

Vision-Sensor with five megapixels for more details

VISOR® V50

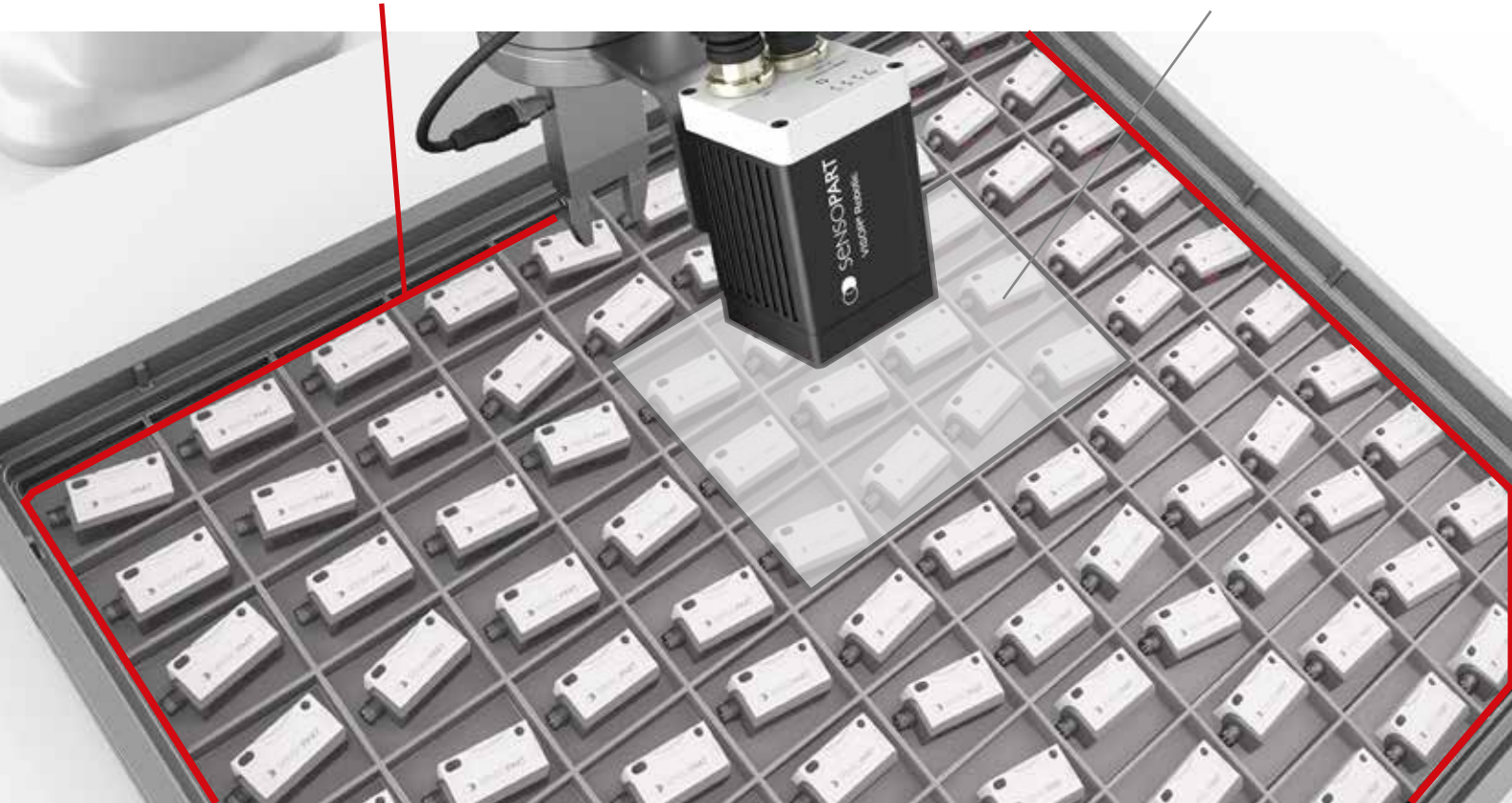


VISOR® V50

Detects everything in one glance

Resolution V50: 2560 × 1936 pixels

Resolution SVGA



The **VISOR® V50** allows the detection of many more object details in a single glance.

made in Germany

SensoPart presents a new addition to its established vision sensor family: **VISOR® V50**. With **2560 × 1936 pixels**, the new **VISOR® V50** offers an image resolution that is three times greater than that of standard vision sensors.

These new sensors achieve an image quality that was previously only available with expensive, complex vision systems; the potential applications of the user-friendly vision sensors have therefore been considerably expanded.

