



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

Application	Indoor
Light source	Laser diode (905 nm)
Laser class	1 (IEC 60825-1:2014, EN 60825-1:2014+A11:2021)
Aperture angle	Horizontal 270°
Scanning frequency	≥ 25 Hz
Angular resolution	Horizontal 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
MTTFd	> 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 σ .

Interfaces

Ethernet	✓, TCP/IP
Function	Data interface (read result output)
Data transmission rate	10/100 MBit/s
Serial	✓, RS-232
Function	Data interface (read result output), Service interface
Data transmission rate	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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Certificates

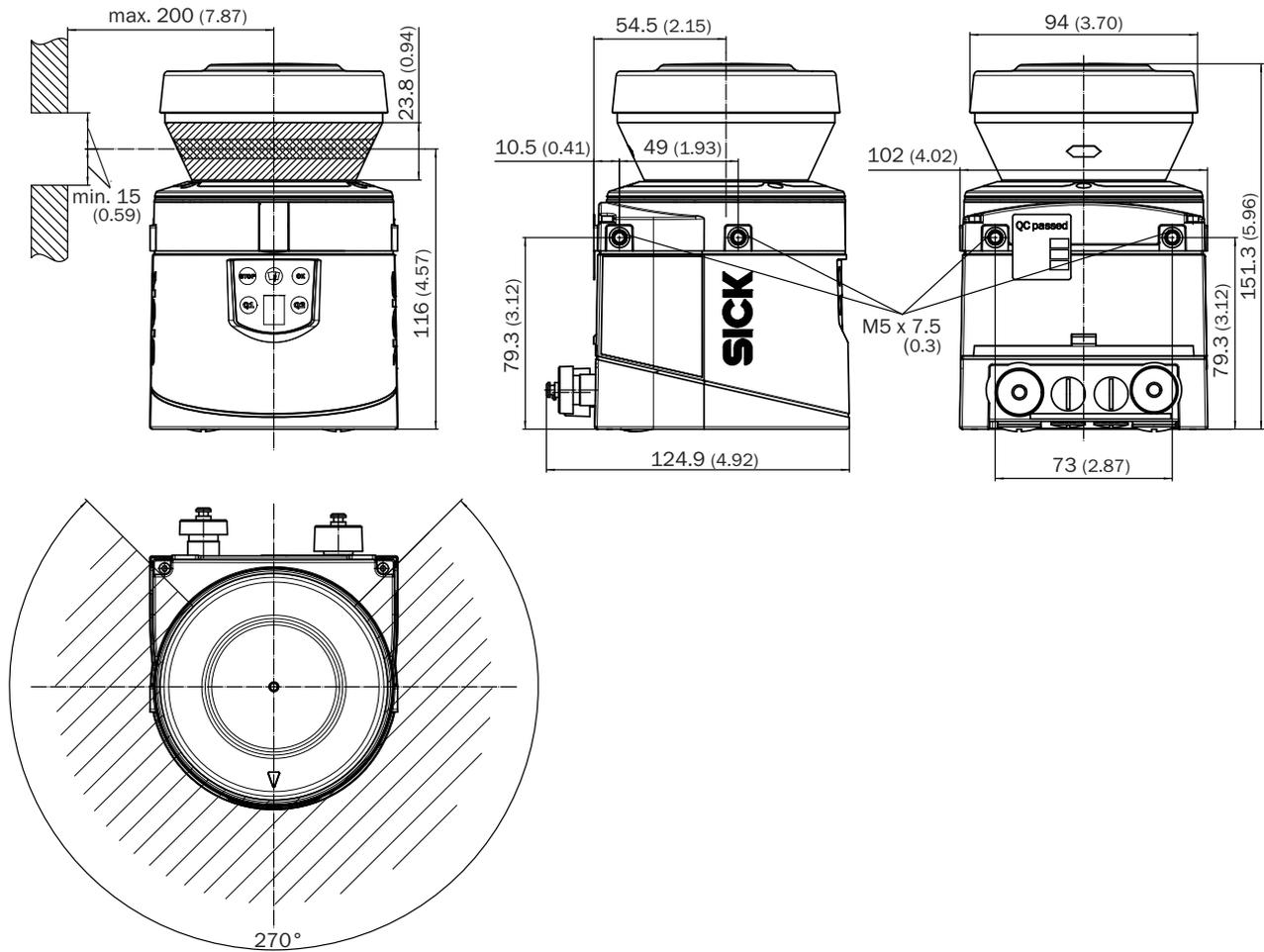
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
China RoHS	✓
cTUVus certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

