



TIM351-2134001

TiM3xx

2D LIDAR SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
TIM351-2134001	1067299

Other models and accessories → www.sick.com/TiM3xx



Detailed technical data

Features

Measurement principle	HDDM
Application	Outdoor
Light source	Infrared (850 nm)
Laser class	1 (IEC 60825-1:2014) EN 60825-1:2014
Aperture angle	
Horizontal	270°
Scanning frequency	15 Hz
Angular resolution	1°
Working range	0.05 m ... 10 m
Scanning range	
At 10% remission	8 m

Mechanics/electronics

Electrical connection	1 x "Ethernet" connection, 4-pin M12 female connector 1 x connection "Power", 12-pin, M12 male connector 1 x Micro USB female connector, type B
Supply voltage	9 V DC ... 28 V DC
Power consumption	Typ. 4 W, 16 W with 4 max. loaded digital outputs
Housing color	Gray (RAL 7032)
Enclosure rating	IP67 (IEC 60529:1989+AMD1:1999+AMD2:2013)
Protection class	III (IEC 61140:2016-1)
Weight	250 g, without connecting cables
Dimensions (L x W x H)	60 mm x 60 mm x 86 mm

Performance

Response time	1 scan, typ. 67 ms 2 scans, ≤ 134 ms
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¹⁾ Typical value; actual value depends on environmental conditions.

Detectable object shape	Almost any
Systematic error	$\pm 60 \text{ mm}^{1)}$
Statistical error	$20 \text{ mm}^{1)}$
Integrated application	Field evaluation with flexible fields
Number of field sets	16 field triples (48 fields, Contour as reference; 1 triple (3 flexible fields) can be configured directly at the scanner)
Simultaneous evaluation cases	1 (3 fields) 2 (2 fields for detection and 1 field for contour as reference)

¹⁾ Typical value; actual value depends on environmental conditions.

Interfaces

Ethernet	✓, TCP/IP
USB	✓
Remark	Micro USB
Function	AUX, parameterization
Digital inputs	4
Digital outputs	3 (PNP, additional 1 x "Device Ready")
Delay time	67 ms ... 30,000 ms (configurable)
Dwell time	67 ms ... 10,000 ms (configurable)
Optical indicators	2 LEDs (ON, switching status)

