

# VISOR® Code Reader

Reads whatever is printed, dot-peened and lasered



The VISOR® Code Reader from SensoPart easily reads barcodes of numerous 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 even easily deciphers skewed or distorted codes, or those on convex, reflective or transparent surfaces.

**Built-in early warning system:** the VISOR® 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.

The VISOR® Code Reader Standard offers suitable tools for easily readable barcodes and data matrix codes (e.g. printed). The Advanced or Professional versions provide high-performance reading algorithms for difficult codes (e.g. directly marked).

## HIGHLIGHTS OF VISOR® CODE READER

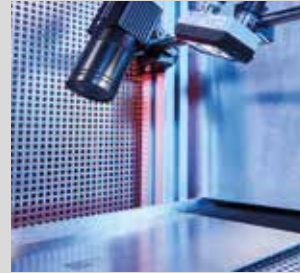
- Reliably reads barcodes as well as printed and directly marked data matrix codes, and even several codes simultaneously and mixed 1D/2D codes
- Supplementary object detection for characteristics other than codes
- Evaluation of quality parameters according to ISO/IEC 15415, ISO 15416, ISO/IEC 29158 and SEMI-T10
- Flexible definition of output data (header; trailer; user data)
- String comparison with message via the digital switching output
- EtherNet/IP PROFINET (conformance class B), EtherNet (TCP/IP) supported
- Comprehensive options for archiving images and data
- Optical character recognition



Printed barcode on label



Lasered code on shiny metallic surfaces



Dot-peened code on metal surfaces

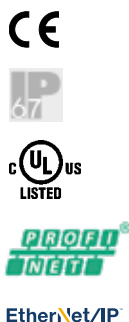


*A lot of information in a small space:*  
up to 2,334 ASCII symbols (7 bit) or  
3,116 digits can be coded with an  
ECC-200 data matrix code.

VISOR® Code Reader – product overview					
	Product variant	Resolution	Field of view	Integrated lighting	Page
V50-CR-A3-xxx	Advanced	2560 × 1936 monochrome	Wide	White, red or infrared LEDs	147
V50-CR-A3-xxx			Medium	White, red or infrared LEDs	149
V50-CR-A3-xxx			C-mount	None	151
V50-CR-P3-xxx	Professional	2560 × 1936 monochrome	Wide	White, red or infrared LEDs	153
V50-CR-P3-xxx			Medium	White, red or infrared LEDs	155
V50-CR-P3-xxx			C-mount	None	157
V20-CR-S3-xxx	Standard	1440 × 1080	Wide	White, red or infrared LEDs	159
V20-CR-S3-xxx			Medium	White, red or infrared LEDs	161
V20-CR-S3-xxx			Narrow	White, red or infrared LEDs	163
V20-CR-A3-xxx	Advanced	1440 × 1080	Wide	White, red or infrared LEDs	165
V20-CR-A3-xxx			Medium	White, red or infrared LEDs	167
V20-CR-A3-xxx			Narrow	White, red or infrared LEDs	169
V20-CR-A3-C-2			C-mount	None	171
V20-CR-P3-xxx	Professional	1440 × 1080	Wide	White, red or infrared LEDs	173
V20-CR-P3-xxx			Medium	White, red or infrared LEDs	175
V20-CR-P3-xxx			Narrow	White, red or infrared LEDs	177
V20-CR-P3-C-2			C-mount	None	179
V10-CR-S3-xxx	Standard	800 × 600	Wide	White, red or infrared LEDs	181
V10-CR-S3-xxx			Medium	White, red or infrared LEDs	183
V10-CR-S3-xxx			Narrow	White, red or infrared LEDs	185
V10-CR-A3-xxx	Advanced	800 × 600	Wide	White, red or infrared LEDs	187
V10-CR-A3-xxx			Medium	White, red or infrared LEDs	189
V10-CR-A3-xxx			Narrow	White, red or infrared LEDs	191
V10-CR-A3-C-2			C-mount	None	193
V10-CR-P3-xxx	Professional	800 × 600	Wide	White, red or infrared LEDs	195
V10-CR-P3-xxx			Medium	White, red or infrared LEDs	197
V10-CR-P3-xxx			Narrow	White, red or infrared LEDs	199
V10-CR-P3-C-2			C-mount	None	201


# VISOR® V50 Code Reader Advanced, wide field of view

Multi-Code Reader for 1D and 2D codes



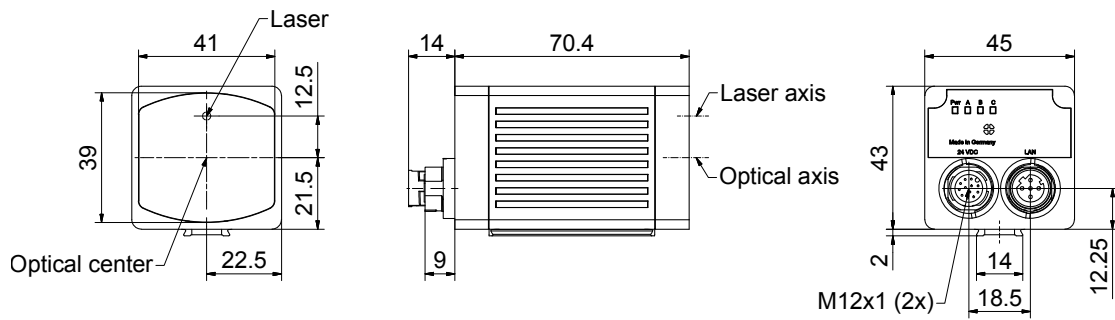
## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Reliable detection of even poorly readable codes under difficult ambient conditions
- Comprehensive tools for flexible and easy connection to PC and PLC environments
- Reading of several similar or differing types of codes in one reading pass

Optical data		Functions	
Resolution	2560 x 1936 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/1.8", monochrome	Detectors	<b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>Result processing: Text:</b> checking and calculating with results from detectors
Integrated lens, focal length [mm]	9.6 (wide)		
Pixel size	2.8 µm x 2.8 µm		
Focus	Motorized		
Adjustment range	40 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	32 x 24 mm		
Target laser	Laser: red (635 nm) class 1  (IEC 60825-1)		
Electrical data		Mechanical data	
Operating voltage, +U <sub>B</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>B</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>B</sub> -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 VISOR® V20-CR-Advanced	Ethernet (LAN), EtherNet/IP, PROFINET, SensoWeb, Service Port	Vibration resistance	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs	Shock resistance	EN 60068-2-27
Encoder	✓		

<sup>1</sup> Max. ripple < 5V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing

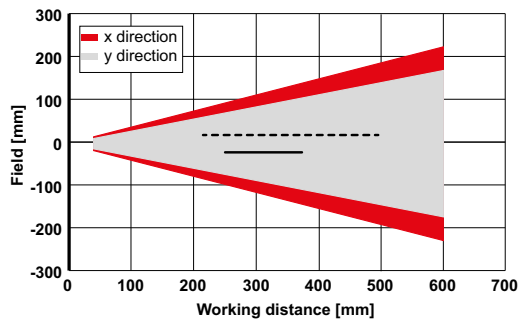
VISOR® vision sensor



153-13554

4

Field of view V50, wide



155-03626

----- Increased depth of field  
 \_\_\_\_\_ Normal depth of field

Illumination	Part number	Article number	Accessories
White	V50-CR-A3-W-W-M2-L	635-91027	Connection cables Illumination Brackets Interface accessories <a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a>
Red	V50-CR-A3-R-W-M2-L	635-91029	
Infrared	V50-CR-A3-I-W-M2-L	635-91031	
White	V50-CR-A3-W-WD-M2-L	635-91063	
Red	V50-CR-A3-R-WD-M2-L	635-91064	
Infrared	V50-CR-A3-I-WD-M2-L	635-91065	


# VISOR® V50 Code Reader Advanced, medium field of view

Multi-Code Reader for 1D and 2D codes



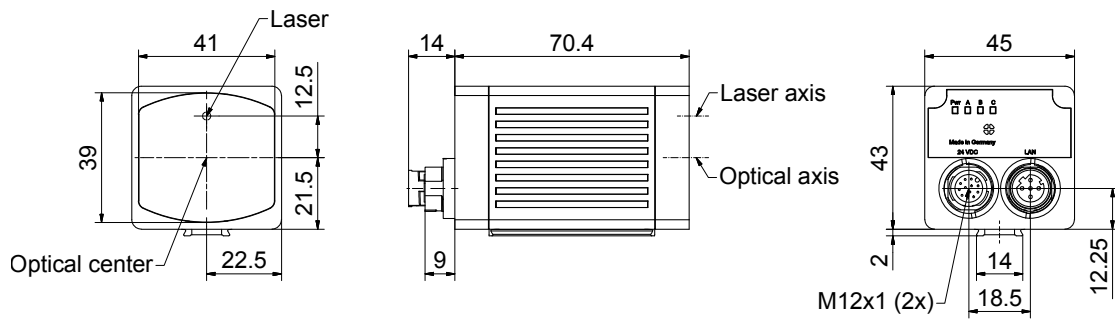
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- Reading of several similar or differing types of codes in one reading pass

Optical data		Functions	
Resolution	2560 x 1936 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/1.8", monochrome	Detectors	<b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>Result processing: Text:</b> checking and calculating with results from detectors
Integrated lens, focal length [mm]	20 (medium)		
Pixel size	2.8 µm x 2.8 µm		
Focus	Motorized		
Adjustment range	100 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	32 x 24 mm		
Target laser	Laser: red (635 nm) class 1  (IEC 60825-1)		
Electrical data		Mechanical data	
Operating voltage, +U <sub>B</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>B</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>B</sub> -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 VISOR® V20-CR-Advanced	Ethernet (LAN), EtherNet/IP, PROFINET, SensoWeb, Service Port	Vibration resistance	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs	Shock resistance	EN 60068-2-27
Encoder	✓		

