

# **VISOR<sup>®</sup> XE**

**XE**-tra fast. **XE**-tra easy. **XE**-tra smart.



# VISOR® XE - The next generation

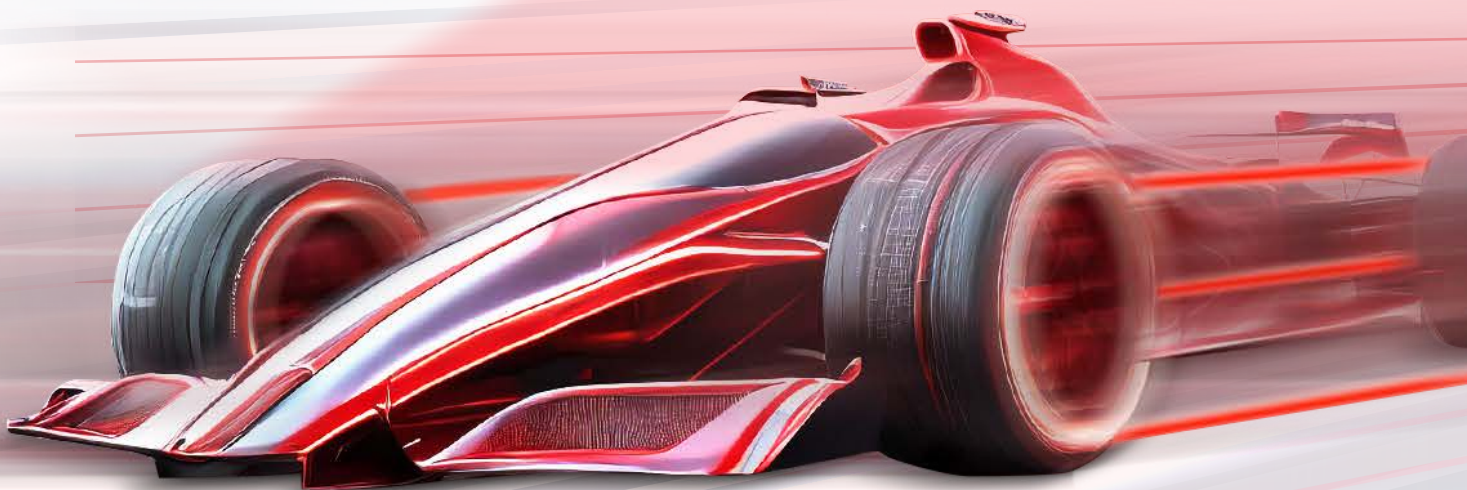
The extra-fast vision sensors

Discover the VISOR® XE product series and experience the future of industrial image processing. With improved AI algorithms, simplified installation, and a processor with accelerated AI, these sensors excel in object detection - delivering results four times faster than their predecessors.

The innovative vision sensor masters demanding tasks with precision and flexibility, even with changing working distances and varying requirements. Take a closer look and let VISOR® XE take your production processes to the next level.

## Advantages of our new vision sensors

- Powerful hardware that offers compatibility with the existing VISOR® product line while also reducing evaluation time
  - VISOR® XE Code Reader and Robotic: Classic detection of data codes, pattern matching, contours, and calipers operate up to four times faster than previous models
  - VISOR® XE Object AI: Detector classification using AI is up to eight times faster than previous models
- Simple system integration: additional communication plug for simplified installation
- Universally applicable: versatile for multiple tasks, e.g. as a code reader and for robot-guided applications

