



Overcoming Industrial Challenges with the latest 2D LiDAR from SICK

picoScan100 - Compact, efficient, powerful, and accurate

In industrial settings, customers face challenges like limited space, power efficiency, the need for high-resolution and long-range detection, and varying environmental conditions. The picoScan100 from SICK addresses these issues effectively and offers several advantages that make it an excellent choice for various applications. In summation, it is four things: compact, efficient, powerful, and accurate.

The picoScan100 is a 2D LiDAR sensor designed to provide precise and reliable measurement data for various industrial applications. Its compact design fits into tight spaces, and its low power consumption is ideal for battery-operated equipment. The sensor provides precise, long-range detection and maintains accuracy in adverse conditions with features like multi-echo and fog filters. With versatile mounting options and reliable performance, the picoScan100 helps customers improve efficiency and accuracy in their operations.

Compact Design

The picoScan100 is notably compact, making it easy to integrate into tight spaces. It is four millimeters shorter than previous models, which is particularly beneficial for applications like mobile robots or within compact industrial setups. The small size of the picoScan100 ensures that it can be seamlessly incorporated without compromising on performance.

Because of its compact size, it allows for diverse mounting and integration options. Its lightweight design and robust mounting options make it easy to install and integrate into different systems. This versatility allows it to be used in a wide range of applications, from industrial automation to robotics. The ease of integration ensures that the picoScan100 can be quickly and effectively deployed in various settings, enhancing its utility across industries.

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Power Efficiency

Power efficiency is another significant challenge, especially for battery-operated equipment. High power consumption can quickly drain batteries, reducing the operational time of mobile robots and other autonomous systems. The picoScan100 addresses this issue with its low power consumption of just 4.5W, ensuring that it does not significantly impact battery life. This efficiency is crucial for maintaining long operational periods and reducing downtime.

Additionally, it is lightweight at just 220 grams, and features robust mounting options with three screw holes for secure attachment to various materials. Its lightweight design further enhances its suitability for such uses, ensuring that it does not add unnecessary weight to the equipment.

Powerful Performance

High-resolution and long-range detection are essential for many industrial applications, such as navigation, object detection, and environment mapping. Traditional sensors may struggle to provide the necessary range and resolution, especially in challenging conditions.

Despite its small size, the picoScan100 is incredibly powerful. It can detect targets up to 75 meters away on white surfaces and up to 120 meters on reflective surfaces. It also performs well on black targets, with a range of up to 40 meters. This capability ensures that

even distant objects are accurately identified, which is vital for precise and reliable operations.

The sensor operates at 40 to 50Hz, providing high-resolution data that is crucial for detailed inspections. This capability is crucial for applications requiring precise and long-range detection, ensuring that even distant objects are accurately identified.

Accuracy

The need for accurate and reliable data is paramount in industrial applications. Inaccurate data can lead to poor decision-making, reduced efficiency, and increased safety risks.

The picoScan100 is extremely accurate, with a statistical error of five millimeters or less. This precision is enabled by its fine-point laser with a 0.27-degree divergence, which creates a circular spot for detailed detection.

This level of accuracy is essential for applications that require precise measurements and reliable data, such as quality control and inspection. The sensor's ability to deliver consistent and accurate data makes it a valuable tool in these contexts.

The picoScan100 is designed to perform reliably under such conditions with features like multi-echo, fog filter, and particle filter. Additionally, it can identify and filter out unwanted reflections, such as rain or snow, ensuring reliable performance.