



Laser scanners
NAV / NAV310 / Indoor / Long Range

NAV310-3211



Model Name > [NAV310-3211](#)
Part No. > [1060834](#)

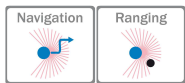


At a glance

- Mixed-mode navigation provides both spatial contour data and reflector data
- Long scanning range: up to 70 m on reflectors (up to 35 m on black targets)
- High internal computing power and individual AGV configuration
- Measurement, navigation, and determination of position with highest level of precision from three visible reflectors
- Angular resolution of up to 0.1 degrees
- Navigation, spatial and contour data, reflector marks, angular position and/or raw data collection

Your benefits

- Precise, fast collection of spatial contour data and/or simultaneous determination of reflector data (managing up to 12,000 reflectors) in real time
- Integrated evaluation of measured data reduces the computing load in the vehicle computer, minimizing power consumption and reducing operating costs
- High flexibility, since line guidance is also possible in areas without reflector marks, and routes can be easily modified using teach-in mode
- Accurate measurements in harsh industrial environments thanks to IP 65 housing
- High angular resolution for gap-free scanning even under difficult conditions
- Hardware synchronization output ensures precise control



Features

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

Performance

Detectable object shape:	Almost any
Systematic error ¹⁾ :	± 10 mm
Statistical error ²⁾ :	15 mm

1) 2) Actual value depends on environmental conditions

Interfaces

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

Mechanics/electronics

Electrical connection:	3 x M12 male connector/female connector
Operating voltage:	24 V DC± 15 %
Power consumption:	36 W
Housing:	Die-cast aluminum
Housing color:	Light blue (RAL 5012)
Enclosure rating:	IP 65
Protection class:	III
Weight:	2.4 kg
Dimensions:	115 mm x 120.5 mm x 222 mm

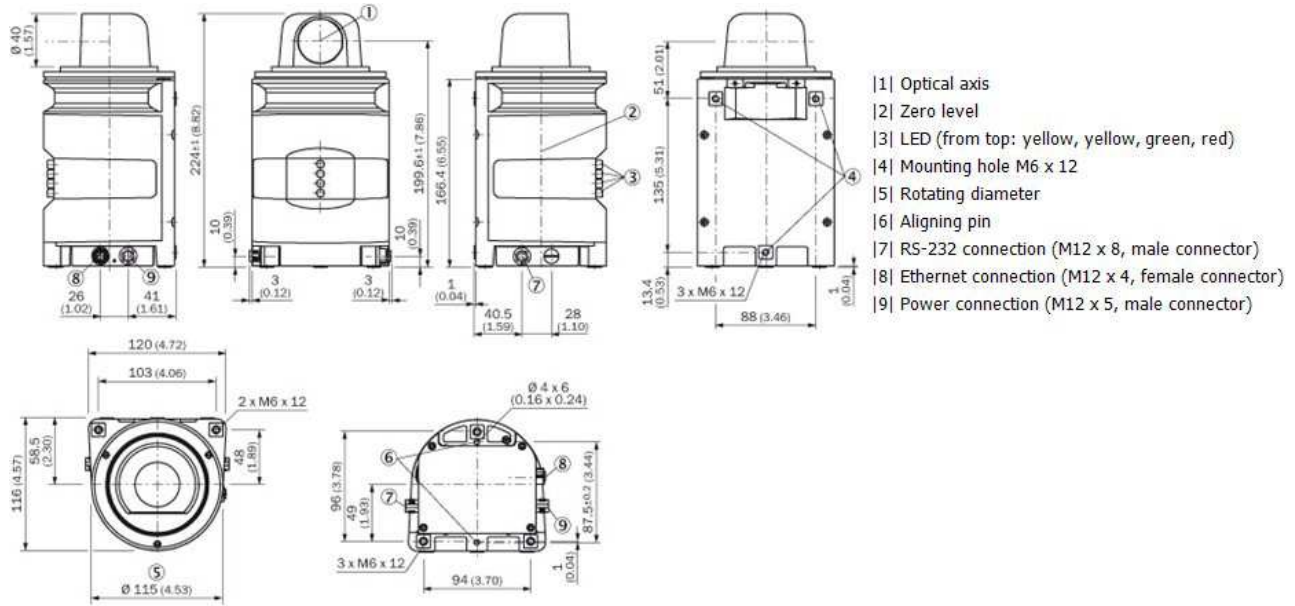
Ambient data

Ambient operating temperature:	0 °C ... +50 °C
Storage temperature:	-20 °C ... +80 °C
Permissible relative humidity:	85 %, non-condensing

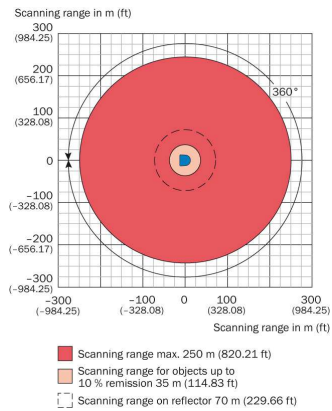
General notes

Note on use:	Not suitable for personnel protection
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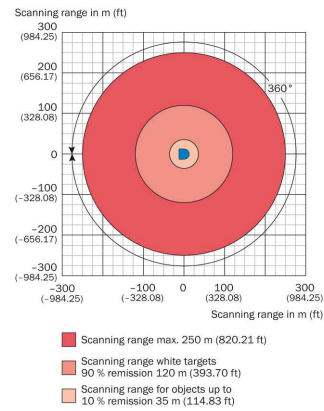
Dimensional drawing



Operating range diagram



Operating range diagram



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