

VISOR[®] Robotic +Z

Everything in view, everything under control - the vision sensor for robotics applications



VISOR® Robotic +Z

Enhanced robot approach using depth sensing



VISOR®V20 Robotic +Z Advanced

Vision sensor with distance measurement for precise robot guidance. It also enables object inspections, including presence and completeness checks, as well as measurement tasks.

Applications

- Robot approach using depth information
- Positioning
- Object detection
- Measurement
- Identification

255 jobs with 255 detectors each

- **Distance:** Determines the VISOR®'s distance to the target object
- **Position tracking X/Y and orientation of the target**
- **Pattern matching, contour, Target Mark 3D:** Teach-in and recognition of patterns, contours and 3D poses
- **Caliper:** Distance between edges
- **BLOB, gray threshold, brightness:** Evaluation of brightness
- **Contrast:** Evaluation of contrast
- **Result Processing – Robotics, Text, Math:** Checking and Calculating Detector Results

Product highlights

Resolution	V20: 1440 × 1080
Series	Robotic
Variant	Advanced/Professional
Image chip	Monochrome
Lens type	Medium (integrated)
Integrated illumination	LED, red
Distance measurement	yes
Working distance min. [mm]	150
Working distance max. [mm]	2500
Speed [Hz]	100
Light source	Laser, red (class 2)

2D vision-guided robotics with integrated distance measurement

The VISOR® Robotic +Z combines a vision sensor for robotics with a distance sensor in a single device, enhancing the capabilities of the VISOR® Robotic by providing precise depth information. Using triangulation-based distance measurement, it extends Sensopart's triangulation sensor range from a previous limit of 1,000 mm to an expanded range of 150-2,500 mm.

An integrated projection laser ensures accurate detection of varying distances. The VISOR® Robotic precisely evaluates this data and transmits it directly to the robot controller – making it particularly valuable in automotive manufacturing. For example, when removing body parts from load carriers, the VISOR® Robotic +Z reduces cycle times while increasing precision. By providing exact distance measurements, the sensor enables the robot to move faster and more accurately toward the target.

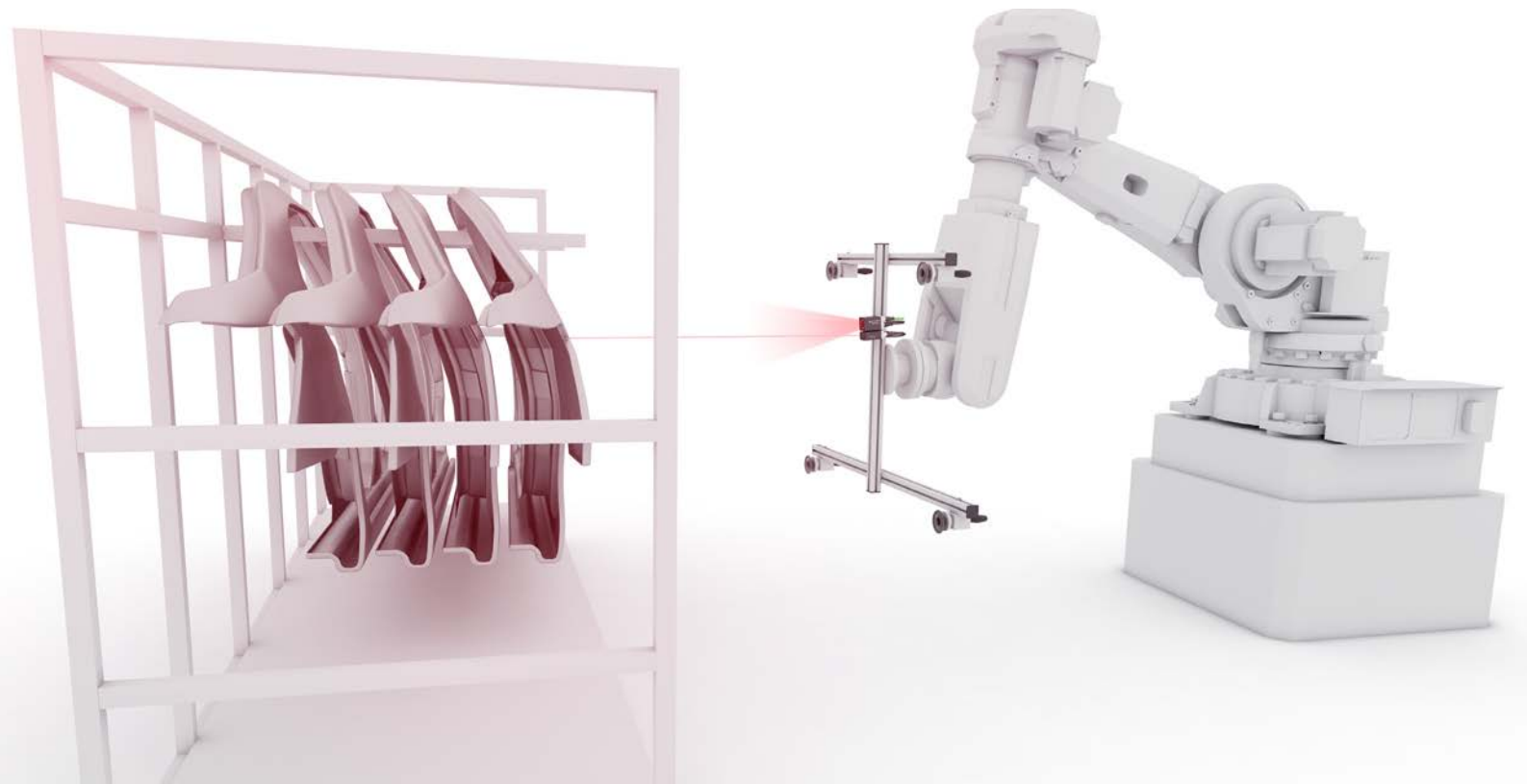
The VISOR® Robotic +Z is a powerful all-in-one solution, combining the strengths of 2D vision-guided robotics with precise long-range distance measurement.



