NAV245-10100S01

NAV2xx

2D LIDAR SENSORS

SICK
Sensor Intelligence.

NAV245-10100S01 | NAV2xx

2D LIDAR SENSORS

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

Safety-related parameters

$MTTF_D$	> 100 years

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.

Certificates

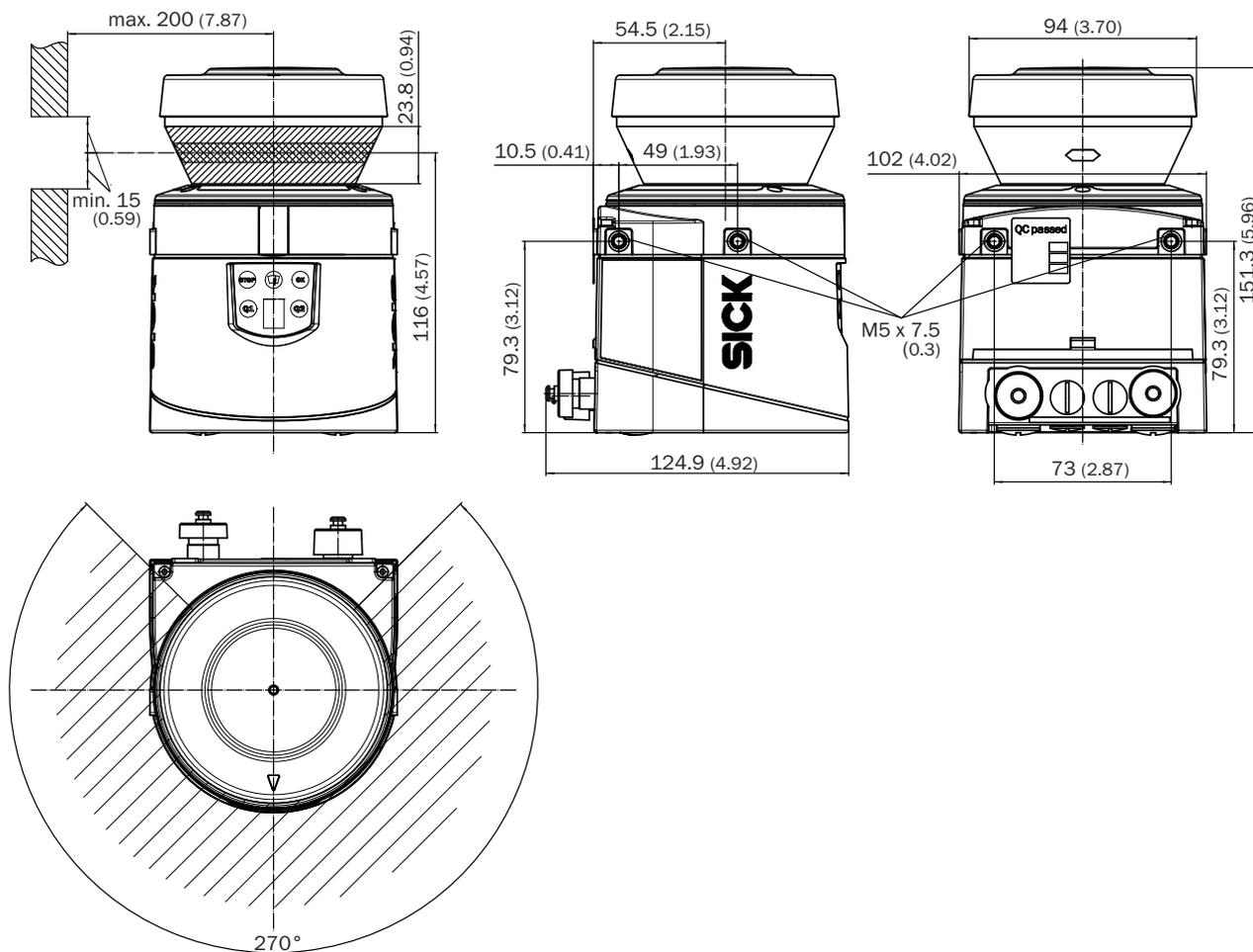|	
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
China RoHS	✓
cTUVus certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

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

Scanning range in m (ft)

Scanning range in m (ft)

■ Scanning range max. 50 m (164.04 ft)
■ Scanning range for objects up to
10 % remission 18 m (59.06 ft)
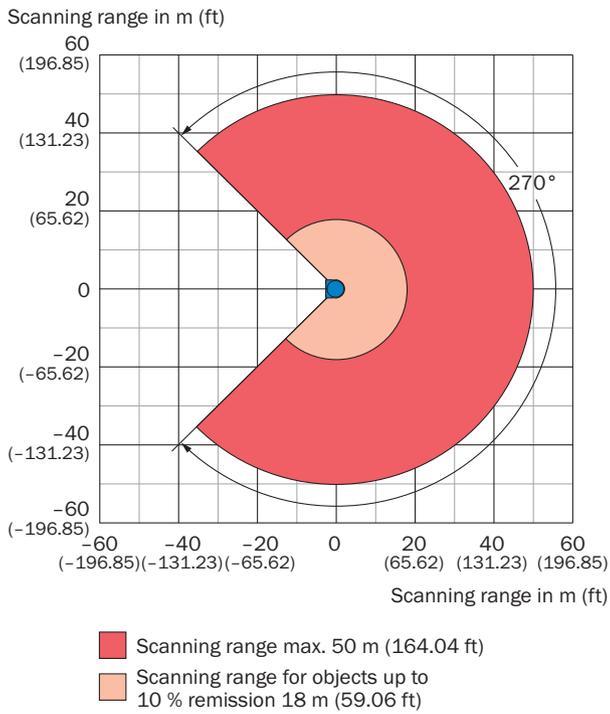
Recommended accessories

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

	Brief description	Type	part no.
connectors and cables			
	• **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:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A28-050UA6XLEAX	2095835
	• **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 • **Description:** Sensor/actuator cable, shielded • **Application:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A28-C60UA6XLEAX	2145470
	• **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 • **Description:** Sensor/actuator cable, shielded • **Application:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A28-010UA6XLEAX	2145471
	• **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 • **Description:** Sensor/actuator cable, shielded • **Application:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A28-020UA6XLEAX	2145472
	• **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 • **Description:** Sensor/actuator cable, shielded • **Application:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A28-030UA6XLEAX	2145473
	• **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			
	• **Description:** Mounting plate, adjustable longitudinal axis, only in conjunction with mounting kit 2 (2039302) • **Packing unit:** 1 piece	Mounting kit 3	2039303
	• **Description:** Mounting bracket for rear mounting on wall or machine with protection of optics hood • **Packing unit:** 1 piece	Mounting kit 1b	2034325
	• **Description:** Mounting bracket, adjustable lateral axis, only in conjunction with mounting kit 1a (2034324) or 1b (2034325) • **Packing unit:** 1 piece	Mounting kit 2	2039302
	• **Description:** Mounting bracket for rear mounting on wall or machine • **Packing unit:** 1 piece	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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