



LZR[®]-VISIOSCAN NAV

Distance measuring laser scanner for AMR & Automatic Forklift navigation and object avoidance



APPLICATIONS



TECHNOLOGY

Laser



DOWNLOAD



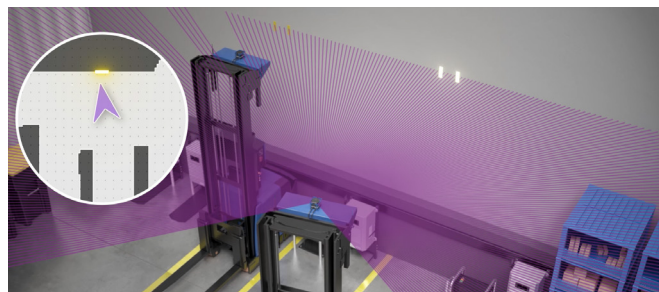
The LZR[®]-VISIOSCAN NAV is a compact and reliable laser scanner for accurate navigation and obstacle avoidance of AMRs and automatic forklifts in complex industrial environments.

Based on the LASER time-of-flight technology, the scanner scans a 2D plane over the opening angle of 275°. The scanner outputs high quality measurement data at an angular resolution of up to 0.025° through Ethernet communication. Designed and built to work under harsh industrial conditions, the LZR[®]-VISIOSCAN NAV's precision and stability is unaffected by environmental disturbances.



High-resolution, high-frequency

Configurable angular resolution of up to 0.025° for a **precise mapping** of the surrounding, or a scanning frequency of up to 80Hz **real-time tracking of fast-moving objects**.



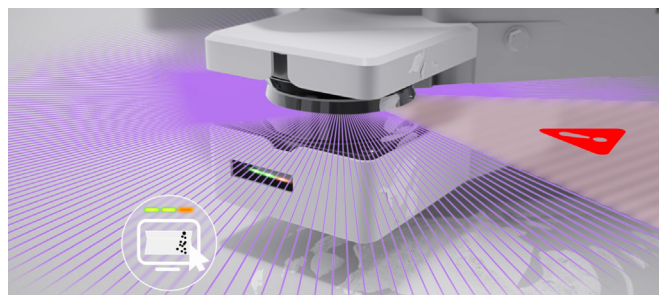
High-quality measurements for SLAM navigation

The LZR[®]-VISIOSCAN NAV outputs highly reliable and stable measurement data, unaffected by extreme lighting, low reflective surfaces, or background interferences, ensuring **reliable SLAM navigation** in industrial environments.



Robust build, industrial performance

Stable performance is achieved even in harsh industrial environments thanks to the scanner's **wide operating temperature range of -30°C to +60°C**, ingress protection enclosure of IP67, and vibration and shock resistance reaching class 5M2.

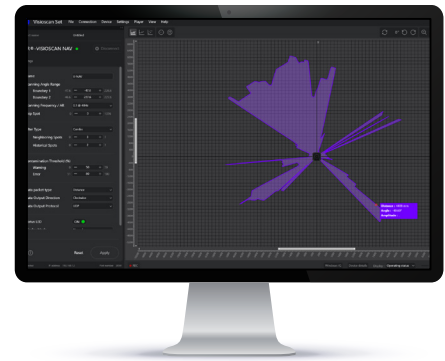


Intelligent window monitoring system

The innovative and intelligent window monitoring system instantly pinpoints the location and severity of any contaminant on the optical window. With user-definable alert thresholds, it enables **predictive maintenance scheduling** to eliminate unplanned downtime.

VISIOSCAN SET

Visioscan Set is a Windows software that lets you configure the scanner and visualize the real-time detection point cloud. Parameters can be configured easily thanks to its intuitive user interface. Configurations can also be saved to file and loaded onto other scanners, making commissioning quick and easy. Troubleshooting is convenient with the Visioscan Set, as the error log and other scanner status, such as the window contamination, is readily available. Visioscan Set can be downloaded from BEA Sensors' website.



APPLICATIONS



Navigation of Automatic Forklifts

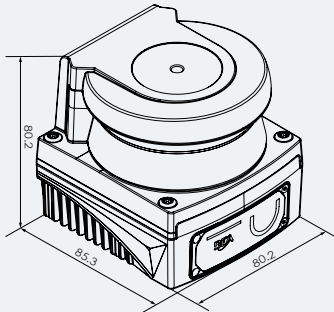


Navigation and Obstacle Avoidance of AMRs



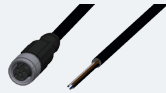
Collision Avoidance of Stacker Cranes

DIMENSIONS



All dimensions are in mm.
(All dimensions to be held to ± 0.3 mm)

ACCESSORIES



POWER CABLE

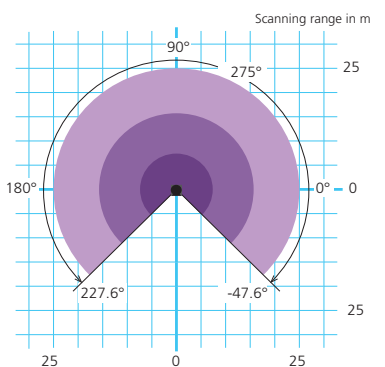


ETHERNET CABLE



MOUNTING
BRACKET

TECHNICAL SPECIFICATIONS



- Scanning range for objects up to 1.8% reflectivity, typ. 7 m.
- Scanning range for objects up to 10% reflectivity, typ. 15 m.
- Max. scanning range 25 m.

Technology	Laser scanner, time-of-flight measurement; Output power < 0.1 mW; Class 1 (IEC/EN 60825-1)
Scanning range	0.08 – 25 m; 7 m @ 1.8% reflectivity; 15 m @ 10% reflectivity;
Curtain	1
Scanning angle	275°
Angular resolution	0.2° @ 80 Hz, 0.1° @ 40 Hz, 0.05° @ 20 Hz, 0.025° @ 10 Hz
Measurement accuracy	
Systematic error	± 10 mm*
Statistical error (1 σ)	≤ 6 mm (0.08 – 7 m); ≤ 10 mm (7 – 15 m)* ≤ 6 mm (0.08 – 25 m) for reflectors
Supply voltage**	12 – 24 V DC, - 10% / + 30%
Ambient conditions	
Ambient light immunity	100,000 lux ambient light; 3,000 lux (IEC 61496-3)
Operating temperature	- 30°C to + 60°C
Enclosure	IP67 (only with the USB port cover in place, IEC/EN 60529)
Ethernet	
Default IP	192.168.1.2
Port	3050
USB	USB 2.0, Type-C
Conformity	This product conforms to all applicable European Union legislation, please refer to the Declaration of Conformity for further information. This product is UL Listed.

* Typical value at 10% reflectivity up to 7 m scanning range or as specified; real values depends on ambient conditions and the target object.

** External electrical sources must be within specified voltages and ensure double insulation from primary voltages. For UL compliance, the device shall be supplied exclusively by class 2 power supplies.

Specifications are subject to changes without prior notice. All values measured in specific conditions.

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