Ambient data

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

General notes

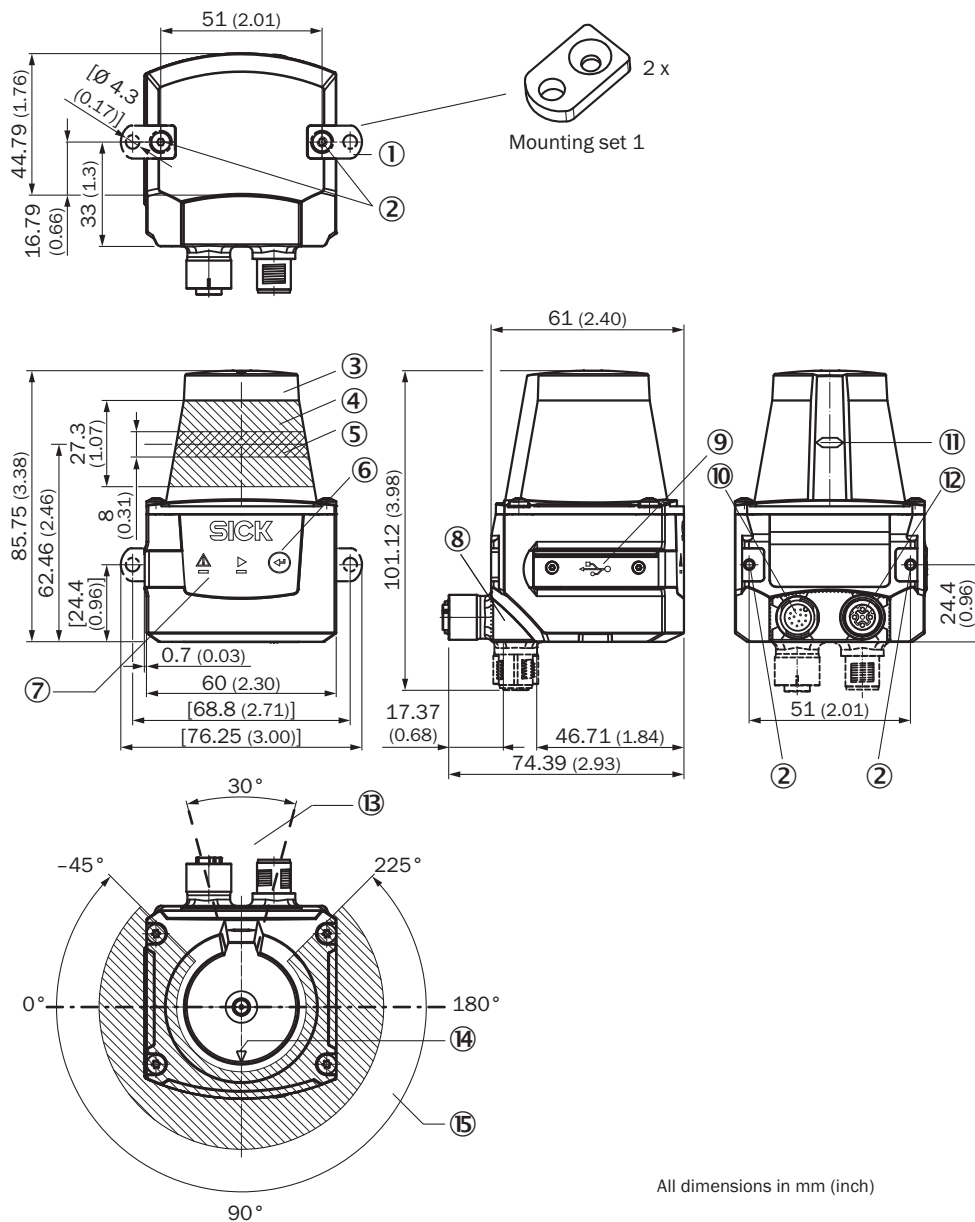
Note on use	The sensor does not constitute a safety component as defined by relevant legislation on machine safety.
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Classifications

ECI@ss 5.0	27270990
ECI@ss 5.1.4	27270990
ECI@ss 6.0	27270913
ECI@ss 6.2	27270913
ECI@ss 7.0	27270913
ECI@ss 8.0	27270913
ECI@ss 8.1	27270913
ECI@ss 9.0	27270913
ETIM 5.0	EC002550
ETIM 6.0	EC002550

UNSPSC 16.0901	46171620
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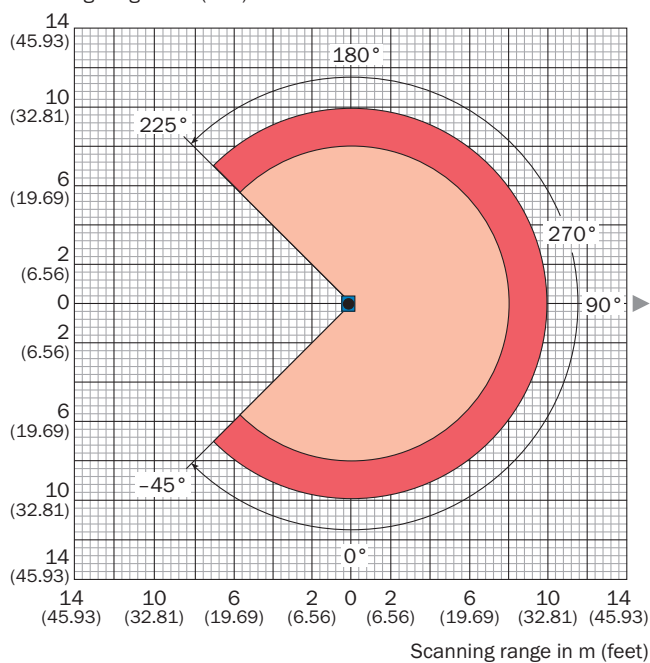
Dimensional drawing (Dimensions in mm (inch))