<sup>1</sup> Max. ripple < 5V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing

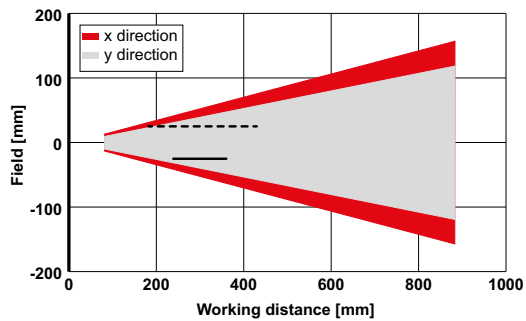
VISOR® vision sensor



153-13554

4

Field of view V50, medium



155-03559

----- Increased depth of field  
 ——— Normal depth of field

illumination	Part number	Article number	Accessories	
White	V50-CR-A3-W-M-M2-L	635-91028	Connection cables	<a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a>
Red	V50-CR-A3-R-M-M2-L	635-91030	Illumination	
Infrared	V50-CR-A3-I-M-M2-L	635-91032	Brackets	
White	V50-CR-A3-W-MD-M2-L	635-91048	Interface accessories	
Red	V50-CR-A3-R-MD-M2-L	635-91049		
Infrared	V50-CR-A3-I-MD-M2-L	635-91050		

# VISOR® V50 Code Reader Advanced, C-mount

Multi-Code Reader for 1D and 2D codes



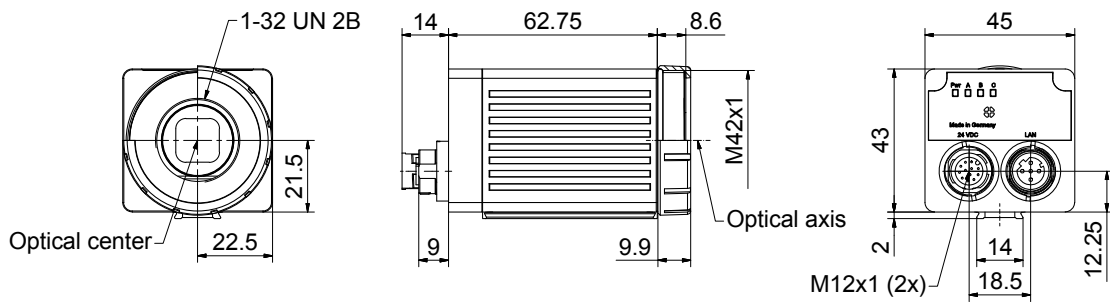
## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Reliable detection of even poorly readable codes under difficult ambient conditions
- Comprehensive tools for flexible and easy connection to PC and PLC environments
- Reading of several similar or differing types of codes in one reading pass

Optical data		Functions	
Resolution	2560 x 1936 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/1.8", monochrome	Detectors	<b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>Result processing: Text:</b> 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 <sub>B</sub>	18 ... 30V DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65 <sup>2</sup>
Protective circuits	Reverse-polarity protection, U <sub>B</sub> / 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 <sup>3</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>3</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>B</sub> -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	✓		

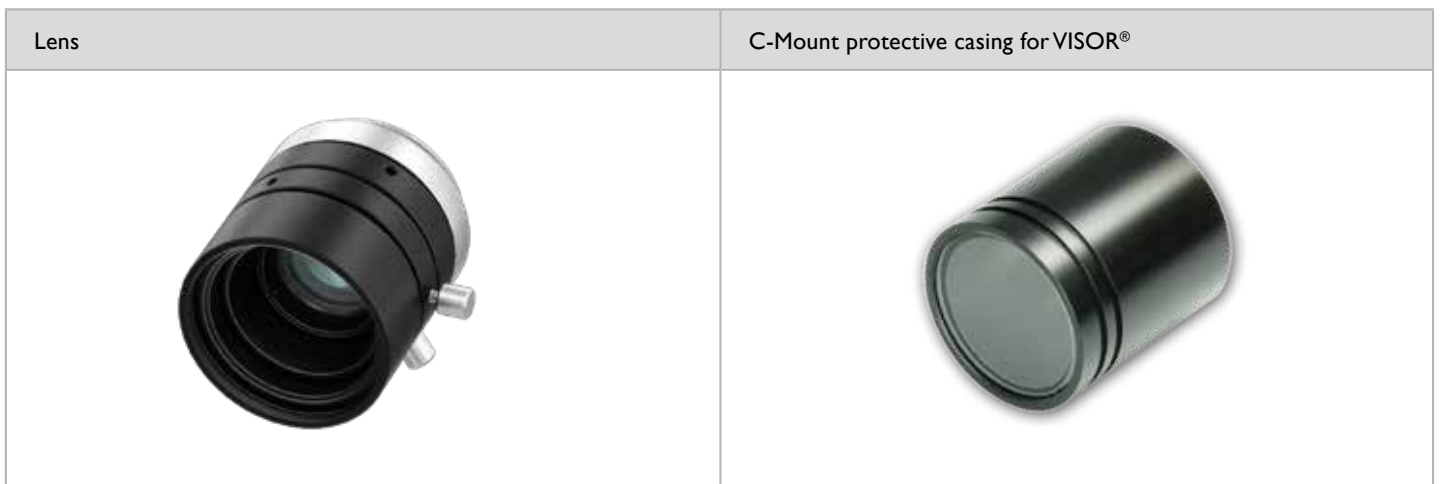
<sup>1</sup> Max. ripple < 5V<sub>SS</sub>    <sup>2</sup> Only with protective casing    <sup>3</sup> 80 % air humidity, noncondensing

VISOR® vision sensor C-mount



153-13555

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Part number	Article number
LPT Vxx-G37.5	651-01006
LPT Vxx-25.0	651-01007

	LOC-08-HD-30.5x0.5	LOC-12-HD-27x0.5	LOC-16-HD-27x0.5	LOC-25-HD-27x0.5	LOC-35-HD-27x0.5	LOC-50-HD-27x0.5	LOC-75-HD-34x0.5
Focal length	8 mm	12 mm	16 mm	25 mm	35 mm	50 mm	75 mm
Article number	526-51535	526-51536	526-51537	526-51538	526-51539	526-51540	526-51541

Part number	Article number	Accessories
V50-CR-A3-C-2	635-91033	<ul style="list-style-type: none"> <li>Connection cables</li> <li>Illumination</li> <li>Lenses</li> <li>Brackets</li> <li>Interface accessories</li> </ul>

[www.sensopart.com/en/accessories](http://www.sensopart.com/en/accessories)




# VISOR® V50 Code Reader Professional, wide field of view

Multi Code Reader for 1D and 2D codes and OCR



## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Combination of two functions in one device: code reading and object detection
- Reliable detection of even poorly readable codes under difficult ambient conditions
- Comprehensive tools for flexible and easy connection to PC and PLC environments
- Reading of several similar or differing types of codes in one reading pass
- Reading OCR fonts

Optical data		Functions	
Resolution	2560 × 1936 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/1.8", monochrome	Detectors	Position tracking; X/Y and orientation; <b>Pattern matching, contour:</b> teach-in and detection of patterns and contours; <b>Grey threshold, brightness:</b> evaluation of brightness; <b>Contrast:</b> evaluation of contrast; <b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>OCR:</b> reading of fonts; <b>Result processing; Text:</b> checking and calculating with results from detectors
Integrated lens, focal length [mm]	9.6 (wide)		
Pixel size	2.8 μm × 2.8 μm		
Focus	Motorized		
Adjustment range	40 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X × Y	32 × 24 mm		
Target laser	Laser: red (635 nm) class 1 		
Electrical data		Mechanical data	
Operating voltage, +U <sub>b</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 × 45 × 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>b</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>b</sub> -1 V / Low < 3 V	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	Vibration resistance	EN 60068-2-6
VISOR® V20-CR-Advanced		Shock resistance	EN 60068-2-27
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs		
Encoder	✓		

<sup>1</sup> Max. ripple < 5 V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing

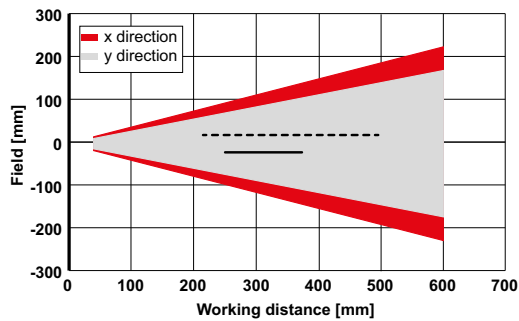
VISOR® vision sensor



153-13554

4

Field of view V50, wide



155-03626

----- Increased depth of field  
 \_\_\_\_\_ Normal depth of field

Illumination	Part number	Article number	Accessories
White	V50-CR-P3-W-W-M2-L	635-91020	Connection cables Illumination Brackets Interface accessories <a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a>
Red	V50-CR-P3-R-W-M2-L	635-91022	
Infrared	V50-CR-P3-I-W-M2-L	635-91024	
White	V50-CR-P3-W-WD-M2-L	635-91060	
Red	V50-CR-P3-R-WD-M2-L	635-91061	
Infrared	V50-CR-P3-I-WD-M2-L	635-91062	


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Multi Code Reader for 1D and 2D codes and OCR



