



TIM781-2174101

TiM7xx

2D LIDAR SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
TIM781-2174101	1096807

Other models and accessories → www.sick.com/TiM7xx



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	0.33°
Working range	0.05 m ... 25 m
Scanning range	At 10% remission 8 m

Performance

Response time	1 scan, typ. 67 ms 2 scans, ≤ 134 ms
Detectable object shape	Almost any
Systematic error	± 60 mm ¹⁾
Statistical error	20 mm ¹⁾
Integrated application	Field evaluation with flexible fields, output of measurement data
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	3 simultaneous fields (per field set)

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

Interfaces

Ethernet	✓, TCP/IP
USB	✓
Remark	Micro USB

	Function	Parameterization
Switching inputs		4 (PNP, for field set switching)
Switching 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, "device ready")

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	16 W, With 4 max. loaded switching 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

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

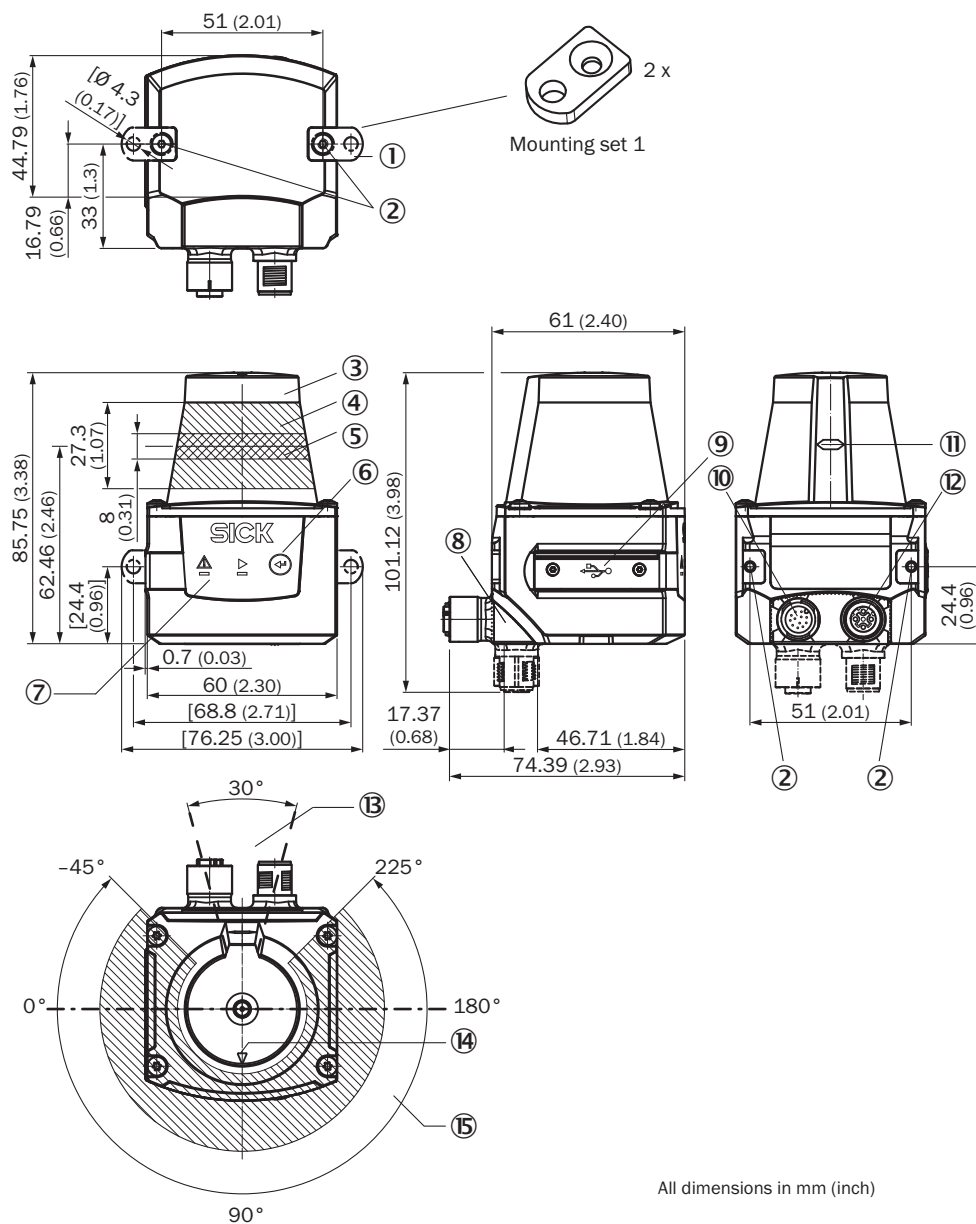
General notes

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

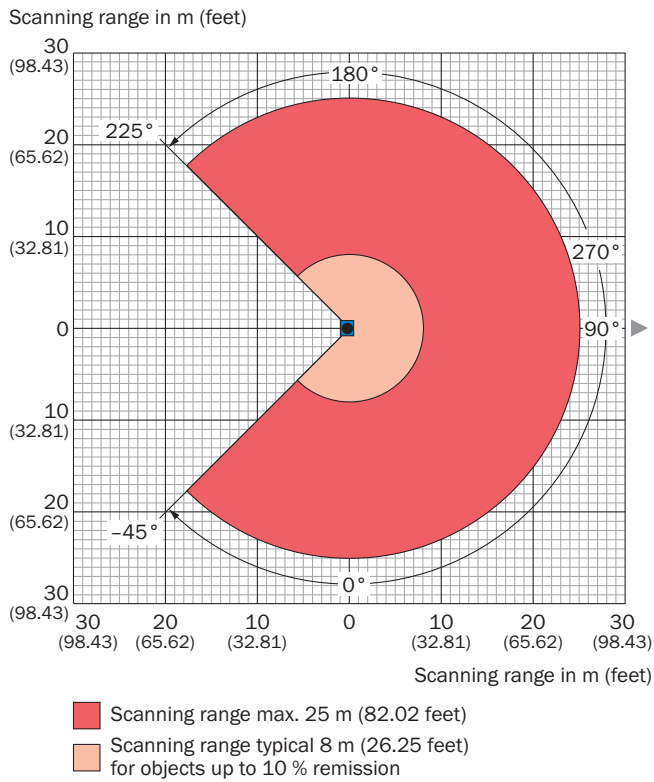
ECl@ss 5.0	27270990
ECl@ss 5.1.4	27270990
ECl@ss 6.0	27270913
ECl@ss 6.2	27270913
ECl@ss 7.0	27270913
ECl@ss 8.0	27270913
ECl@ss 8.1	27270913
ECl@ss 9.0	27270913
ETIM 5.0	EC002550
ETIM 6.0	EC002550
UNSPSC 16.0901	46171620

Dimensional drawing (Dimensions in mm (inch))






All dimensions in mm (inch)

Working range diagram



Recommended accessories

Other models and accessories → www.sick.com/TiM7xx

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting kit with sun shade/weather protection	Mounting kit	2068398
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	Connecting cable (female connector - open)	6054974
	Head A: male connector, M12, 4-pin, straight, D-coded Head B: male connector, RJ45, 8-pin, straight Cable: Ethernet, 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