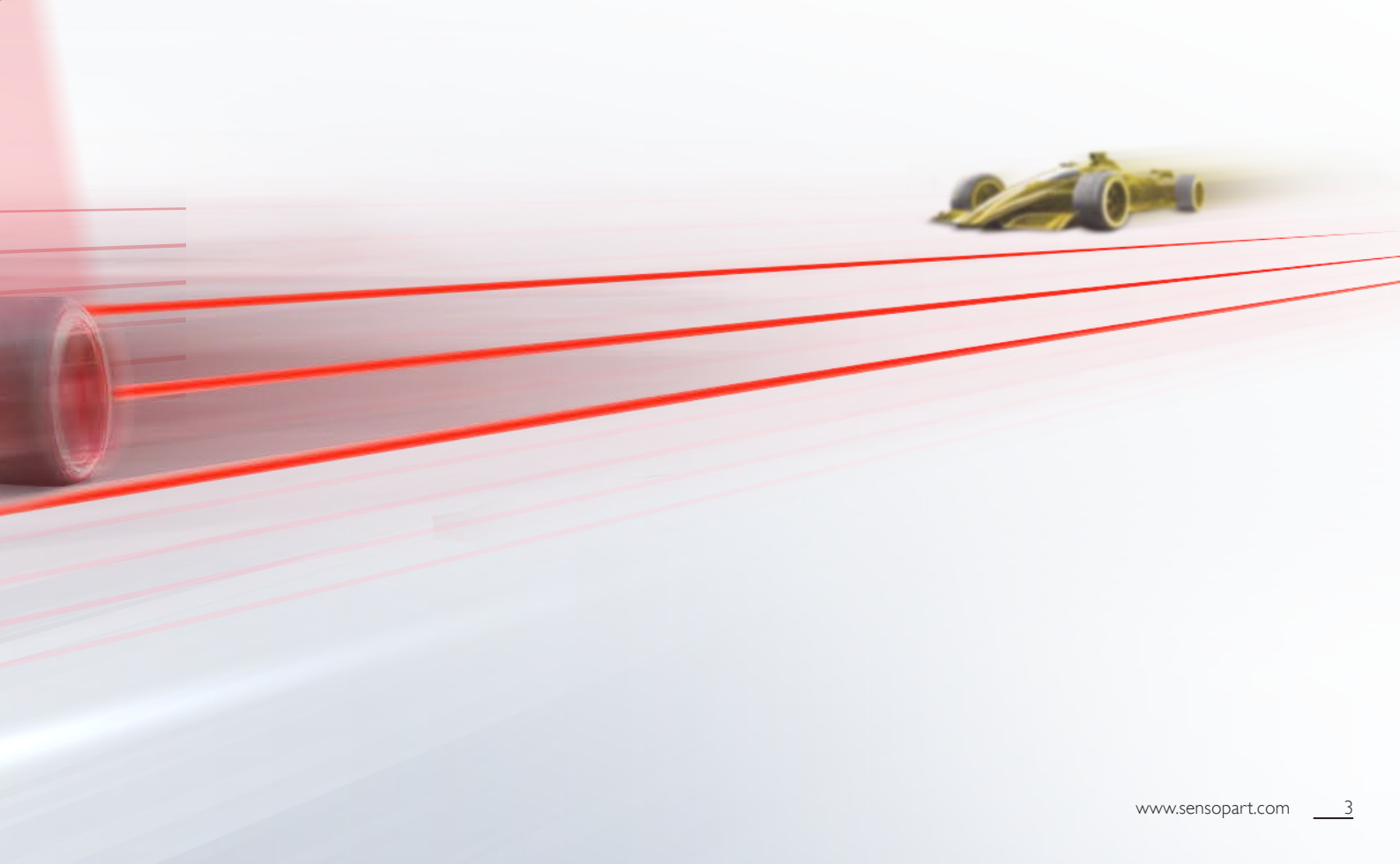


With the VISOR® **XE** series, we are expanding our proven and trusted vision sensor portfolio with a future-proof, optimized hardware platform that is also designed to accommodate ongoing advancements in image processing and artificial intelligence. VISOR® **XE** sensors are the fastest and most powerful vision sensors in Sensopart's VISOR® series. They are also flexible, easily adapting to varying working distances, and facilitate the precise detection and processing of objects, just like all models in the VISOR® series. Thanks to their advanced technology and easy integration into existing systems, VISOR® **XE** sensors are the ideal solution for demanding applications that require fast and precision-driven results.

Our VISOR® **XE** series is well suited for a wide range of applications in production automation - from simple presence and completeness checks to complex quality control. This makes this new generation of vision sensors a smart investment that delivers lasting value and fast returns.

We offer vision sensors in a variety of models, ensuring the perfect fit for your application needs.