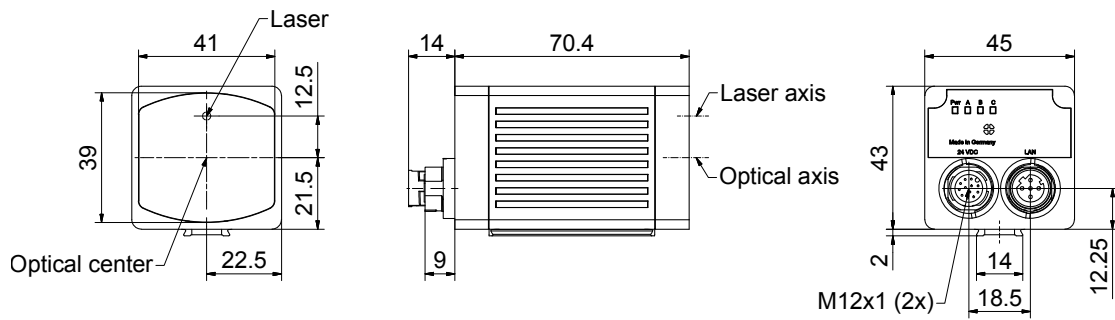
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- Reading OCR fonts

Optical data		Functions	
Resolution	2560 x 1936 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/1.8", monochrome	Detectors	Position tracking; X/Y and orientation; <b>Pattern matching, contour:</b> teach-in and detection of patterns and contours; <b>Grey threshold, brightness:</b> evaluation of brightness; <b>Contrast:</b> evaluation of contrast; <b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>OCR:</b> reading of fonts; <b>Result processing; Text:</b> checking and calculating with results from detectors
Integrated lens, focal length [mm]	20 (medium)		
Pixel size	2.8 µm x 2.8 µm		
Focus	Motorized		
Adjustment range	100 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	32 x 24 mm		
Target laser	Laser: red (635 nm) class 1 		
Electrical data		Mechanical data	
Operating voltage, +U <sub>b</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>b</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>b</sub> -1 V / Low < 3 V	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	Vibration resistance	EN 60068-2-6
VISOR® V20-CR-Advanced		Shock resistance	EN 60068-2-27
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs		
Encoder	✓		

<sup>1</sup> Max. ripple < 5 V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing

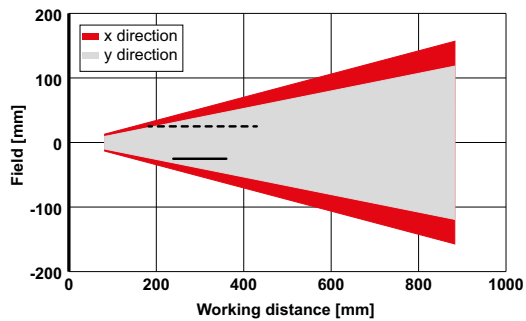
VISOR® vision sensor



153-13554

4

Field of view V50, medium



155-03559

----- Increased depth of field  
 \_\_\_\_\_ Normal depth of field

Illumination	Part number	Article number	Accessories	
White	V50-CR-P3-W-M-M2-L	635-91021	Connection cables	<a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a>
Red	V50-CR-P3-R-M-M2-L	635-91023	Illumination	
Infrared	V50-CR-P3-I-M-M2-L	635-91025	Brackets	
White	V50-CR-P3-W-MD-M2-L	635-91045	Interface accessories	
Red	V50-CR-P3-R-MD-M2-L	635-91046		
Infrared	V50-CR-P3-I-MD-M2-L	635-91047		

# VISOR® V50 Code Reader Professional, C-mount

Multi Code Reader for 1D und 2D codes and OCR



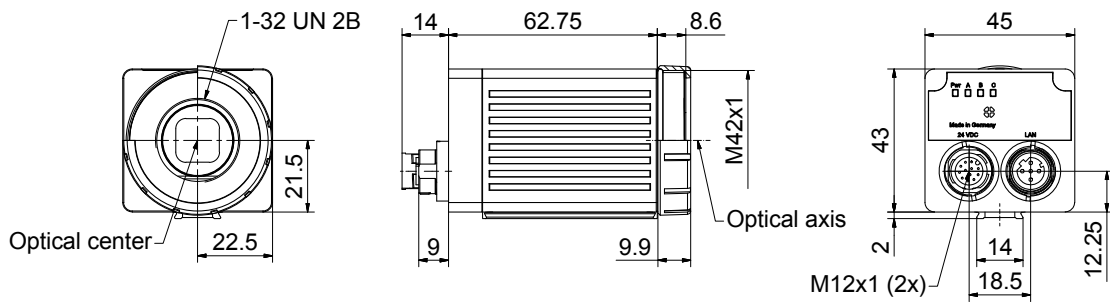
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Optical data		Functions	
Resolution	2560 x 1936 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/1.8", monochrome	Detectors	Position tracking; X/Y and orientation; <b>Pattern matching, contour:</b> teach-in and detection of patterns and contours; <b>Grey threshold, brightness:</b> evaluation of brightness; <b>Contrast:</b> evaluation of contrast; <b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>OCR:</b> reading of fonts; <b>Result processing:Text:</b> 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 <sub>b</sub>	18 ... 30V DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65 <sup>2</sup>
Protective circuits	Reverse-polarity protection, U <sub>b</sub> / 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 <sup>3</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>3</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>b</sub> -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
VISOR® V20-CR-Advanced		Schockfestigkeit	EN 60068-2-27
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs		
Encoder	✓		

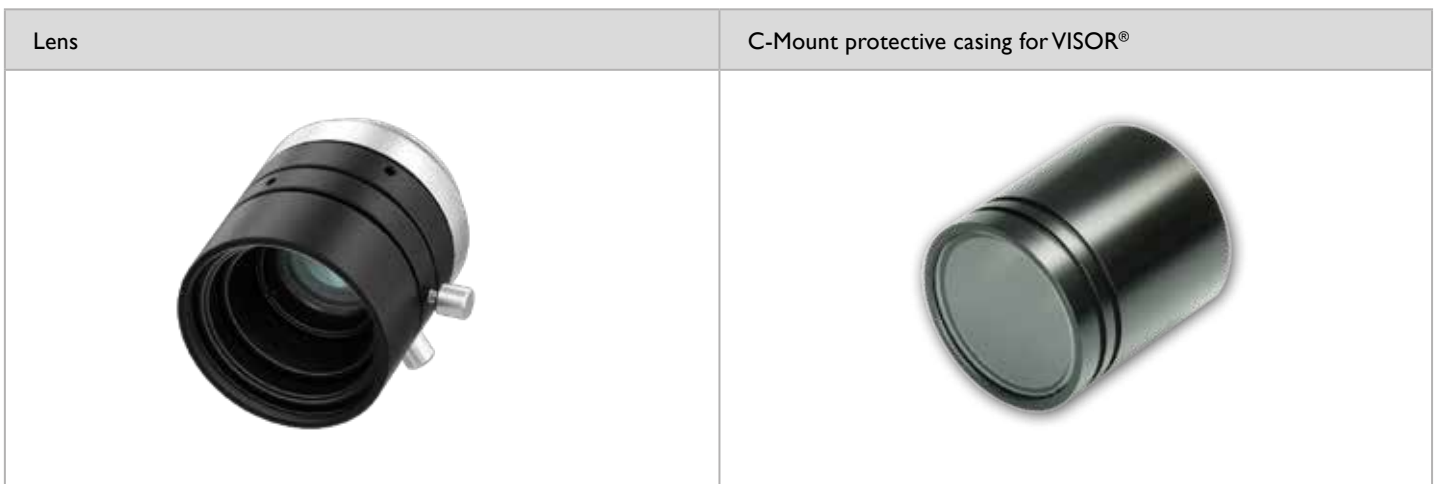
<sup>1</sup> Max. ripple < 5 V<sub>SS</sub>    <sup>2</sup> Only with protective casing    <sup>3</sup> 80 % air humidity, noncondensing

VISOR® vision sensor C-mount



153-13555

4



Part number	Article number
LPT Vxx-G37.5	651-01006
LPT Vxx-25.0	651-01007

	LOC-08-HD-30.5x0.5	LOC-12-HD-27x0.5	LOC-16-HD-27x0.5	LOC-25-HD-27x0.5	LOC-35-HD-27x0.5	LOC-50-HD-27x0.5	LOC-75-HD-34x0.5
<b>Focal length</b>	8 mm	12 mm	16 mm	25 mm	35 mm	50 mm	75 mm
<b>Article number</b>	526-51535	526-51536	526-51537	526-51538	526-51539	526-51540	526-51541

Part number	Article number	Accessories
V50-CR-P3-C-2	635-91026	<ul style="list-style-type: none"> <li>Connection cables</li> <li>Illumination</li> <li>Lenses</li> <li>Brackets</li> <li>Interface accessories</li> </ul> <a data-bbox="1197 1836 1516 1870" href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a>