Classifications

ECLASS 5.0	27270990
ECLASS 5.1.4	27270990
ECLASS 6.0	27270913
ECLASS 6.2	27270913
ECLASS 7.0	27270913

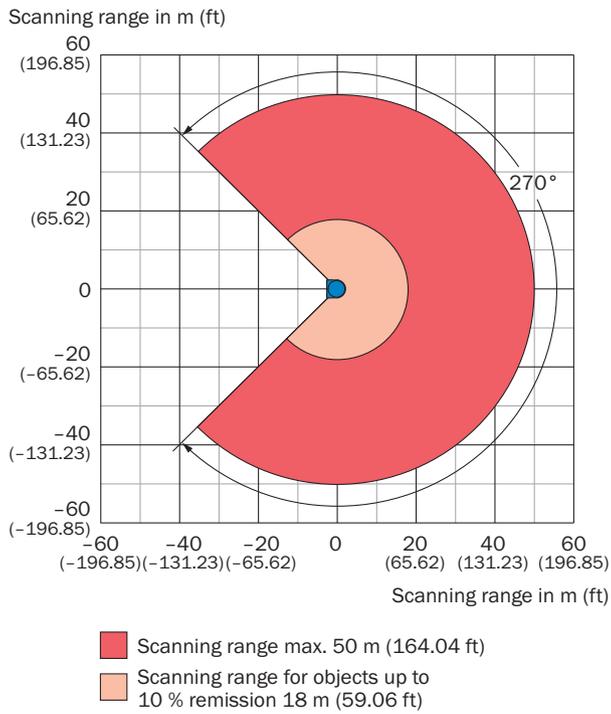
ECLASS 8.0	27270913
ECLASS 8.1	27270913
ECLASS 9.0	27270913
ECLASS 10.0	27270913
ECLASS 11.0	27270913
ECLASS 12.0	27270913
ETIM 5.0	EC002550
ETIM 6.0	EC002550
ETIM 7.0	EC002550
ETIM 8.0	EC002550
UNSPSC 16.0901	41111615

Dimensional drawing



Dimensions in mm (inch)

Working range diagram



Recommended accessories

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

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, shielded 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 Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A28-050UA6XLEAX	2095835
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, shielded Connection type head A: Female connector, M12, 8-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 8-wire, PUR, halogen-free Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A28-C60UA6XLEAX	2145470
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, shielded Connection type head A: Female connector, M12, 8-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 1 m, 8-wire, PUR, halogen-free Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A28-010UA6XLEAX	2145471
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, shielded Connection type head A: Female connector, M12, 8-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 8-wire, PUR, halogen-free Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A28-020UA6XLEAX	2145472
	<ul style="list-style-type: none"> Description: Sensor/actuator cable, shielded Connection type head A: Female connector, M12, 8-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 3 m, 8-wire, PUR, halogen-free Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A28-030UA6XLEAX	2145473
	<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, shielded, PROFINET Application: Drag chain operation, Zones with oils and lubricants 	YM2D24-050P-N1MRJA4	2106184
Mounting systems			
	<ul style="list-style-type: none"> Description: Mounting plate, adjustable longitudinal axis, only in conjunction with mounting kit 2 (2039302) Material: Anodized aluminum Details: AlMg3, black anodized Packing unit: 1 piece Items supplied: Mounting plate, 2 x countersunk screws with washers M4 x 10, 2 x spring washer 	Mounting kit 3	2039303
	<ul style="list-style-type: none"> Description: Mounting bracket for rear mounting on wall or machine with protection of optics hood Material: Anodized aluminum Details: AlMg3, black anodized Packing unit: 1 piece Items supplied: Mounting bracket, 4 x M5 x 10 countersunk screws 	Mounting kit 1b	2034325
	<ul style="list-style-type: none"> Description: Mounting bracket, adjustable lateral axis, only in conjunction with mounting kit 1a (2034324) or 1b (2034325) Material: Anodized aluminum Details: AlMg3, black anodized Packing unit: 1 piece Items supplied: Mounting bracket, 4 x countersunk screws with washers M4 x 10, 4 x spring washer 	Mounting kit 2	2039302
	<ul style="list-style-type: none"> Description: Mounting bracket for rear mounting on wall or machine Material: Anodized aluminum Details: AlMg3, black anodized Packing unit: 1 piece Items supplied: Mounting bracket, 4 x M5 x 10 countersunk screws 	Mounting kit 1a	2034324

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.”

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