- Advanced: with an extended range of functions to support complex requirements
- Professional: includes a comprehensive measuring system for demanding applications



# VISOR® XE Vision Sensors

XE-tra fast. XE-tra easy. XE-tra smart.

VISOR® ready-to-use:

- VISOR® XE Allround
- VISOR® XE Object
- VISOR® XE Robotic
- VISOR® XE Code Reader

- User-friendly configuration software (also available offline)

- SensoView and SensoWeb

High-resolution monochrome or color imaging chip

- 1600 x 1200 pixels
- 2560 x 1936 pixels







# New standards in industrial image processing

Maximum performance with advanced technology



VISOR® **XE** sets new standards in industrial image processing: the sensors work up to four times faster than conventional vision sensors and reduce the evaluation time in object classification by eight times - thanks to a processor with integrated hardware acceleration for deep learning algorithms. We achieve this substantial performance increase by optimizing the use of several processor cores working in tandem.

For you, this means faster image processing and increased productivity, even for tasks that are complex and require high resolution. Supported by artificial intelligence, the VISOR® **XE** sensors excel in detecting even the smallest details in large image fields. This makes the series ideal for applications that require maximum precision and speed.

## Seamless integration into your operation

The installation and deployment of VISOR® **XE** sensors is particularly simple and efficient: The addition of a second LAN interface simplifies connecting multiple vision sensors, reducing the need for extra cabling in multi-sensor applications, such as robotics. A single cable to the robot controller is all you need to integrate multiple vision sensors, saving you both time and money. The VISOR® **XE** series sensors are also fully compatible with existing VISOR® software and interface protocols, allowing you to utilize existing configurations and systems without time-consuming integrations.

## VISOR® **XE** sensors excel in image processing

Whether for precise code detection, reliable object detection or seamless integration into robot applications - the VISOR® **XE** series offers the right solution for a wide range of industrial applications and sets new standards in Industry 4.0. To meet the specific requirements of diverse applications, the sensors are available in different models, each optimized for specific needs and offer outstanding performance and reliability. This high level of flexibility makes the sensors in the VISOR® **XE** series an indispensable tool in many industries, from automotive to packaging.



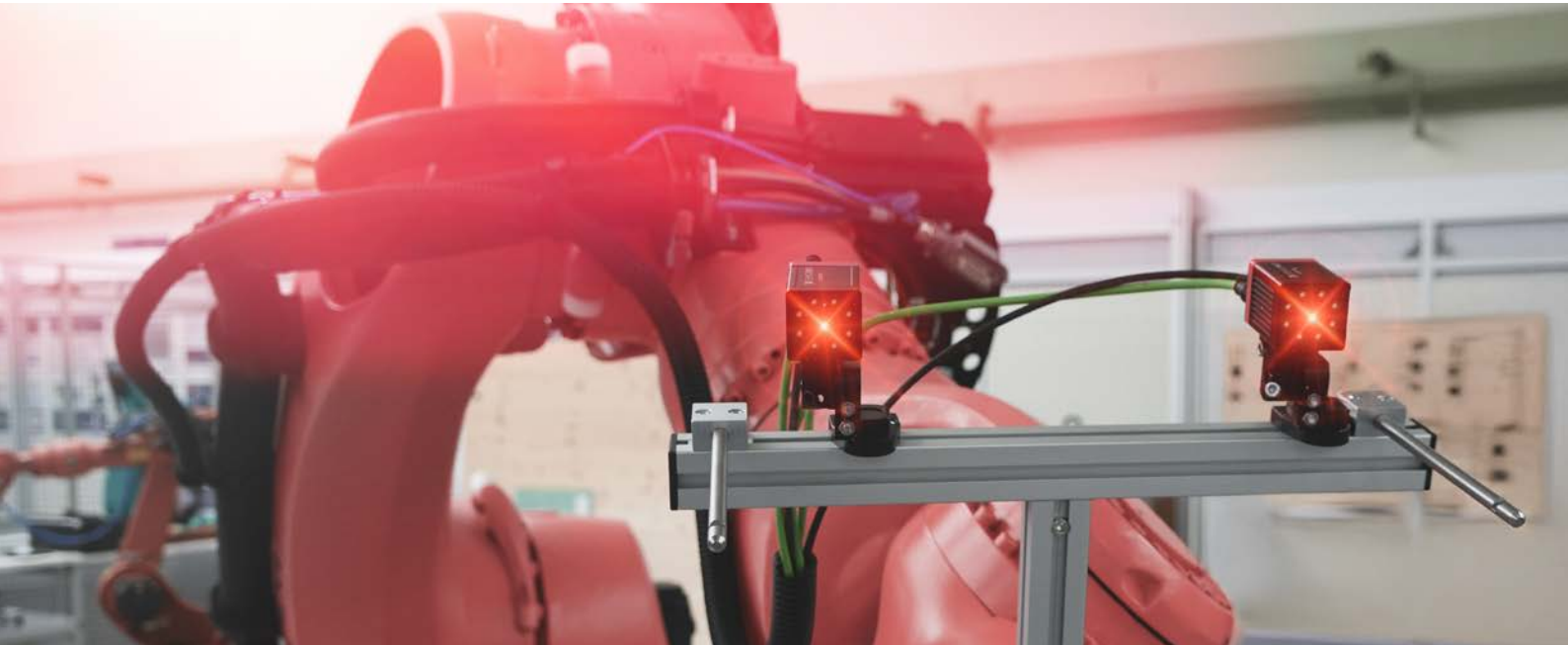
The VISOR® XE Object AI makes image processing easier than ever before:

**VISOR® XE Object AI:** Powerful capabilities for presence and completeness checks, position control, counting of objects, part recognition and for simple measuring and quality control tasks

- The "Classification (AI)" detector facilitates object classification and ensures reliable assignment of up to 200 classes
- Automatic evaluation of objects as "good" or "bad" for presence checks
- Artificial intelligence (AI) enables learning of distinguishing features based on a few sample images; no expert knowledge required
- Easy adaptation to process variations such as lot variations, stains, or strong reflections with just a few mouse clicks
- Thanks to the AI-optimized hardware of the VISOR® XE Object AI, get up to 40 high-speed inspections per image

## HIGHLIGHTS: VISOR® XE OBJECT AI

- Easy setup without image processing knowledge
- AI technology in a robust vision sensor, made for industrial automation
- Simple detector training with a few images on your PC
- Reliable results with strong varying processes and products
- AI-optimized hardware enabling high-speed inspections



## An eye on everything – the vision sensor for Robot guidance:

**VISOR® XE Robotic:** Today's robotics solutions face steadily rising expectations in the Industry 4.0 era, alongside a growing demand for greater ease of use. This is precisely where the VISOR® XE Robotic demonstrates its outstanding capabilities. Available in several models, the vision sensor offers the perfect solution for a variety of automation tasks. Designed with integrated and standardized interfaces, VISOR® XE Robotic integrates easily into existing systems and, with various calibration methods and flexible data structures, adapts to a wide range of procedures.

## HIGHLIGHTS: VISOR® XE ROBOTIC

- Reliable 2D or 3D localization in robot coordinates
- Precise part picking with specialized features like gripper clearance check and gripper offset
- Compact and lightweight housing for mobile or stationary use
- Streamlined setup with calibration methods tailored to specific applications
- Simple integration with numerous robot function modules and apps

*Thanks to the additional LAN connection on the VISOR® XE Robotic, simplified cabling on the robot arm saves cable runs.*