The field of view or operating distance can be flexibly adapted to the most diverse requirements by selecting a suitable **C-mount lens**. For example, the tiniest details can be identified at a long range in a narrow image section, while multiple component characteristics or several individual components can be detected simultaneously with a wide field of view.

In certain applications, one **VISOR® V50** can replace up to four vision sensors with a normal resolution, thereby saving costs.

HIGHLIGHTS OF VISOR® V50

- Resolution of 2560 × 1936 pixels (monochrome or color version)
- Expansion of product family to include variant with 5 megapixel resolution in compact housing
- Precise detection of smallest details
- Reduced installation costs with large fields of view

High performance in a compact design

With a resolution of 5 megapixels, the **VISOR® V50** is unique on the market. Thanks to global shutter technology, the **VISOR® V50** supplies even better results in certain applications – for example, when reading moving bar codes.



With an image resolution of 1.5 megapixels, the contours remain partly blurred.



With an image resolution of 5 megapixels, the contours appear clearly and the detection of even smaller details is possible.

VISOR® V50 – Product overview		
Sensor type / Product variant	Focus applications	Field of view
V50 Allround Professional	Presence, completeness, measurement, position check, color, reading of bar codes, data codes, text, multishot	C-Mount
V50 Object Advanced	Presence, completeness, measurement, position check, color	C-Mount
V50 Robotic Professional	Robotics, presence, completeness, measurement, positioning	C-Mount
V50 Code Reader Advanced and Professional	Reading of bar codes, 2D codes, text	C-Mount
V50 Solar Advanced	Position detection and quality inspection of solar cells	C-Mount

VISOR® V50

Versions: Allround, Object, Robotic, Code Reader and Solar



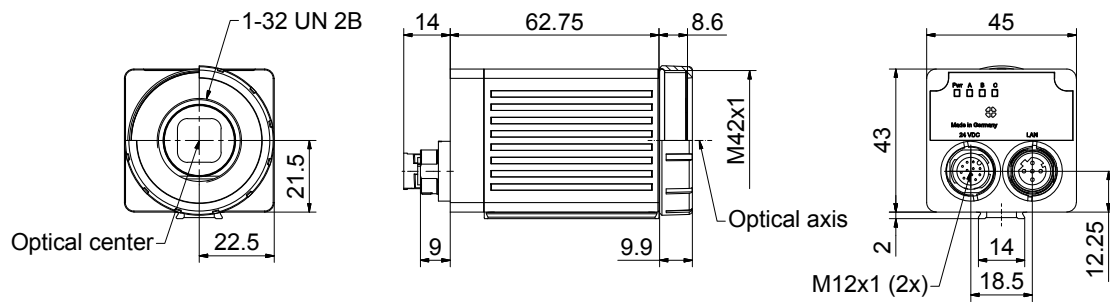
PRODUCT HIGHLIGHTS

- Resolution of 2560 x 1936 pixels (monochrome or color version)
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Optical data		Functions	
Resolution	2560 x 1936 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/1.8", monochrome / color	Detectors (dependent on product version)	Position tracking: X/Y and orientation; Pattern matching, contour, 3D contour : teach-in and detection of patterns and contours; Calliper : distance between edges; BLOB, grey threshold, brightness : evaluation of brightness; Contrast : evaluation of contrast; Color value ¹ : output of color values; Color area ¹ : area inspection of colors, with selectable tolerance; Color list ¹ : finding the most similar colors; Barcode : reading 1D bar codes, EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, GS1, pharm code, codabar; Datacode : reading 2D codes: ECC200, QR code, GS1, PDF 417; OCR : reading of fonts; Result processing: Text, Math : checking and calculating with results from detectors
Integrated lens, focal length [mm]	C-Mount		
Pixel size	2,8 µm x 2,8 µm		
Focus	Manual		
Adjustment range	Dependent on lens		
Integrated illumination	None		
Minimum field of view, X x Y	Dependent on lens		
Target laser	No		
Electrical data		Mechanical data	
Operating voltage, +U _B	18 ... 30V DC ²	Dimensions	70,4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65 ³
Protective circuits	Reverse-polarity protection, U _B / short-circuit protection of all outputs	Material, housing	Aluminium, die-cast, RoHS compliant
Power On Delay	Approx. 13 s after Power on	Material, front screen	Plastic
Outputs	PNP/NPN (switchable)	Ambient temperature: operation	0 ... +50 °C ⁴
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C ⁴
Switching threshold inputs incl. encoder	PNP/NPN High > U _B -1V / Low < 3V	Weight	Approx. 200 g
Input resistance	> 20 kΩ	Plug connections	Supply and I/O M12, 12-pin Ethernet M12, 4-pin
Interfaces	Ethernet (LAN), EtherNet/IP, PROFINET, SensoWeb, Service Port	Vibrationsfestigkeit	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs	Schockfestigkeit	EN 60068-2-27
Encoder	✓		