- 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 Function button for teach-in
- ⑦ Red and green LED (status displays)
- ⑧ Swivel connector unit
- ⑨ Micro USB female connector, type B
- ⑩ Connection "Power", 12-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)

Working range diagram

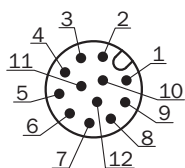
Scanning range in m (feet)



- Scanning range max. 10 m (32.81 feet)
- Scanning range typical 8 m (26.25 feet)
for objects up to 10 % remission

PIN assignment




Power I/O connection



- ① GND
- ② DC 9 V ... 28 V
- ③ In₁
- ④ In₂
- ⑤ OUT1
- ⑥ OUT2
- ⑦ OUT3
- ⑧ OUT4
- ⑨ PNP: INGND, NPN: IN 9 V ... 28 V
- ⑩ In₃
- ⑪ In₄
- ⑫ nc

Recommended accessories

Other models and accessories → www.sick.com/TiM3xx

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting kit, Anodized aluminum	Mounting kit	2086761
	Mounting kit with shock absorber, Anodized aluminum	Mounting kit	2086074
Plug connectors and cables			
	Head A: female connector, M12, 12-pin, straight, A-coded Head B: Flying leads Cable: Power, I/O, PUR, shielded, 5 m	YF2A6B-050UD3XLEAX	6054974

Recommended services

Additional services → www.sick.com/TiM3xx

	Type	Part no.
Warranty extensions		
<ul style="list-style-type: none"> • Product area: Identification solutions, Vision, Distance sensors, Detection and ranging solutions • Range of services: The services correspond to the scope of the statutory manufacturer warranty (SICK general terms and conditions of purchase), Long-term protection for calculable lump sum. • Duration: Five-year warranty from date of purchase. 	Five-year extended warranty	1680671
Training		
<ul style="list-style-type: none"> • Product family group: 2D LiDAR sensors, 3D LiDAR sensors • Range of services: 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 • Note: A minimum and maximum number of participants is determined based on the training format, depending on the training format, content and location, a training course may take place over the course of one or more work days • Duration: The fixed price includes the specific training services agreed upon, the fixed price includes the work time required for the training services and depends on the range of services, Additional work will be invoiced separately • Travel expenses: The prices include costs for the travel time and expenses, travel costs, such as flight or hotel expenses, are not included 	Training LMS/MRS/NAV/TiM	1612234
Commissioning		
<ul style="list-style-type: none"> • Product area: 2D LiDAR sensors, 3D LiDAR sensors • Range of services: Inspection of connection, fine adjustment, configuration of monitored areas, configuration and optimization of parameters of the LMS/MRS/NAV/TiM as well as verification tests, Setup of previously defined functions of basic settings, parameters of field application, filters for raw data output and product-specific configuration • Documentation: Archiving of product parameters in a SICK database, Documentation of performance, Creation of a commissioning log • Duration: Additional work will be invoiced separately • Note: The prices do not include expenses or costs for the travel time 	Commissioning LMS/MRS/NAV/TiM (Prime package)	1680672

	Type	Part no.
Maintenance		
<ul style="list-style-type: none">• Product area: 2D LiDAR sensors, 3D LiDAR sensors• Range of services: 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• Documentation: Documentation of operating hours and archiving of parameters in a SICK database, Creation of a maintenance log• Duration: Additional work will be invoiced separately• Note: The prices do not include expenses or costs for the travel time	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