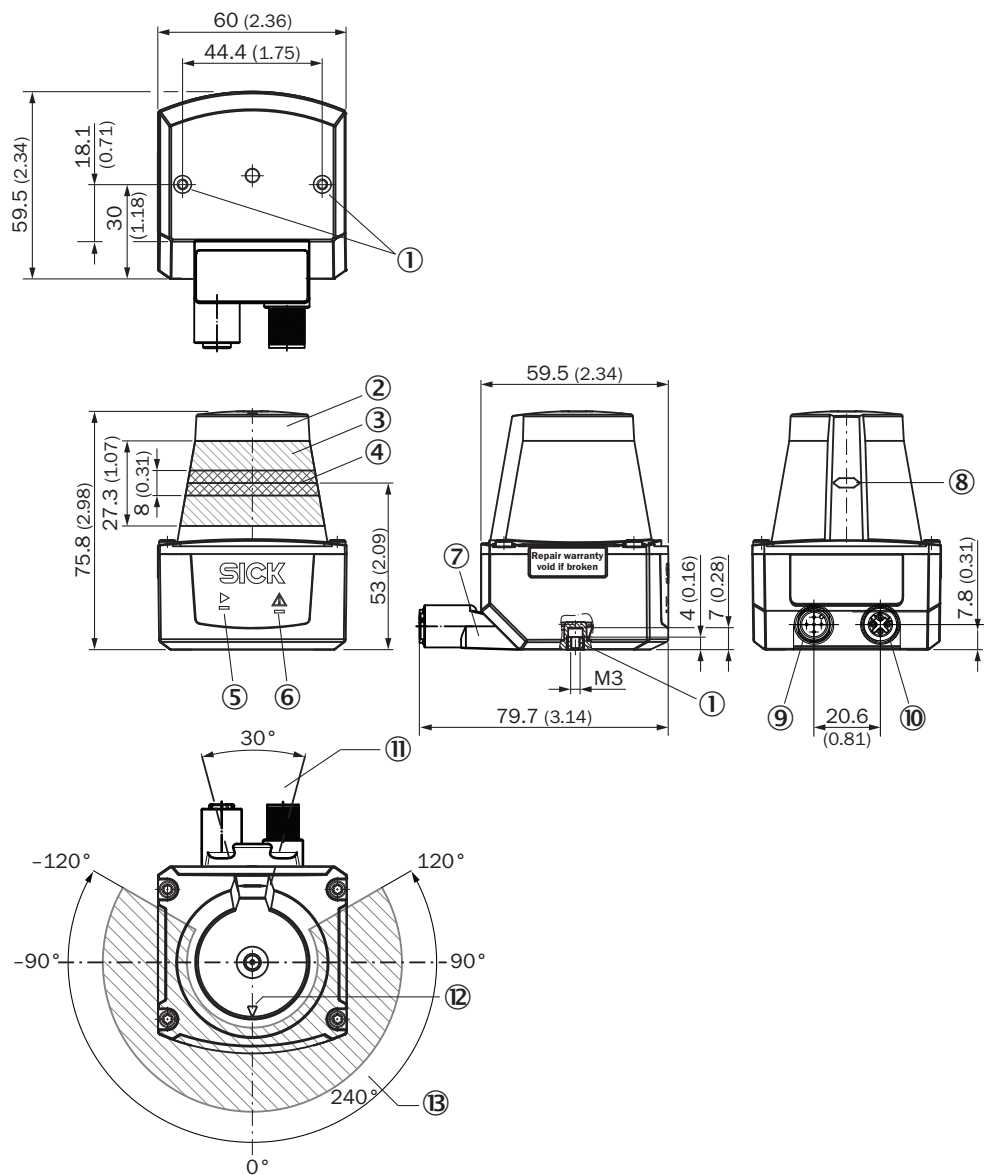
## General notes

<b>Note on use</b>	The sensor does not constitute a safety component as defined by relevant legislation on machine safety.
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## 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>ECl@ss 10.0</b>	27270913
<b>ECl@ss 11.0</b>	27270913
<b>ETIM 5.0</b>	EC002550
<b>ETIM 6.0</b>	EC002550
<b>ETIM 7.0</b>	EC002550




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



- ① M3 threaded mounting hole, 2.8 mm deep (blind hole thread), max. tightening torque 0.7 Nm
- ② Optical hood
- ③ Receiving range (light inlet)
- ④ Transmission range (light emission)
- ⑤ Green LED
- ⑥ Red LED
- ⑦ Swivel connector unit with electrical connections (9) and (10)
- ⑧ Marking for the position of the light emission level
- ⑨ Connection "Power/Synchronization output" 5-pin, M12 male connector
- ⑩ "Ethernet" connection, 4-pin M12 female connector
- ⑪ Area in which no reflective surfaces are allowed for mounted devices
- ⑫ Bearing marking to support alignment (0° axis)
- ⑬ 240° aperture angle (visual range)

## Recommended accessories

Other models and accessories → [www.sick.com/TiM2xx](http://www.sick.com/TiM2xx)

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting kit	Mounting kit	2082188
Plug connectors and cables			
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Power, shielded, 5 m	YF2A64-050XXXXLEAX	6036159
	Head A: male connector, M12, 4-pin, straight, D-coded Head B: male connector, RJ45, 8-pin, straight Cable: Ethernet, twisted pair, PUR, halogen-free, shielded, 5 m	YM2D24-050EA1MRJA4	6034415

## Recommended services

Additional services → [www.sick.com/TiM2xx](http://www.sick.com/TiM2xx)

	Type	Part no.
Warranty extensions		
<ul style="list-style-type: none"> <li><b>Product area:</b> Identification solutions, machine vision, Distance sensors, Detection and ranging solutions</li> <li><b>Range of services:</b> The services correspond to the scope of the statutory manufacturer warranty (SICK general terms and conditions of purchase)</li> <li><b>Duration:</b> Five-year warranty from delivery date.</li> </ul>	Extended warranty for a total of five years from delivery date	1680671
Product, system, and software training		
<ul style="list-style-type: none"> <li><b>Range of services:</b> The training contents relate to the following 2D and 3D LiDAR sensors: LMS series, MRS1000, MRS6000, NAV series or TiM series, Training format and location can be worked out in collaboration with SICK</li> </ul>	Training LMS/MRS/NAV/TiM	1612234
Commissioning		
<ul style="list-style-type: none"> <li><b>Product area:</b> 2D LiDAR sensors, 3D LiDAR sensors</li> <li><b>Range of services:</b> Inspection of connection, fine adjustment, configuration of monitored areas, configuration and optimization of parameters of the LMS/MRS/NAV/TiM as well as tests, Setup of previously defined functions of basic settings, parameters of field application, filters for raw data output and product-specific configuration</li> <li><b>Travel expenses:</b> The prices do not include travel costs such as hotel, flight, travel time and expenses.</li> <li><b>Duration:</b> Additional work will be invoiced separately</li> </ul>	Commissioning LMS/MRS/NAV/TiM (Prime package)	1680672
Maintenance		
<ul style="list-style-type: none"> <li><b>Product area:</b> 2D LiDAR sensors, 3D LiDAR sensors</li> <li><b>Range of services:</b> Inspection, analysis and restoring of defined functions, Inspection and adaptation of basic settings, parameters of field application, filters for raw data output, and product-specific configuration</li> <li><b>Travel expenses:</b> The prices do not include travel costs such as hotel, flight, travel time and expenses.</li> <li><b>Duration:</b> Additional work will be invoiced separately</li> </ul>	Maintenance LMS/MRS/NAV/TiM	1682593

## 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)