QR code for further
information

Removing body parts from load carriers

Application example (2D vision-guided robotics with integrated distance measurement)



The Task:

The **removal of body parts** from load carriers is an important process in automobile production. A robot is supposed to pick up the components safely and precisely from the load carrier. A sensor transmits the **exact position data** to the robot.

The Challenge:

The distances to be measured **vary** depending on how many components have already been removed from the load carrier or are still on it. In addition, the **shiny, reflective material** (metallic surface) makes detection more difficult.

Our Solution:

The VISOR® Robotic +Z combines a **vision sensor for robotics** and the function of a **distance sensor** in a single device. This combination enables the functionalities of the VISOR® Robotic to be expanded by providing precise depth information (for large distances to the object of 150-2500 mm).

The varying distances are reliably detected by the **integrated projection laser**, precisely evaluated by the VISOR® Robotic and transmitted directly to the robot.

On the one hand, a significant advantage lies in the **reduction of the cycle time**.

Thanks to the addition of an external laser, the VISOR® receives precise information about the distance to the component, which allows the robot to approach it **more quickly** without risking a crash.

On the other hand, this integration offers **increased accuracy**. The integrated distance measurement enables the robot to approach the component in a more targeted and extremely precise manner.

Your Benefits:

- Reduced cycle time
- High precision
- Large working range: 150 – 2500 mm
- With the high computing performance in a compact design, the VISOR® hardware is predestined for use directly on the robot gripper
- Two functions combined in one device
 - ▶ Reduced assembly and setup effort
- Easy connection to robotic systems from leading manufacturers

Recommended product for this application:

VISOR® Robotic +Z



SensoPart is a leading manufacturer of photoelectric and machine vision sensors for factory automation. We also offer inductive and ultrasonic sensors, covering a wide spectrum of industrial automation tasks. Our products are used in a variety of industries, including automotive assembly, mechanical engineering, electronics manufacturing, solar, food, and pharmaceuticals. We take great pride in our renowned, German-made quality products, developed and manufactured at our two facilities in Germany and shipped worldwide.



 made in Germany

SensoPart worldwide

With our global network and worldwide subsidiaries, we are always ready to support you.

You can find your local team at:
www.sensopart.com/contact