¹ Color hardware ² max. ripple < 5V_{SS} ³ only with protective casing ⁴ 80 % air humidity, noncondensing

Vision-Sensor VISOR® C-Mount



153-13555

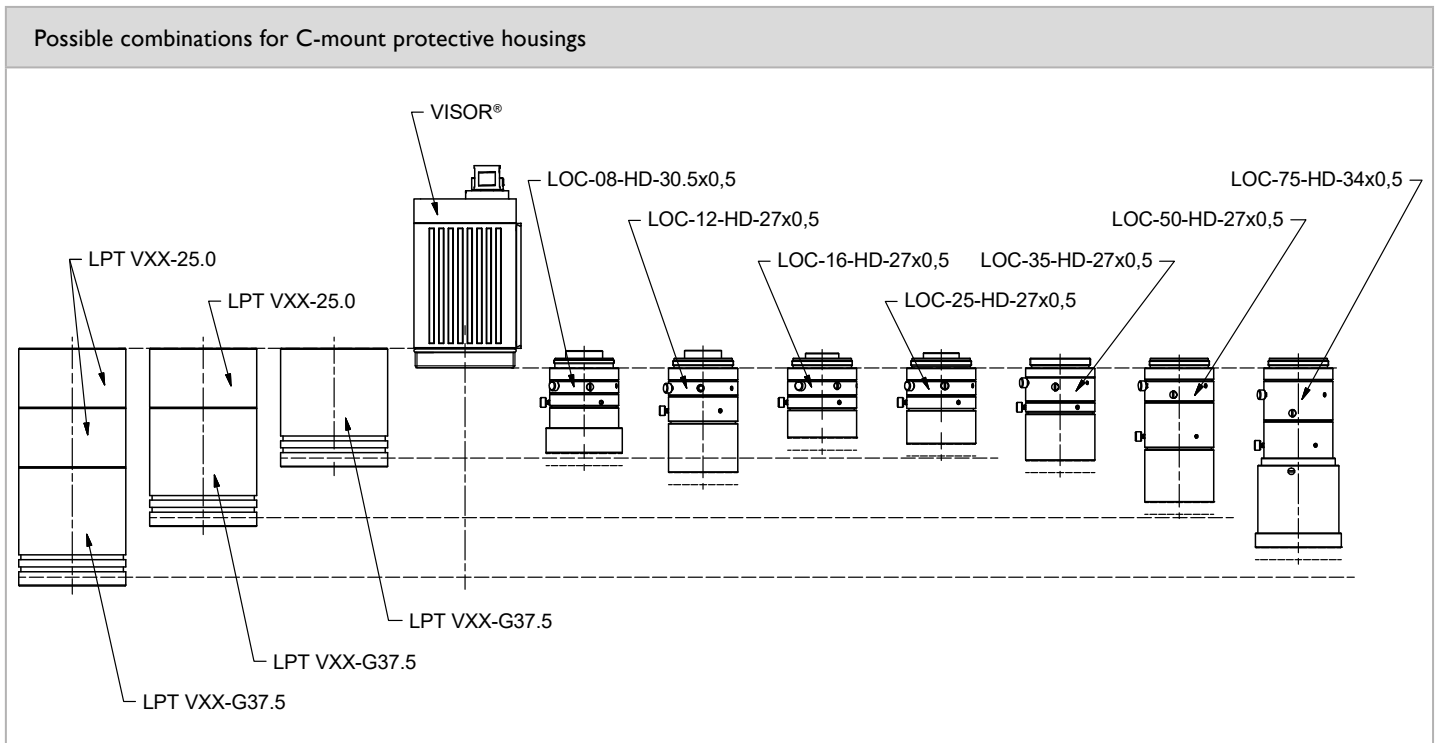
Part number	Article number	Accessories
V50-ALL-P3-C-2	635-91006	<ul style="list-style-type: none"> Connection cables Illumination Lenses Brackets Interface accessories
V50C-ALL-P3-C-2	635-91009	
V50x-OB-A3-C-2	635-91016	
V50C-OB-A3-C-2	635-91019	
V50-RO-P3-C-2	635-91040	
V50C-RO-P3-C-2	635-91043	
V50-CR-A3-C-2	635-91033	
V50-CR-P3-C-2	635-91026	
V50-SO-A3-C-2	635-91044S	

