



# NAV310-3211

NAV3xx

2D LASER SCANNERS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
NAV310-3211	1060834

Other models and accessories → [www.sick.com/NAV3xx](http://www.sick.com/NAV3xx)



### Detailed technical data

#### Features

<b>Version</b>	Long Range
<b>Field of application</b>	Indoor
<b>Light source</b>	905 nm
<b>Laser class</b>	1, eye-safe
<b>Aperture angle</b>	360°
<b>Scanning frequency</b>	5 Hz ... 20 Hz
<b>Angular resolution</b>	0.125°, 1.875°, 0.25°, 0.375°, 0.5°, 0.75°, 1°, interlaced: 0.0625°
<b>Operating range</b>	0.5 m ... 250 m
<b>Max. range with 10 % reflectivity</b>	35 m

#### Performance

<b>Detectable object shape</b>	Almost any
<b>Systematic error</b>	± 10 mm <sup>1)</sup>
<b>Statistical error</b>	15 mm <sup>1)</sup>

<sup>1)</sup> Actual value depends on environmental conditions.

#### Interfaces

<b>Serial (RS-232)</b>		✓
	Data transmission rate	19.2 kBaud ... 115 kBaud
<b>Ethernet</b>		✓
	Data transmission rate	100 Mbit/s
	Protocol	TCP/IP
<b>Switching outputs</b>		1 (digital)
<b>Optical indicators</b>		4 LEDs (status displays)

#### Mechanics/electronics

<b>Electrical connection</b>	3 x M12 male connector/female connector
<b>Operating voltage</b>	24 V DC, ± 15 %

<b>Power consumption</b>	36 W
<b>Housing</b>	Aluminum die cast
<b>Housing color</b>	Light blue (RAL 5012)
<b>Enclosure rating</b>	IP 65
<b>Protection class</b>	III
<b>Weight</b>	2.4 kg
<b>Dimensions (L x W x H)</b>	115 mm x 120.5 mm x 222 mm

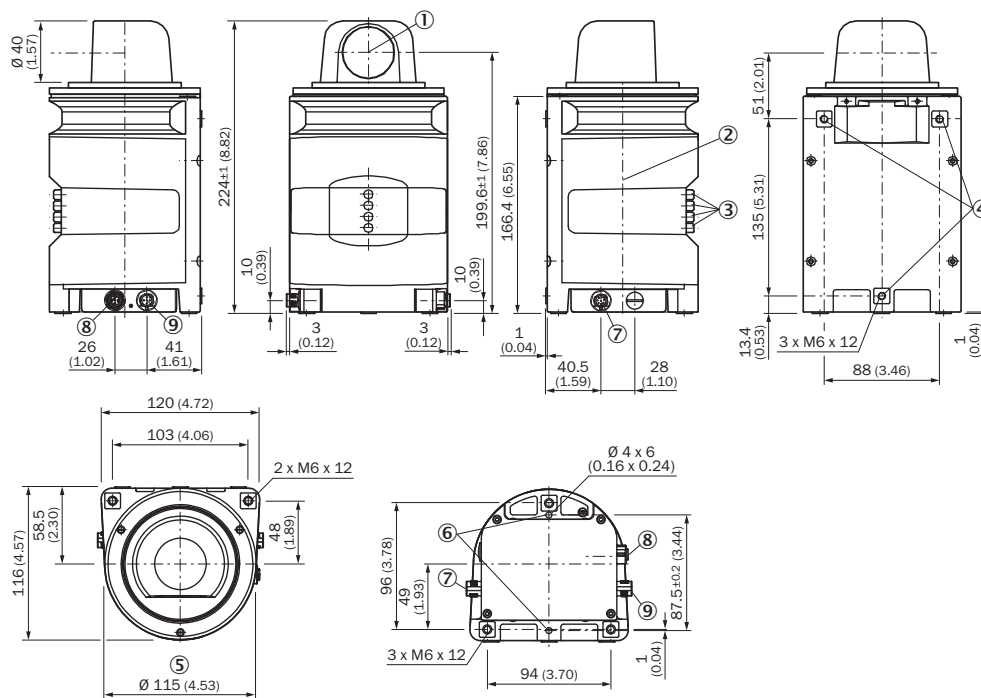
Ambient data

<b>Ambient operating temperature</b>	0 °C ... +50 °C
<b>Storage temperature</b>	-20 °C ... +80 °C
<b>Permissible relative humidity</b>	85 %, Non-condensing