## **Reads whatever is printed, dot-peend, and lasered**

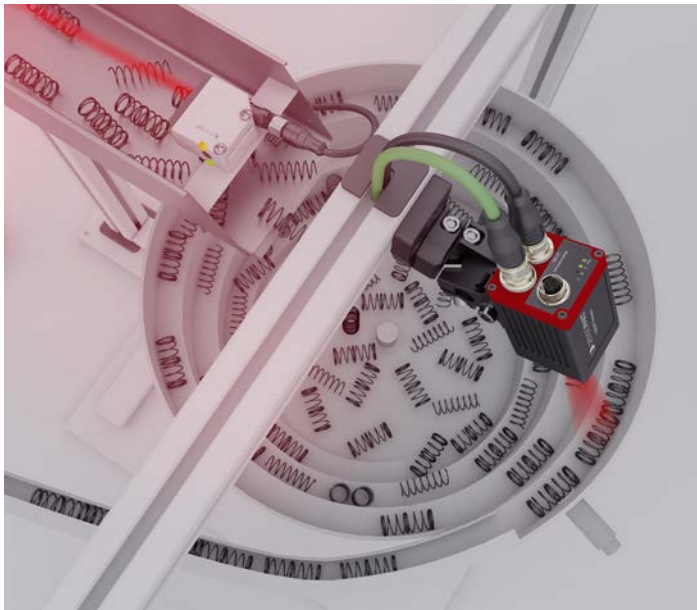
**VISOR® XE Code Reader:** The VISOR® XE Code Reader from SensoPart easily reads multiple barcode types as well as printed and directly marked data matrix codes according to the ECC200 standard, regardless of the carrier materials (metal, plastic, paper, glass). The sensor easily deciphers skewed or distorted codes, as well as those on convex, reflective or transparent surfaces.

**Built-in early warning system:** the VISOR® XE Code Reader evaluates the quality of your printed and directly marked data matrix codes on the basis of standardised quality parameters according to ISO and AIM standards.

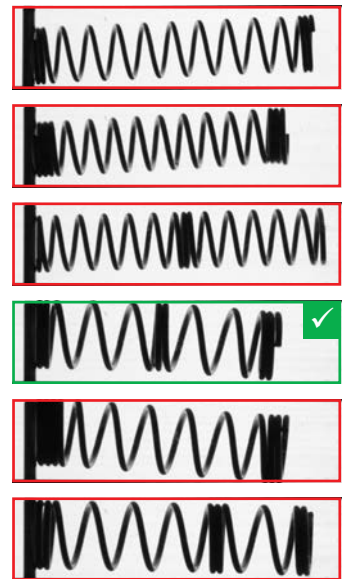
## HIGHLIGHTS: VISOR® XE CODE READER

- With the most powerful processor in the VISOR® product family, the VISOR® XE Code Reader enables high-speed code reading, even at high resolutions
- Reads barcodes, DataMatrix codes, and plain text (OCR) with robust performance, even for low-contrast, dirty, or damaged codes
- Reads directly marked codes
- Supports all marking methods, including printed, etched, and laser-marked
- Reads on nearly all surfaces, including metal, plastic, and paper
- Evaluation of quality parameters according to ISO/IEC 15415, ISO 15416, ISO/IEC 29158 and SEMI-T10

### Classification of springs

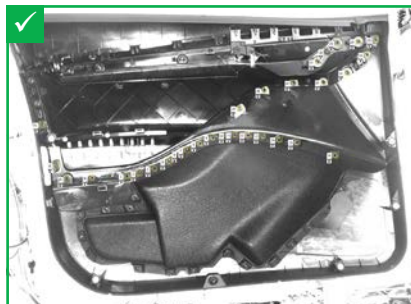


The VISOR® XE Object AI's classification detector reliably distinguishes even very similar-looking springs, ensuring accurate feeding to the machine. By providing just a few examples for each class, the classifier automatically learns to differentiate between types.



