



# NAV350-3232

NAV3xx

2D LIDAR SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	part no.
NAV350-3232	1052928

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



### Detailed technical data

#### Features

<b>Application</b>	Indoor
<b>Light source</b>	905 nm
<b>Laser class</b>	1 (IEC 60825-1:2014, EN 60825-1:2014+A11:2021)
<b>Aperture angle</b>	Horizontal 360°
<b>Scanning frequency</b>	8 Hz, ± 5 %
<b>Angular resolution</b>	Horizontal 0.25°
<b>Working range</b>	0.5 m ... 250 m (0.5 m ... 70 m on reflectors)
<b>Scanning range</b>	At 10% remission factor 35 m
	At 90% remission factor 100 m

#### Mechanics/electronics

<b>Connection type</b>	3 x M12 male connector/female connector
<b>Supply voltage</b>	24 V DC, ± 15 %
<b>Power consumption</b>	36 W
<b>Housing material</b>	Aluminum die cast
<b>Housing color</b>	Light blue (RAL 5012)
<b>Enclosure rating</b>	IP65
<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
<b>MTBF</b>	86 years
<b>MTTFd</b>	> 100 years

## Safety-related parameters

<b>MTTF<sub>D</sub></b>	> 100 years
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## Performance

<b>Detectable object shape</b>	Almost any
<b>Systematic error</b>	± 10 mm (RDI) <sup>1)</sup> ± 15 mm (Contour) <sup>1)</sup>
<b>Statistical error</b>	15 mm (Contour) <sup>1)</sup>
<b>Reflector memory</b>	12,000
<b>Positioning accuracy</b>	± 4 mm
<b>Integrated application</b>	Navigation

<sup>1)</sup> Typical value; actual value depends on environmental conditions.

## Interfaces

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

## 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
<b>Reflector marks (recommended)</b>	Stripes: width ≥ 80 mm, cylindrical: diameter ≥ 80 mm

## General notes

<b>Note on use</b>	The sensor does not constitute a safety component as defined by relevant legislation on machine safety.
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## Certificates

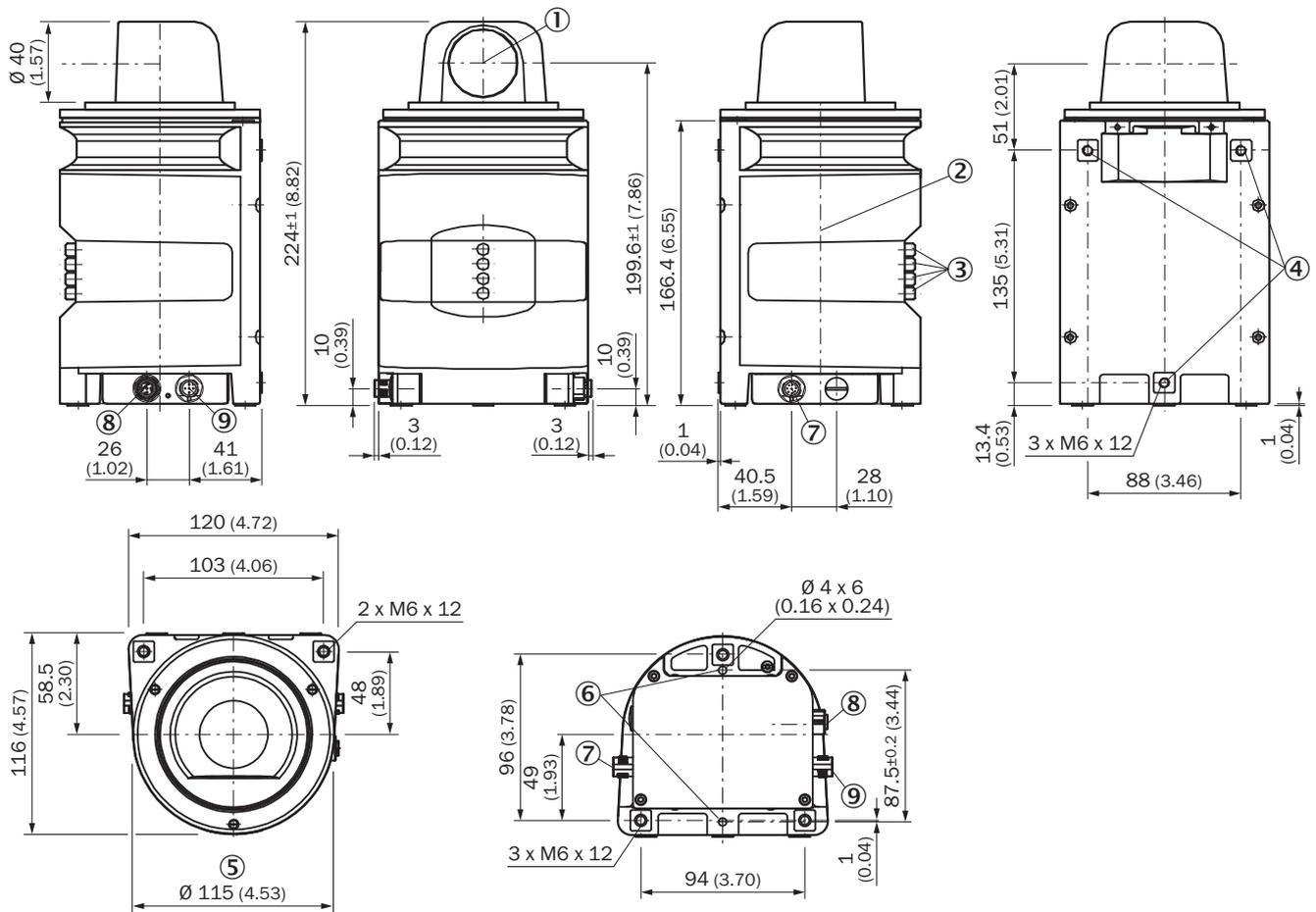
<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>China RoHS</b>	✓
<b>Information according to Art. 3 of Data Act (Regulation EU 2023/2854)</b>	✓