# VISOR® V20 Code Reader Standard, wide field of view

Reading of 1D and 2D codes

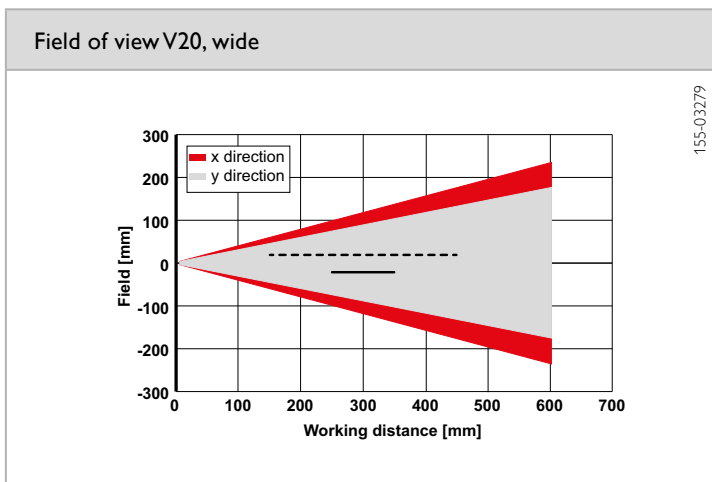
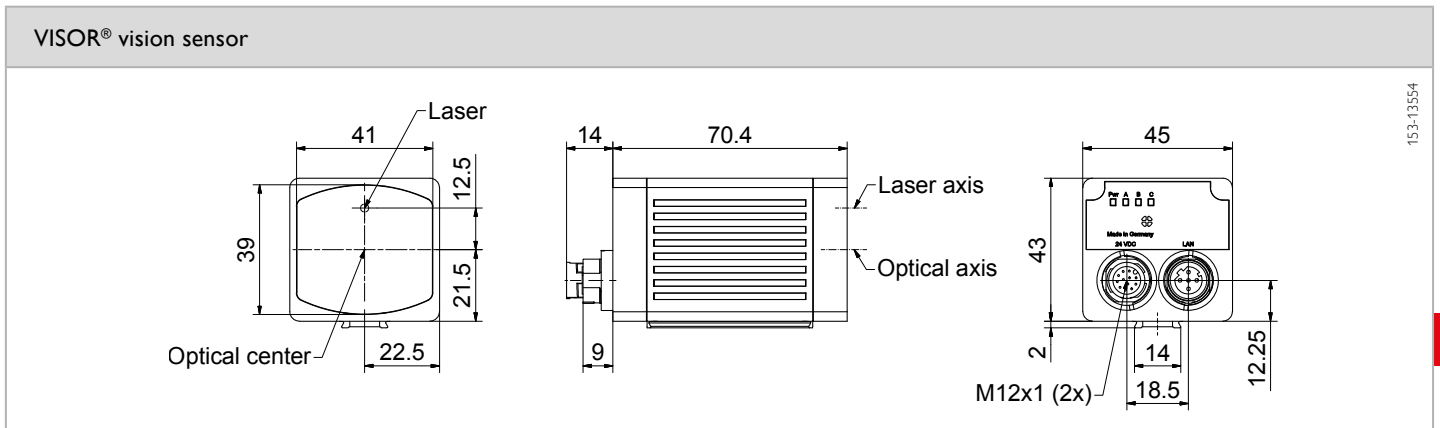


## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Comprehensive tools for flexible and easy connection to PC and PLC environments

Optical data		Functions	
Resolution	1440 x 1080 pixels	Number of jobs / detectors	8 / 2
Imaging chip CMOS	1/2.9", monochrome	Detectors	<b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417;
Integrated lens, focal length [mm]	6.5 (wide)		
Pixel size	3.45 µm x 3.45 µm		
Focus	Motorized		
Adjustment range	10 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	6 x 4 mm		
Target laser	Laser: red (635 nm) class 1  (IEC 60825-1)		
Electrical data		Mechanical data	
Operating voltage, +U <sub>B</sub>	18 ... 30V DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>B</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>B</sub> -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 VISOR® V20-CR-Advanced	Ethernet (LAN), EtherNet/IP, PROFINET, SensoWeb, Service Port	Vibration resistance	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs	Shock resistance	EN 60068-2-27
Encoder	✓		

<sup>1</sup> Max. ripple < 5V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing



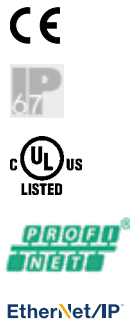
----- Increased depth of field  
 ——— Normal depth of field

Illumination	Part number	Article number	Accessories
White	V20-CR-S3-W-W-M2-L	632-91055	Connection cables Illumination Brackets Interface accessories <a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a>
Red	V20-CR-S3-R-W-M2-L	632-91058	
Infrared	V20-CR-S3-I-W-M2-L	632-91061	




# VISOR® V20 Code Reader Standard, medium field of view

Reading of 1D and 2D codes

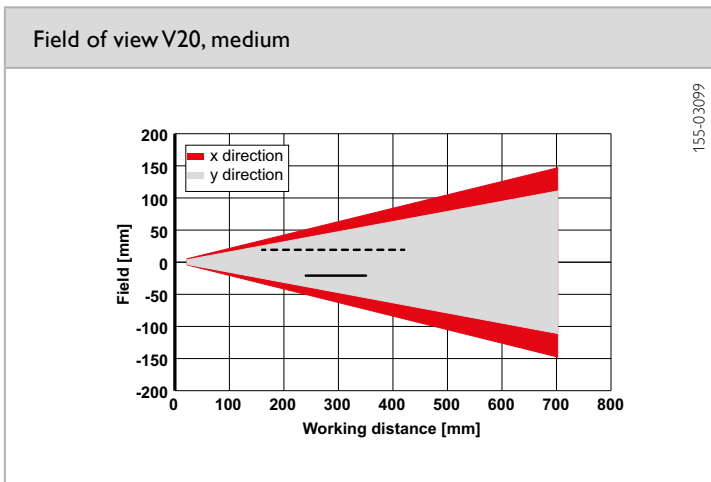
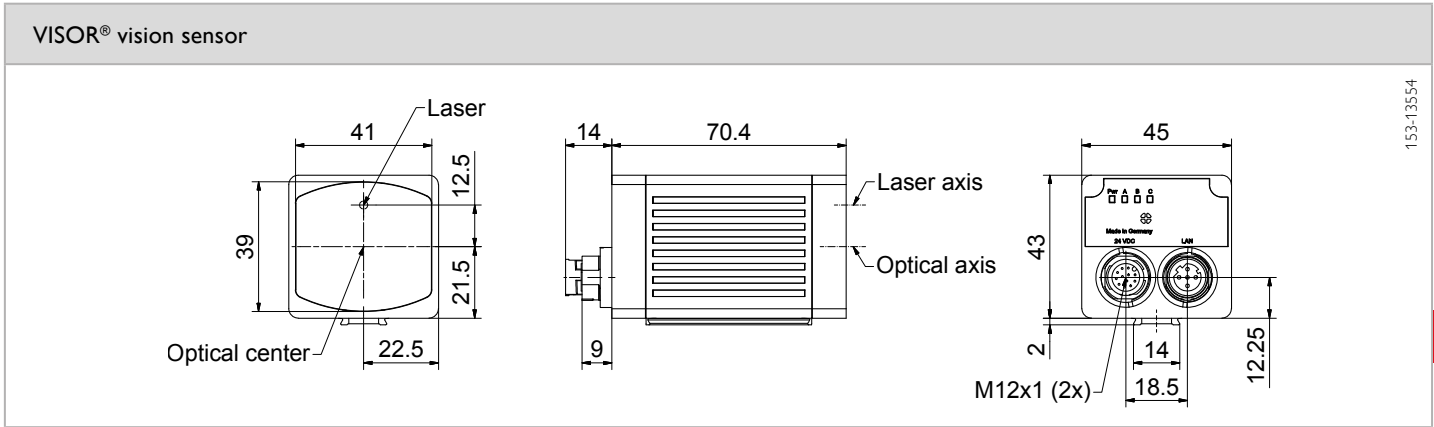


## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Comprehensive tools for flexible and easy connection to PC and PLC environments

Optical data		Functions	
Resolution	1440 x 1080 pixels	Number of jobs / detectors	8 / 2
Imaging chip CMOS	1/2.9", monochrome	Detectors	<b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417;
Integrated lens, focal length [mm]	12 (medium)		
Pixel size	3.45 µm x 3.45 µm		
Focus	Motorized		
Adjustment range	25 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	10 x 8 mm		
Target laser	Laser: red (635 nm) class 1  (IEC 60825-1)		
Electrical data		Mechanical data	
Operating voltage, +U <sub>B</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>B</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>B</sub> -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 VISOR® V20-CR-Advanced	Ethernet (LAN), EtherNet/IP, PROFINET, SensoWeb, Service Port	Vibration resistance	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs	Shock resistance	EN 60068-2-27
Encoder	✓		

<sup>1</sup> Max. ripple < 5V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing



----- Increased depth of field  
 \_\_\_\_\_ Normal depth of field

Illumination	Part number	Article number	Accessories
White	V20-CR-S3-W-M-M2-L	632-91056	Connection cables
Red	V20-CR-S3-R-M-M2-L	632-91059	Illumination
Infrared	V20-CR-S3-I-M-M2-L	632-91062	Brackets
			Interface accessories
			<a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a>


# VISOR® V20 Code Reader Standard, narrow field of view

Reading of 1D and 2D codes



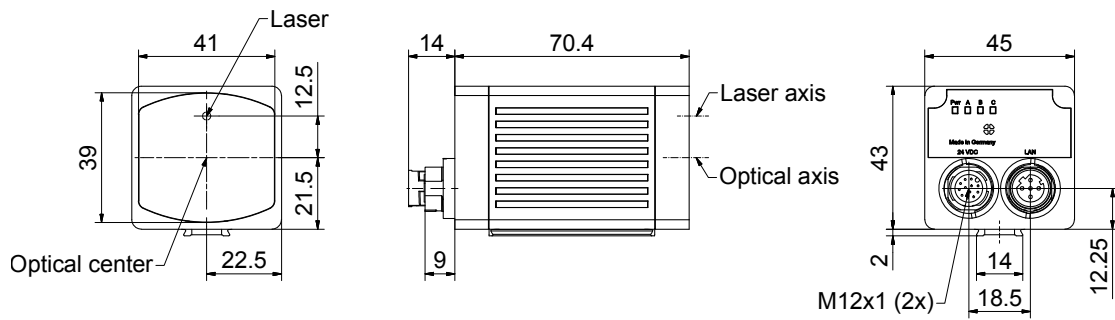
## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Comprehensive tools for flexible and easy connection to PC and PLC environments