### Precise Presence Detection of Car Door Components

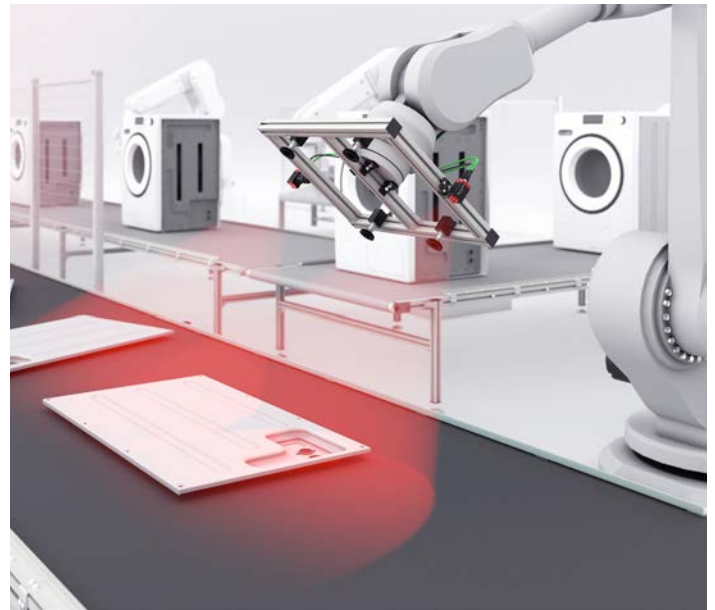
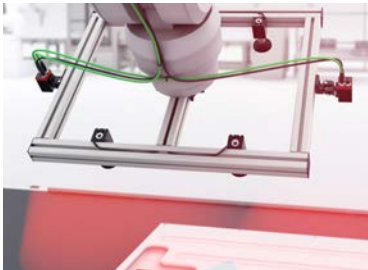
The VISOR® XE V50 Object AI, equipped with advanced artificial intelligence, performs a precise presence check of the numerous small components during the assembly of car doors. The "Classification (AI)" detector enables the vision sensor to perform over 40 AI-based checks in a short time. The detector stands out for its user-friendly design, removing the need for time-consuming selection of the optimal image processing method. Users only need to teach in sample images of components with and without the desired element, which significantly streamlines and accelerates the process.



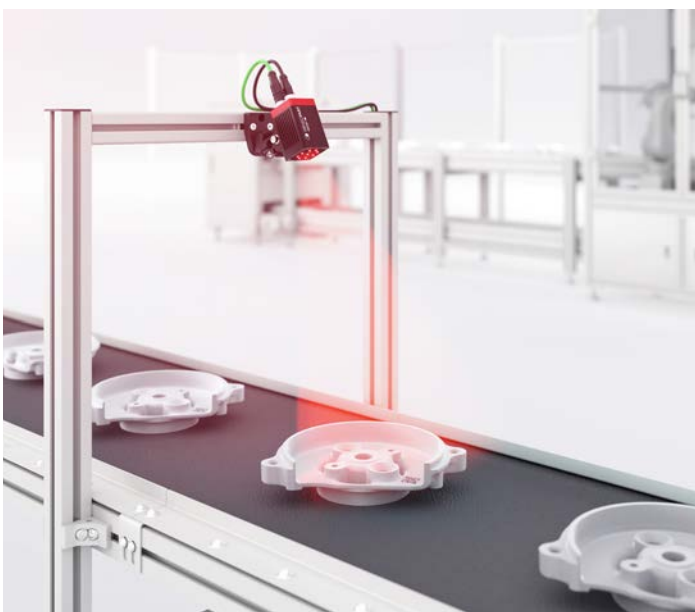
## Precise robotic handling for large components

With the VISOR® **XE** Robotic, the exact position of the large components is determined and transferred to the controller in robot coordinates.

The VISOR® **XE** series enables fast, cost-effective installation and connection of multiple vision sensors thanks to the additional LAN connector, which reduces cabling and installation time. This solution ensures the reliable detection of large components and simplifies their integration into existing systems.

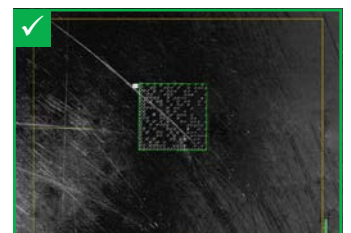


## High-Speed, High-Resolution Code Reading




The VISOR® **XE** Code Reader effortlessly interprets barcodes and both printed and directly marked data matrix codes, easily reading multiple and mixed 1D and 2D codes at the same time. The vision sensor ensures reliable code detection, even under challenging conditions like long distances, moving objects, low contrast, or damaged codes.

The code reader combines high resolution with fast processing speeds, and is available with various options for optics and illumination. The V50 (5 megapixel) model reads codes in large fields of view in under 40 milliseconds and eliminates the need for multiple devices.



**SensoPart** is a leading manufacturer of photoelectric sensors 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 countless applications and industries – from automotive assembly and mechanical engineering to electronics manufacturing and solar, as well as in the food and pharmaceutical industries. 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](http://www.sensopart.com/contact)

