



NAV245-10100S01

NAV2xx

2D LIDAR SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
NAV245-10100S01	1090559

Other models and accessories → www.sick.com/NAV2xx



Detailed technical data

Features

Task	Localizing, navigating and guiding - Localizing Determining position - 2D position determination	
Application	Indoor	
Light source	Laser diode (905 nm)	
Laser class	1 (IEC 60825-1:2014, EN 60825-1:2014)	
Aperture angle	Horizontal	270°
Scanning frequency	≥ 25 Hz	
Angular resolution	0.001°, on reflectors 0.25°, on raw / contour data	
Working range	0.5 m ... 50 m (30 m on reflectors)	
Scanning range	At 10% remission factor	18 m
	At 90% remission factor	50 m

Mechanics/electronics

Connection type	2 x M12 male connector/female connector
Supply voltage	10.8 V DC ... 30 V DC
Power consumption	Typ. 8 W, heating typ. 35 W
Housing material	Aluminum die cast
Housing color	Light blue (RAL 5012)
Enclosure rating	IP65 (EN 60529/A1 (2002-02))
Protection class	III (EN 61140 (2002-03))
Weight	1.1 kg
Dimensions (L x W x H)	124.9 mm x 102 mm x 152 mm
MTBF	> 100 years

Safety-related parameters

MTTF_D	> 100 years
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Performance

Systematic error	Typ. ± 10 mm (RDI) Typ. ± 30 mm (Contour)
Statistical error	Typ. 8 mm (RDI) ¹⁾ Typ. 12 mm (Contour) ¹⁾
Temperature drift	Typ. 0.1 mm/K

¹⁾ 1 sigma.

Interfaces

Ethernet	✓, TCP/IP Function Data transmission rate	Data interface (read result output) 10/100 MBit/s
Serial	✓, RS-232 Function Data transmission rate	Data interface (read result output), Service interface 9.6 kBaud ... 115.2 kBaud
Optical indicators	4 LED	

Ambient data

Electromagnetic compatibility (EMC)	EN 61000-6-2:2005-08 / EN 61000-6-4 (2007-01)
Vibration resistance	EN 60068-2-6 (1995-04)
Ambient operating temperature	-30 °C ... +50 °C
Storage temperature	-30 °C ... +70 °C
Permissible relative humidity	≤ 85 %, Non-condensing

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

ECLASS 5.0	27270990
ECLASS 5.1.4	27270990
ECLASS 6.0	27270913
ECLASS 6.2	27270913
ECLASS 7.0	27270913
ECLASS 8.0	27270913
ECLASS 8.1	27270913
ECLASS 9.0	27270913
ECLASS 10.0	27270913
ECLASS 11.0	27270913
ECLASS 12.0	27270913
ETIM 5.0	EC002550
ETIM 6.0	EC002550
ETIM 7.0	EC002550