Accessories

Lenses

Lenses, C-mount			
		<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>LOC-08-HD-30.5x0.5 / 526-51535</p> <p>C-mount lens 8 mm focal length Aperture/focus: manual Filter thread: 30.5x0.5 Diameter: 32 mm Max. length: 36 mm Weight: 63 g</p> <p>V10 / V20 / V50 C-Mount</p>
		<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>LOC-12-HD-27x0.5 / 526-51536</p> <p>C-mount lens 12 mm focal length Aperture/focus: manual Filter thread: 27x0.5 Diameter: 29 mm Max. length: 44 mm Weight: 65 g</p> <p>V10 / V20 / V50 C-Mount</p>
		<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>LOC-16-HD-27x0.5 / 526-51537</p> <p>C-mount lens 16 mm focal length Aperture/focus: manual Filter thread: 27x0.5 Diameter: 29 mm Max. length: 29.5 mm Weight: 40 g</p> <p>V10 / V20 / V50 C-Mount</p>
		<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>LOC-25-HD-27x0.5 / 526-51538</p> <p>C-mount lens 25 mm focal length Aperture/focus: manual Filter thread: 27x0.5 Diameter: 29 mm Max. length: 32 mm Weight: 65 g</p> <p>V10 / V20 / V50 C-Mount</p>
		<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>LOC-35-HD-27x0.5 / 526-51539</p> <p>C-mount lens 35 mm focal length Aperture/focus: manual Filter thread: 27x0.5 Diameter: 29 mm Max. length: 39 mm Weight: 51 g</p> <p>V10 / V20 / V50 C-Mount</p>
		<p>Part number / Article number</p> <p>Description</p> <p>Suitable for</p>	<p>LOC-50-HD-27x0.5 / 526-51540</p> <p>C-mount lens 50 mm focal length Aperture/focus: manual Filter thread: 27x0.5 Diameter: 29 mm Max. length: 56.5 mm Weight: 69 g</p> <p>V10 / V20 / V50 C-Mount</p>

Lenses, C-mount (Cont.)			
		Part number / Article number	LOC-75-HD-34x0.5 / 526-51541
		Description	C-mount lens 75 mm focal length Aperture/focus: manual Filter thread: 34x0.5 Diameter: 36 mm Max. length: 75.5 mm Weight: 96 g
		Suitable for	V10 / V20 / V50 C-Mount



Accessories, lenses			
	Part number	Article number	Description
	LR 5	543-11011	Intermediate ring 5 mm
	ETS	527-51143	Intermediate ring set: 1 x 0,5 mm 1 x 10 mm 2 x 1 mm 1 x 20 mm 1 x 5 mm 1 x 40 mm
	Part number	Article number	Description
	LOF-PF-30.5x0.5	526-51531	Polarizer filter; linear, for C-mount lenses, anti reflex, rotatable window with fixture, filter thread M30.5x0.5
	LOF-PF-27x0.5	526-51544	Polarizer filter; linear, for C-mount lenses, anti reflex, rotatable window with fixture, filter thread M27x0.5
	LOF-PF-34x0.5	526-51545	Polarizer filter; linear, for C-mount lenses, anti reflex, rotatable window with fixture, filter thread M34x0.5



“We gauge ourselves not by what is possible today, but by our vision of what can be achieved” – this has been our motto since the foundation of SensoPart in 1994. Our goal is to always be a step ahead and to be able to offer our customers the most innovative sensor for industrial automation.

True to this motto, we offer easy-to-integrate VISOR® vision sensors and compact laser sensors with outstanding background suppression made in Germany.

We still also have plenty of ideas for the future - watch this space.

SENSOR TECHNOLOGY

- Light barriers
- Diffuse sensors
- Laser sensors
- Miniature sensors
- Distance sensors
- Color sensors
- Contrast sensors
- Anti-collision sensors
- Slot sensors
- Fiber-optic sensors
- Inductive sensors
- Ultrasonic sensors
- Vision sensors
- Smart cameras
- Vision systems
- Object detection
- Object measurement
- Color detection
- Code reading
- Lighting
- Lenses

Germany
SensoPart
Industriesensorik GmbH
79288 Gottenheim
Tel. +49 7665 94769-0
info@sensopart.de

France
SensoPart France Sarl
662, rue des Jonchères – Bât. A
F-69730 GENAY
Tel. : +33 164 730061
info@sensopart.fr

United Kingdom
SensoPart UK Limited
Pera Business Park, Nottingham Road,
Melton Mowbray, Leicestershire, LE13 0PB
Tel. +44 1664 561539
uk@sensopart.com

USA
SensoPart Inc.
30600 Telegraph Rd.
Suite 2345,
Bingham Farms, MI, 48025
usa@sensopart.com

China
SensoPart China
201803 Shanghai
Tel. +86 21 69017660
china@sensopart.cn