General notes

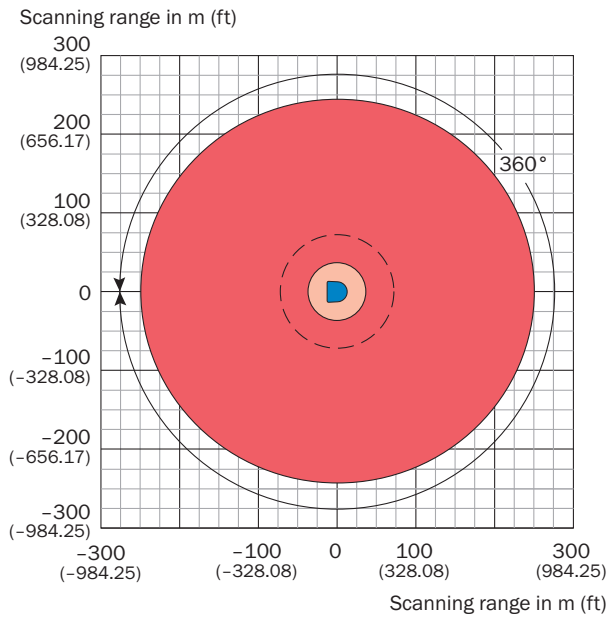
<b>Note on use</b>	Not suitable for personnel protection
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Dimensional drawing (Dimensions in mm (inch))

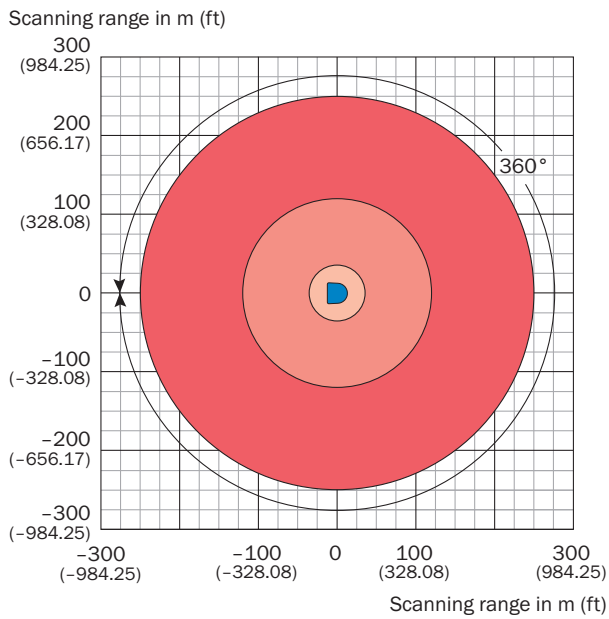


- ① Optical axis
- ② Zero level
- ③ LED (from top: yellow, yellow, green, red)
- ④ Mounting hole M6 x 12
- ⑤ Rotating diameter
- ⑥ Aligning pin
- ⑦ RS-232 connection (M12 x 8, male connector)
- ⑧ Ethernet connection (M12 x 4, female connector)
- ⑨ Power supply connection (M12 x 5, male connector)

Operating range diagram



- Scanning range max. 250 m (820.21 ft)
- Scanning range for objects up to 10 % remission 35 m (114.83 ft)
- Scanning range on reflector 70 m (229.66 ft)



- Scanning range max. 250 m (820.21 ft)
- Scanning range white targets 90 % remission 120 m (393.70 ft)
- Scanning range for objects up to 10 % remission 35 m (114.83 ft)

## Recommended accessories

Other models and accessories → [www.sick.com/NAV3xx](http://www.sick.com/NAV3xx)

	Brief description	Type	Part no.
<b>Plug connectors and cables</b>			
	Head A: male connector, M12, 5-pin, straight Head B: cable Cable: shielded, 5 m	Connecting cable (female connector - open)	6043440
	Head A: female connector, M12, 8-pin, straight, A-coded Head B: cable Cable: RS-232, RS-422, shielded, 5 m	Connecting cable (female connector - open)	6036153
	Head A: male connector, M12, 4-pin, straight, D-coded Head B: male connector, RJ45, 8-pin, straight Cable: Ethernet, drag chain use, PUR, shielded, 5 m	SSL-2J04-G05ME	6034415
<b>Reflectors</b>			
	Reflective tape "Diamond Grade", self-adhesive, sheet, 749 mm x 914 mm, self-adhesive	REF-DG	5320565
<b>Test and monitoring tools</b>			
	Scan finder, receiver to localize infrared scans	Scan-Finder LS-80A	6020756

## 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](http://www.sick.com)