Optical data		Functions	
Resolution	1440 x 1080 pixels	Number of jobs / detectors	8 / 2
Imaging chip CMOS	1/2.9", monochrome	Detectors	<b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417;
Integrated lens, focal length [mm]	20 (narrow)		
Pixel size	3.45 µm x 3.45 µm		
Focus	Motorized		
Adjustment range	100 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	18 x 14 mm		
Target laser	Laser: red (635 nm) class 1  (IEC 60825-1)		
Electrical data		Mechanical data	
Operating voltage, +U <sub>B</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>B</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>B</sub> -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 VISOR® V20-CR-Advanced	Ethernet (LAN), EtherNet/IP, PROFINET, SensoWeb, Service Port	Vibration resistance	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs	Shock resistance	EN 60068-2-27
Encoder	✓		

<sup>1</sup> Max. ripple < 5V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing

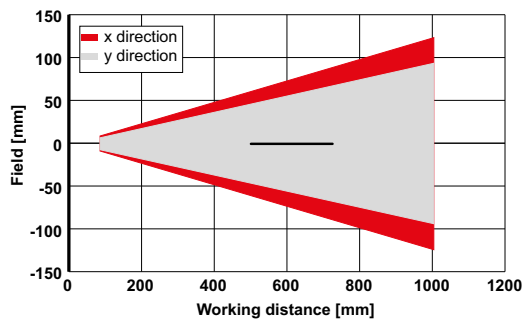
VISOR® vision sensor



153-13554

4

Field of view V20, narrow



155-03098

— Normal depth of field

illumination	Part number	Article number	Accessories
White	V20-CR-S3-W-N-M2-L	632-91057	Connection cables
Red	V20-CR-S3-R-N-M2-L	632-91060	Illumination
Infrared	V20-CR-S3-I-N-M2-L	632-91063	Brackets
			Interface accessories
			<a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a>


# VISOR® V20 Code Reader Advanced, wide field of view

Multi-Code Reader for 1D and 2D codes

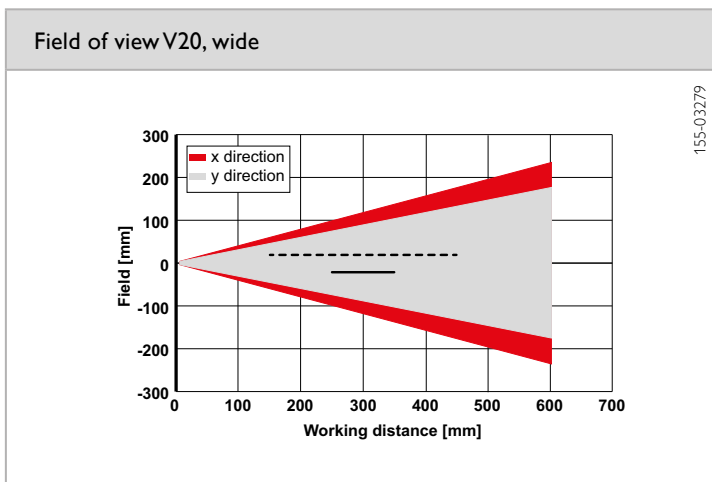
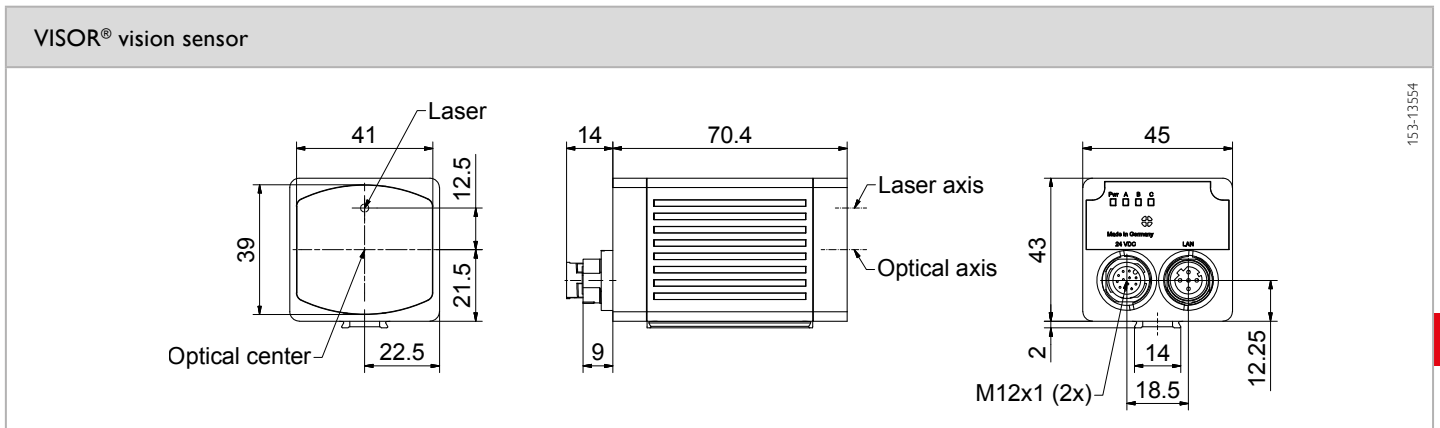


## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Reliable detection of even poorly readable codes under difficult ambient conditions
- Comprehensive tools for flexible and easy connection to PC and PLC environments
- Reading of several similar or differing types of codes in one reading pass

Optical data		Functions	
Resolution	1440 x 1080 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/2.9", monochrome	Detectors	<b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>Result processing: Text:</b> checking and calculating with results from detectors
Integrated lens, focal length [mm]	6.5 (wide)		
Pixel size	3.45 µm x 3.45 µm		
Focus	Motorized		
Adjustment range	10 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	6 x 4 mm		
Target laser	Laser: red (635 nm) class 1  (IEC 60825-1)		
Electrical data		Mechanical data	
Operating voltage, +U <sub>B</sub>	18 ... 30V DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>B</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>B</sub> -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 VISOR® V20-CR-Advanced	Ethernet (LAN), EtherNet/IP, PROFINET, SensoWeb, Service Port	Vibration resistance	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs	Shock resistance	EN 60068-2-27
Encoder	✓		

<sup>1</sup> Max. ripple < 5V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing

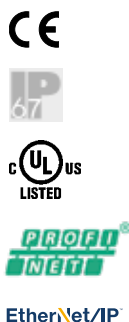


----- Increased depth of field  
 \_\_\_\_\_ Normal depth of field

Illumination	Part number	Article number	Accessories
White	V20-CR-A3-W-W-M2-L	632-91045	Connection cables Illumination Brackets Interface accessories <a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a>
White	V20-CR-A3-W-WD-M2-L	632-91094	
Red	V20-CR-A3-R-W-M2-L	632-91048	
Red	V20-CR-A3-R-WD-M2-L	632-91096	
Infrared	V20-CR-A3-I-W-M2-L	632-91051	
Infrared	V20-CR-A3-I-WD-M2-L	632-91098	


# VISOR® V20 Code Reader Advanced, medium field of view

Multi-Code Reader for 1D and 2D codes



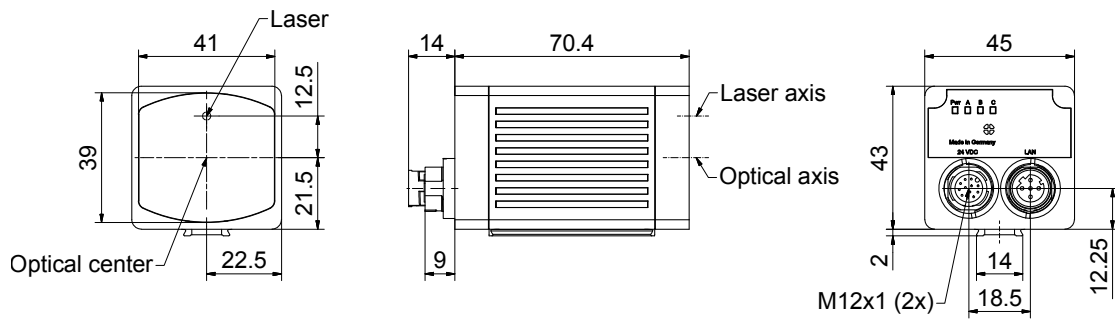
## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Reliable detection of even poorly readable codes under difficult ambient conditions
- Comprehensive tools for flexible and easy connection to PC and PLC environments
- Reading of several similar or differing types of codes in one reading pass

Optical data		Functions	
Resolution	1440 x 1080 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/2.9", monochrome	Detectors	<b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>Result processing: Text:</b> checking and calculating with results from detectors
Integrated lens, focal length [mm]	12 (medium)		
Pixel size	3.45 µm x 3.45 µm		
Focus	Motorized		
Adjustment range	25 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	10 x 8 mm		
Target laser	Laser: red (635 nm) class 1  (IEC 60825-1)		
Electrical data		Mechanical data	
Operating voltage, +U <sub>B</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>B</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>B</sub> -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 VISOR® V20-CR-Advanced	Ethernet (LAN), EtherNet/IP, PROFINET, SensoWeb, Service Port	Vibration resistance	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs	Shock resistance	EN 60068-2-27
Encoder	✓		

<sup>1</sup> Max. ripple < 5V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing

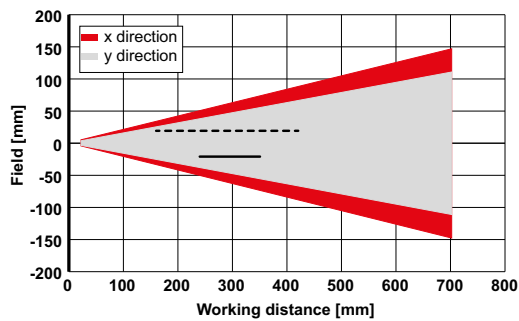
VISOR® vision sensor



153-13554

4

Field of view V20, medium



155-03099

----- Increased depth of field  
 \_\_\_\_\_ Normal depth of field

illumination	Part number	Article number	Accessories
White	V20-CR-A3-W-M-M2-L	632-91046	Connection cables Illumination Brackets Interface accessories <a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a>
White	V20-CR-A3-W-MD-M2-L	632-91095	
Red	V20-CR-A3-R-M-M2-L	632-91049	
Red	V20-CR-A3-R-MD-M2-L	632-91078	
Infrared	V20-CR-A3-I-M-M2-L	632-91052	
Infrared	V20-CR-A3-I-MD-M2-L	632-91099	




# VISOR® V20 Code Reader Advanced, narrow field of view

Multi-Code Reader for 1D and 2D codes



## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Reliable detection of even poorly readable codes under difficult ambient conditions
- Comprehensive tools for flexible and easy connection to PC and PLC environments
- Reading of several similar or differing types of codes in one reading pass

Optical data		Functions	
Resolution	1440 x 1080 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/2.9", monochrome	Detectors	<b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>Result processing: Text:</b> checking and calculating with results from detectors
Integrated lens, focal length [mm]	20 (narrow)		
Pixel size	3.45 µm x 3.45 µm		
Focus	Motorized		
Adjustment range	100 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	18 x 14 mm		
Target laser	Laser: red (635 nm) class 1  (IEC 60825-1)		
Electrical data		Mechanical data	
Operating voltage, +U <sub>B</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>B</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>B</sub> -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 VISOR® V20-CR-Advanced	Ethernet (LAN), EtherNet/IP, PROFINET, SensoWeb, Service Port	Vibration resistance	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs	Shock resistance	EN 60068-2-27
Encoder	✓		

<sup>1</sup> Max. ripple < 5V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing

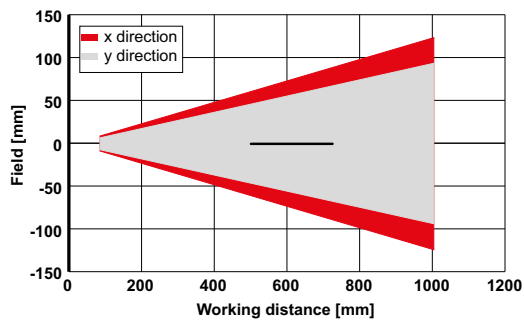
VISOR® vision sensor



153-13554

4

Field of view V20, narrow



155-03098

— Normal depth of field

illumination	Part number	Article number	Accessories
White	V20-CR-A3-W-N-M2-L	632-91047	Connection cables <a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a> Illumination Brackets Interface accessories
Red	V20-CR-A3-R-N-M2-L	632-91050	
Infrared	V20-CR-A3-I-N-M2-L	632-91053	

# VISOR® V20 Code Reader Advanced, C-mount

Multi-Code Reader for 1D and 2D codes



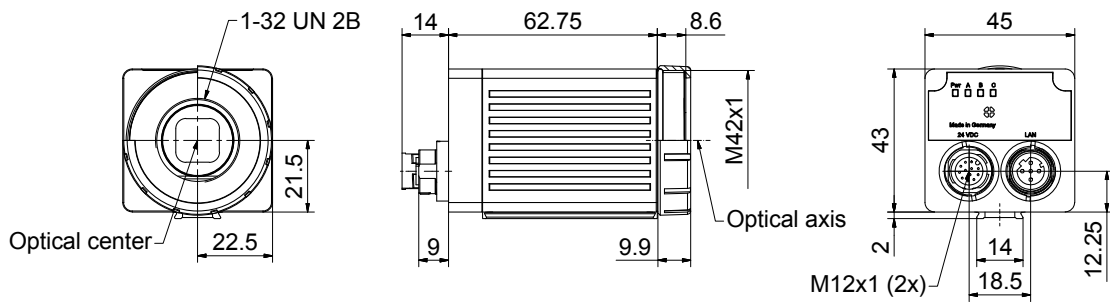
## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Reliable detection of even poorly readable codes under difficult ambient conditions
- Comprehensive tools for flexible and easy connection to PC and PLC environments
- Reading of several similar or differing types of codes in one reading pass

Optical data		Functions	
Resolution	1440 x 1080 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/2.9", monochrome	Detectors	<b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>Result processing: Text:</b> checking and calculating with results from detectors
Integrated lens, focal length [mm]	C-mount		
Pixel size	3.45 µm x 3.45 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 <sub>B</sub>	18 ... 30V DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65 <sup>2</sup>
Protective circuits	Reverse-polarity protection, U <sub>B</sub> / 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 <sup>3</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>3</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>B</sub> -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	Vibration resistance	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs	Shock resistance	EN 60068-2-27
Encoder	✓		

<sup>1</sup> Max. ripple < 5V<sub>SS</sub>    <sup>2</sup> Only with protective casing    <sup>3</sup> 80 % air humidity, noncondensing

VISOR® vision sensor C-mount



Lens



C-Mount protective casing for VISOR®



Part number	Article number
LPT Vxx-G37.5	651-01006
LPT Vxx-25.0	651-01007

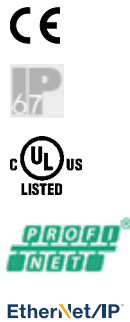
	LOC-08-HD-30.5x0.5	LOC-12-HD-27x0.5	LOC-16-HD-27x0.5	LOC-25-HD-27x0.5	LOC-35-HD-27x0.5	LOC-50-HD-27x0.5	LOC-75-HD-34x0.5
Focal length	8 mm	12 mm	16 mm	25 mm	35 mm	50 mm	75 mm
Article number	526-51535	526-51536	526-51537	526-51538	526-51539	526-51540	526-51541

Part number	Article number	Accessories
V20-CR-A3-C-2	632-91054	<ul style="list-style-type: none"> <li>Connection cables</li> <li>Illumination</li> <li>Lenses</li> <li>Brackets</li> <li>Interface accessories</li> </ul>

[www.sensopart.com/en/accessories](http://www.sensopart.com/en/accessories)


# VISOR® V20 Code Reader Professional, wide field of view

Multi Code Reader for 1D and 2D codes and OCR



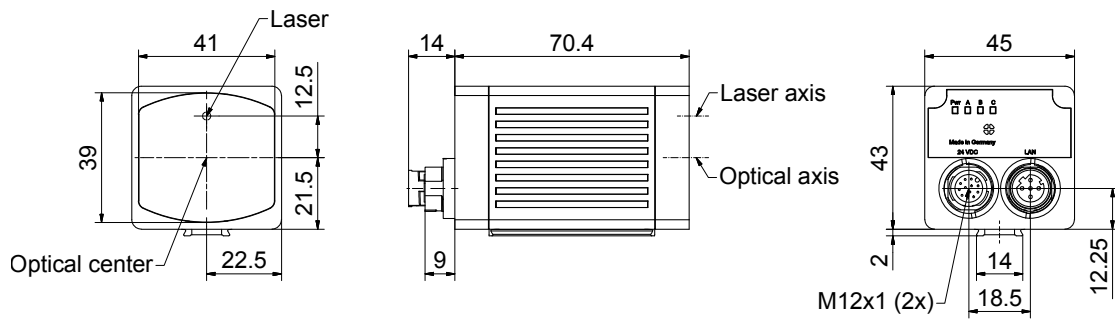
## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Combination of two functions in one device: code reading and object detection
- Reliable detection of even poorly readable codes under difficult ambient conditions
- Comprehensive tools for flexible and easy connection to PC and PLC environments
- Reading of several similar or differing types of codes in one reading pass
- Reading OCR fonts

Optical data		Functions	
Resolution	1440 x 1080 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/2.9", monochrome	Detectors	Position tracking; X/Y and orientation; <b>Pattern matching, contour:</b> teach-in and detection of patterns and contours; <b>Grey threshold, brightness:</b> evaluation of brightness; <b>Contrast:</b> evaluation of contrast; <b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>OCR:</b> reading of fonts; <b>Result processing:Text:</b> checking and calculating with results from detectors
Integrated lens, focal length [mm]	6.5 (wide)		
Pixel size	3.45 µm x 3.45 µm		
Focus	Motorized		
Adjustment range	10 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	6 x 4 mm		
Target laser	Laser: red (635 nm) class 1 		
	(IEC 60825-1)		
Electrical data		Mechanical data	
Operating voltage, +U <sub>b</sub>	18 ... 30V DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>b</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>b</sub> -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	Vibration resistance	EN 60068-2-6
VISOR® V20-CR-Advanced		Shock resistance	EN 60068-2-27
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs		
Encoder	✓		

<sup>1</sup> Max. ripple < 5 V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing

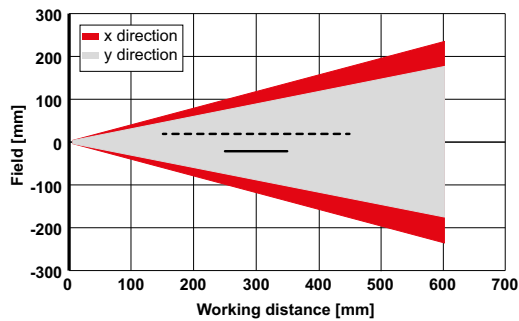
VISOR® vision sensor



153-13554

4

Field of view V20, wide



155-03279

----- Increased depth of field  
 \_\_\_\_\_ Normal depth of field

Illumination	Part number	Article number	Accessories
White	V20-CR-P3-W-W-M2-L	632-91079	Connection cables Illumination Brackets Interface accessories <a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a>
White	V20-CR-P3-W-WD-M2-L	632-91082	
Red	V20-CR-P3-R-W-M2-L	632-91084	
Red	V20-CR-P3-R-WD-M2-L	632-91087	
Infrared	V20-CR-P3-I-W-M2-L	632-91089	
Infrared	V20-CR-P3-I-WD-M2-L	632-91092	