## Classifications

<b>ECLASS 5.0</b>	27270990
<b>ECLASS 5.1.4</b>	27270990
<b>ECLASS 6.0</b>	27270913
<b>ECLASS 6.2</b>	27270913

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

### Dimensional drawing

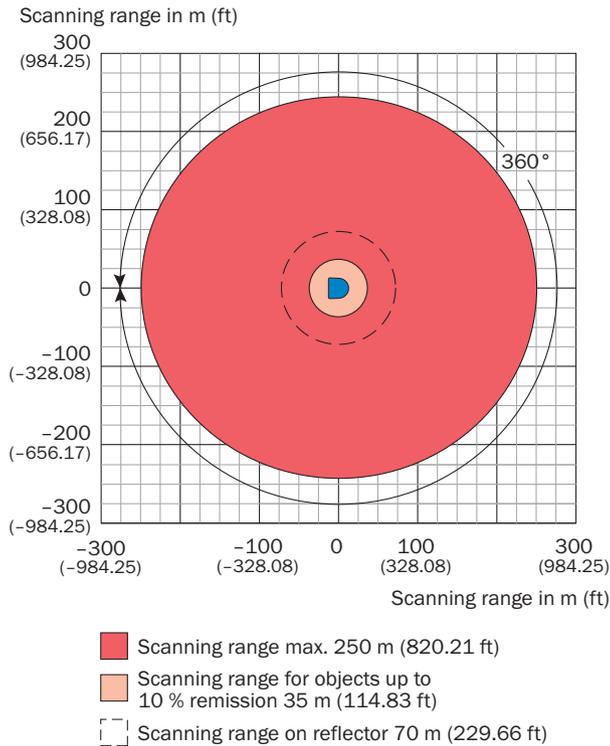


Dimensions in mm (inch)

- 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)

### Working range diagram



### Recommended accessories

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

	Brief description	Type	part no.
reflectors and optics			
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Reflective tape "Diamond Grade", self-adhesive, sheet</li> <li>• <b>Dimensions:</b> 749 mm 914 mm</li> <li>• <b>Ambient operating temperature:</b> -34 °C ... +70 °C</li> </ul>	REF-DG	5320565

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 5-pin, straight</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 5 m, 5-wire, PUR, halogen-free</li> <li>• <b>Description:</b> Sensor/actuator cable, shielded</li> <li>• <b>Connection systems:</b> Flying leads</li> <li>• <b>Application:</b> Zones with oils and lubricants, Drag chain operation</li> </ul>	DOL-1205-G05MAC25	6043440
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M12, 4-pin, straight, D-coded</li> <li>• <b>Connection type head B:</b> Male connector, RJ45, 4-pin, straight</li> <li>• <b>Signal type:</b> Ethernet, PROFINET</li> <li>• <b>Cable:</b> 5 m, 4-wire, PUR, halogen-free</li> <li>• <b>Description:</b> Ethernet, shielded, PROFINET</li> <li>• <b>Application:</b> Drag chain operation, Zones with oils and lubricants</li> </ul>	YM2D24-050P-N1MRJA4	2106184
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Sensor/actuator cable, shielded</li> <li>• <b>Connection type head A:</b> Female connector, M12, 8-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 5 m, 8-wire, PUR, halogen-free</li> <li>• <b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF2A28-050UA6XLEAX	2095835
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Sensor/actuator cable, shielded</li> <li>• <b>Connection type head A:</b> Female connector, M12, 8-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 0.6 m, 8-wire, PUR, halogen-free</li> <li>• <b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF2A28-C60UA6XLEAX	2145470
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Sensor/actuator cable, shielded</li> <li>• <b>Connection type head A:</b> Female connector, M12, 8-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 1 m, 8-wire, PUR, halogen-free</li> <li>• <b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF2A28-010UA6XLEAX	2145471
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Sensor/actuator cable, shielded</li> <li>• <b>Connection type head A:</b> Female connector, M12, 8-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 2 m, 8-wire, PUR, halogen-free</li> <li>• <b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF2A28-020UA6XLEAX	2145472
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Sensor/actuator cable, shielded</li> <li>• <b>Connection type head A:</b> Female connector, M12, 8-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 3 m, 8-wire, PUR, halogen-free</li> <li>• <b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF2A28-030UA6XLEAX	2145473

## 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)