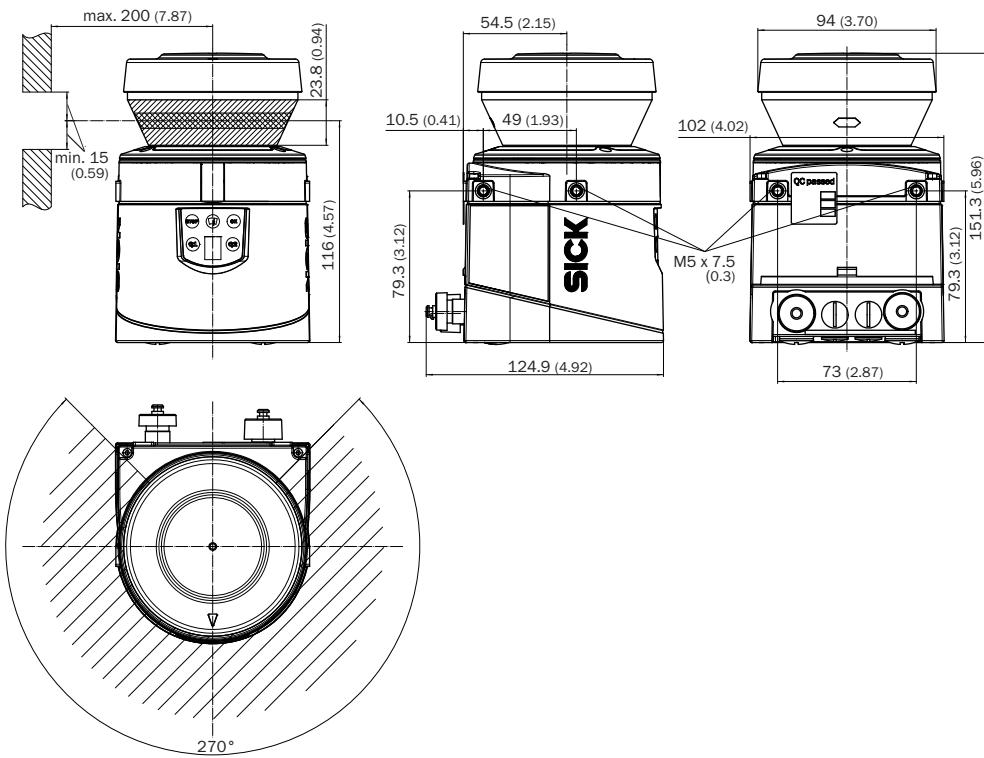
ETIM 8.0

EC002550

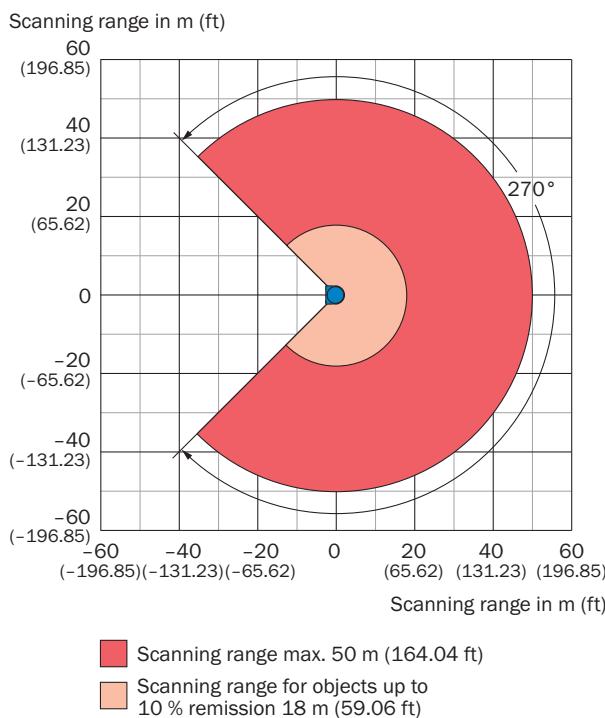
UNSPSC 16.0901

41111615

Dimensional drawing (Dimensions in mm (inch))



Working range diagram



Recommended accessories

Other models and accessories → www.sick.com/NAV2xx

	Brief description	Type	Part no.
Mounting brackets and plates			
	1 piece, mounting bracket for rear mounting on wall or machine	Mounting kit 1a	2034324
	1 piece, mounting bracket for rear mounting on wall or machine with protection of optics hood	Mounting kit 1b	2034325
	1 piece, mounting bracket, adjustable lateral axis, only in conjunction with mounting kit 1a (2034324) or 1b (2034325)	Mounting kit 2	2039302
	1 piece, mounting plate, adjustable longitudinal axis, only in conjunction with mounting kit 2 (2039302)	Mounting kit 3	2039303
Others			
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 8-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 8-wire, PUR, halogen-free Description: Sensor/actuator cable, shielded Application: Zones with oils and lubricants, Drag chain operation 	YF2A28-050UA6XLEAX	2095835

	Brief description	Type	Part no.
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, straight, D-coded Connection type head B: Male connector, RJ45, 4-pin, straight Signal type: Ethernet, PROFINET Cable: 5 m, 4-wire, PUR, halogen-free Description: Ethernet, PROFINET, shielded Application: Drag chain operation, Zones with oils and lubricants 	YM2D24-050PN1MRJA4	2106184

Recommended services

Additional services → www.sick.com/NAV2xx

	Type	Part no.
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 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 Duration: Additional work will be invoiced separately 	Commissioning LiDAR sensors	1680672
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 Duration: Additional work will be invoiced separately 	Maintenance of LiDAR sensors	1682593
Extended warranty		
<ul style="list-style-type: none"> Product area: Machine vision, LiDAR sensors, safety camera sensors, Safety laser scanners, Safety radar sensors, Radar sensors, Fixed mount barcode scanners, Image-based code readers, RFID, Mobile handheld scanners Range of services: The services correspond to the scope of the statutory manufacturer warranty (SICK general terms of delivery). Duration: Five-year warranty from delivery date. 	Extended warranty for a total of five years from delivery date	1680671

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