# VISOR® V20 Code Reader Professional, medium field of view

Multi Code Reader for 1D and 2D codes and OCR

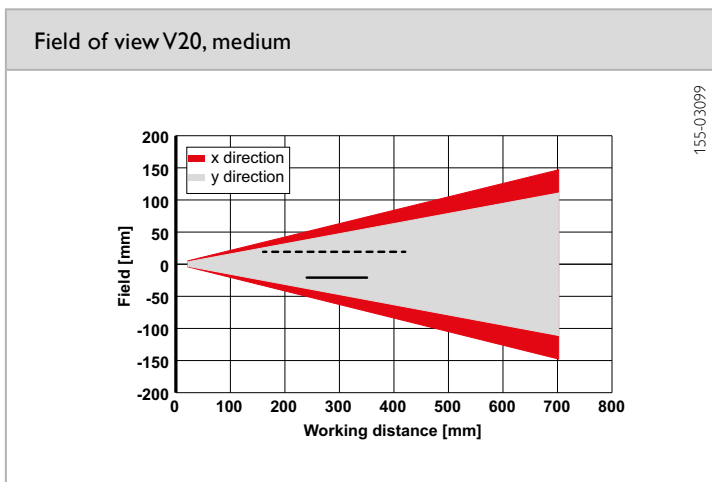
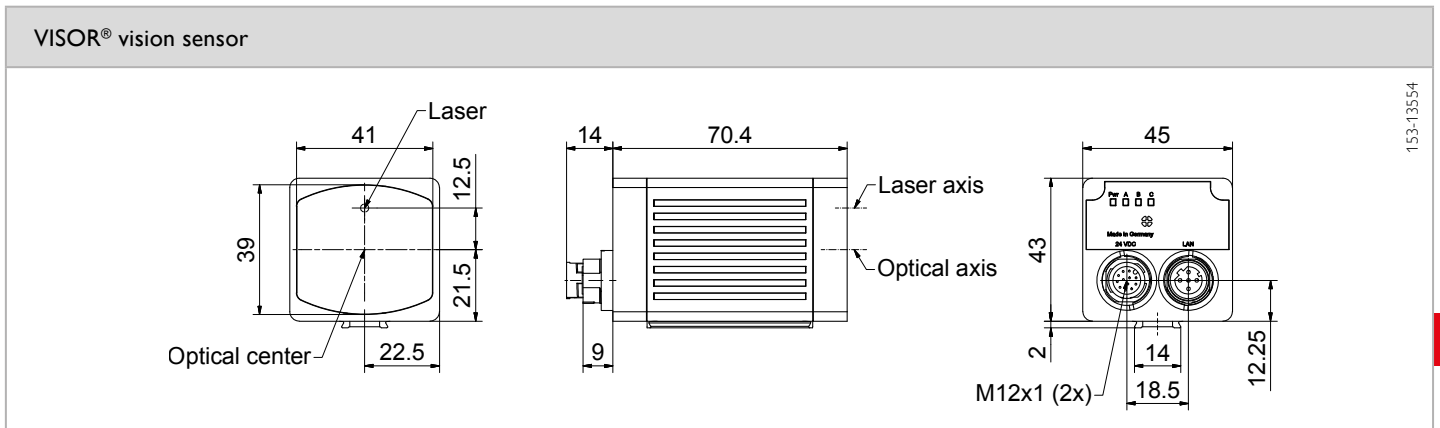


## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Combination of two functions in one device: code reading and object detection
- Reliable detection of even poorly readable codes under difficult ambient conditions
- Comprehensive tools for flexible and easy connection to PC and PLC environments
- Reading of several similar or differing types of codes in one reading pass
- Reading OCR fonts

Optical data		Functions	
Resolution	1440 x 1080 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/2.9", monochrome	Detectors	Position tracking; X/Y and orientation; <b>Pattern matching, contour:</b> teach-in and detection of patterns and contours; <b>Grey threshold, brightness:</b> evaluation of brightness; <b>Contrast:</b> evaluation of contrast; <b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>OCR:</b> reading of fonts; <b>Result processing; Text:</b> checking and calculating with results from detectors
Integrated lens, focal length [mm]	12 (medium)		
Pixel size	3.45 µm x 3.45 µm		
Focus	Motorized		
Adjustment range	25 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	10 x 8 mm		
Target laser	Laser: red (635 nm) class 1 		
	(IEC 60825-1)		
Electrical data		Mechanical data	
Operating voltage, +U <sub>b</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>b</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>b</sub> -1 V / Low < 3 V	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	Vibration resistance	EN 60068-2-6
VISOR® V20-CR-Advanced		Shock resistance	EN 60068-2-27
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs		
Encoder	✓		

<sup>1</sup> Max. ripple < 5 V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing



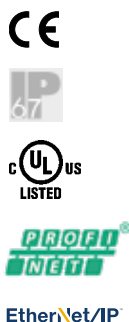
----- Increased depth of field  
 \_\_\_\_\_ Normal depth of field

Illumination	Part number	Article number	Accessories
White	V20-CR-P3-W-M-M2-L	632-91080	Connection cables Illumination Brackets Interface accessories <a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a>
White	V20-CR-P3-W-MD-M2-L	632-91083	
Red	V20-CR-P3-R-M-M2-L	632-91085	
Red	V20-CR-P3-R-MD-M2-L	632-91088	
Infrared	V20-CR-P3-I-M-M2-L	632-91090	
Infrared	V20-CR-P3-I-MD-M2-L	632-91093	




# VISOR® V20 Code Reader Professional, narrow field of view

Multi Code Reader for 1D and 2D codes and OCR



## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Combination of two functions in one device: code reading and object detection
- Reliable detection of even poorly readable codes under difficult ambient conditions
- Comprehensive tools for flexible and easy connection to PC and PLC environments
- Reading of several similar or differing types of codes in one reading pass
- Reading OCR fonts

Optical data		Functions	
Resolution	1440 x 1080 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/2.9", monochrome	Detectors	Position tracking; X/Y and orientation; <b>Pattern matching, contour:</b> teach-in and detection of patterns and contours; <b>Grey threshold, brightness:</b> evaluation of brightness; <b>Contrast:</b> evaluation of contrast; <b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>OCR:</b> reading of fonts; <b>Result processing; Text:</b> checking and calculating with results from detectors
Integrated lens, focal length [mm]	20 (narrow)		
Pixel size	3,45 µm x 3,45 µm		
Focus	Motorized		
Adjustment range	100 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	18 x 14 mm		
Target laser	Laser: red (635 nm) class 1  (IEC 60825-1)		
Electrical data		Mechanical data	
Operating voltage, +U <sub>b</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>b</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>b</sub> -1 V / Low < 3 V	Weight	Approx. 200 g
Input resistance	> 20 kΩ	Plug connections	Supply and I/O M12, 12-pin Ethernet M12, 4-pin
Interfaces VISOR® V20-CR-Advanced	Ethernet (LAN), EtherNet/IP, PROFINET, SensoWeb, Service Port	Vibration resistance	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs	Shock resistance	EN 60068-2-27
Encoder	✓		

<sup>1</sup> Max. ripple < 5 V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing

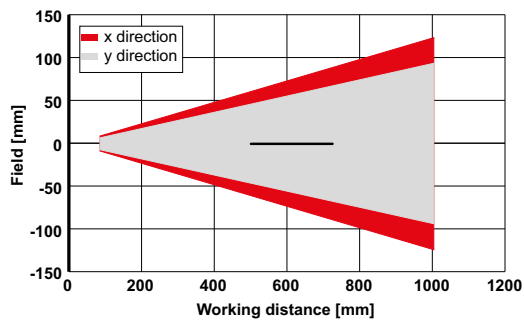
VISOR® vision sensor



153-13554

4

Field of view V20, narrow



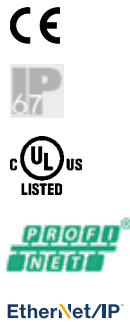
155-03098

— Normal depth of field

illumination	Part number	Article number	Accessories
White	V20-CR-P3-W-N-M2-L	632-91081	Connection cables <a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a> Illumination Brackets Interface accessories
Red	V20-CR-P3-R-N-M2-L	632-91086	
Infrared	V20-CR-P3-I-N-M2-L	632-91091	

# VISOR® V20 Code Reader Professional, C-mount

Multi Code Reader for 1D and 2D codes and OCR



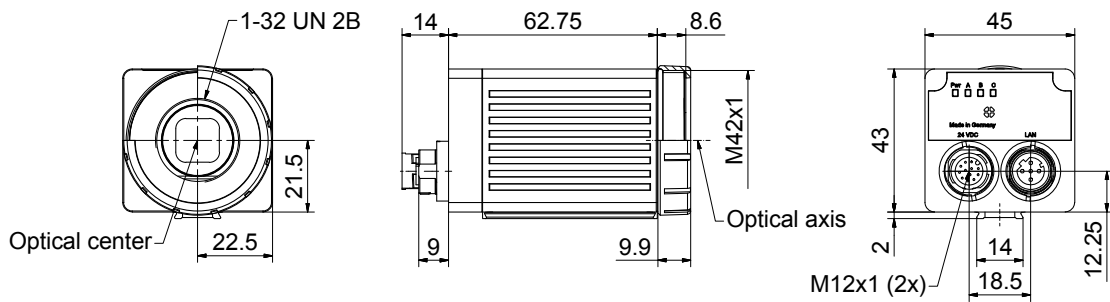
## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Combination of two functions in one device: code reading and object detection
- Reliable detection of even poorly readable codes under difficult ambient conditions
- Comprehensive tools for flexible and easy connection to PC and PLC environments
- Reading of several similar or differing types of codes in one reading pass
- Reading OCR fonts

Optical data		Functions	
Resolution	1440 x 1080 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/2.9", monochrome	Detectors	Position tracking; X/Y and orientation; <b>Pattern matching, contour:</b> teach-in and detection of patterns and contours; <b>Grey threshold, brightness:</b> evaluation of brightness; <b>Contrast:</b> evaluation of contrast; <b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>OCR:</b> reading of fonts; <b>Result processing:Text:</b> checking and calculating with results from detectors
Integrated lens, focal length [mm]	C-mount		
Pixel size	3,45 µm x 3,45 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 <sub>b</sub>	18 ... 30V DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65 <sup>2</sup>
Protective circuits	Reverse-polarity protection, U <sub>b</sub> / 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 <sup>3</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>3</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>b</sub> -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 VISOR® V20-CR-Advanced	Ethernet (LAN), EtherNet/IP, PROFINET, SensoWeb, Service Port	Vibration resistance	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs	Shock resistance	EN 60068-2-27
Encoder	✓		

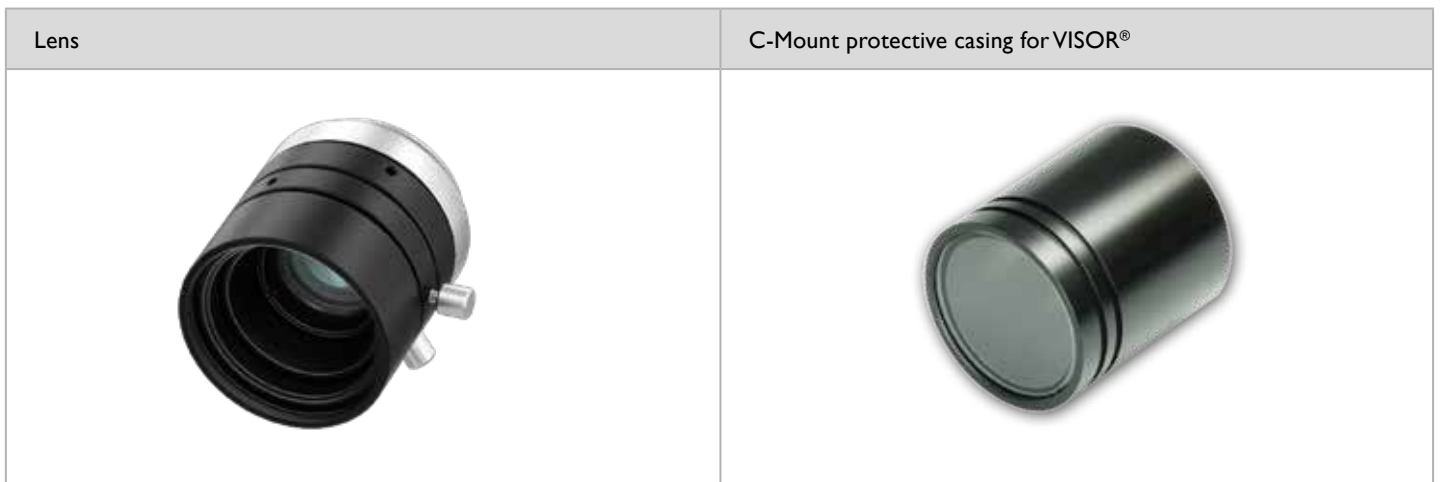
<sup>1</sup> Max. ripple < 5 V<sub>SS</sub>    <sup>2</sup> Only with protective casing    <sup>3</sup> 80 % air humidity, noncondensing

VISOR® vision sensor C-mount



153-13555

4



Part number	Article number
LPT Vxx-G37.5	651-01006
LPT Vxx-25.0	651-01007

	LOC-08-HD-30.5x0.5	LOC-12-HD-27x0.5	LOC-16-HD-27x0.5	LOC-25-HD-27x0.5	LOC-35-HD-27x0.5	LOC-50-HD-27x0.5	LOC-75-HD-34x0.5
Focal length	8 mm	12 mm	16 mm	25 mm	35 mm	50 mm	75 mm
Article number	526-51535	526-51536	526-51537	526-51538	526-51539	526-51540	526-51541

Part number	Article number	Accessories
V20-CR-P3-C-2	632-91134	<ul style="list-style-type: none"> <li>Connection cables</li> <li>Illumination</li> <li>Lenses</li> <li>Brackets</li> <li>Interface accessories</li> </ul> <p style="text-align: right;"><a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a></p>

# VISOR® V10 Code Reader Standard, wide field of view

Reading of 1D and 2D codes



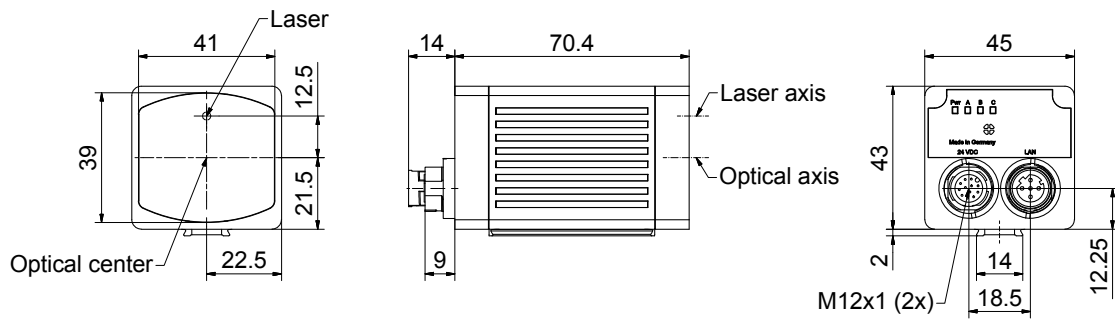
## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Comprehensive tools for flexible and easy connection to PC and PLC environments

Optical data		Functions	
Resolution	800 x 600 pixels	Number of jobs / detectors	8 / 2
Imaging chip CMOS	1/3.6", monochrome	Detectors	<b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417;
Integrated lens, focal length [mm]	5.2 (wide)		
Pixel size	4.8 µm x 4.8 µm		
Focus	Motorized		
Adjustment range	0 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	2 x 1 mm		
Electrical data		Mechanical data	
Operating voltage, +U <sub>B</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>B</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>B</sub> -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	Vibration resistance	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 4 selectable inputs/outputs	Shock resistance	EN 60068-2-27
Encoder	No		

<sup>1</sup> Max. ripple < 5V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing

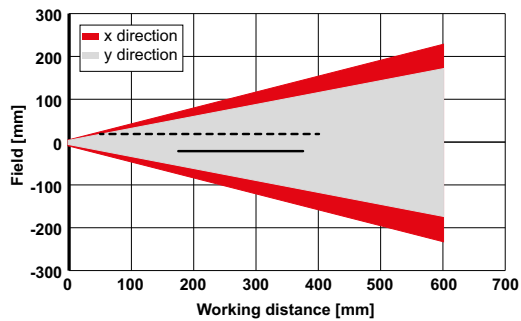
VISOR® vision sensor



153-13554

4

Field of view V10, wide



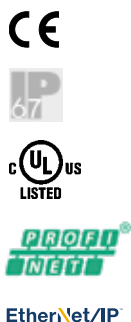
155-03101

----- Increased depth of field  
 ——— Normal depth of field

Illumination	Part number	Article number	Accessories
White	V10-CR-S3-W-W-M2	631-91061	Connection cables Illumination Brackets Interface accessories <a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a>
White	V10-CR-S3-W-WD-M2	631-91000	
Red	V10-CR-S3-R-W-M2	631-91064	
Red	V10-CR-S3-R-WD-M2	631-91066	
Infrared	V10-CR-S3-I-W-M2	631-91069	
Infrared	V10-CR-S3-I-WD-M2	631-91040	

# VISOR® V10 Code Reader Standard, medium field of view

Reading of 1D and 2D codes

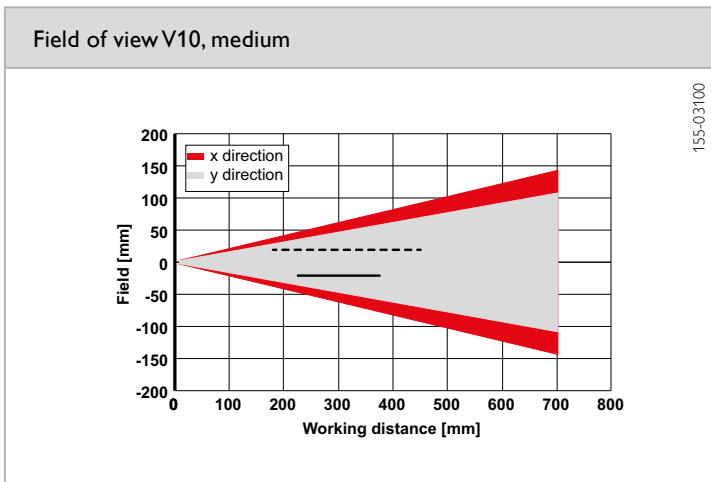
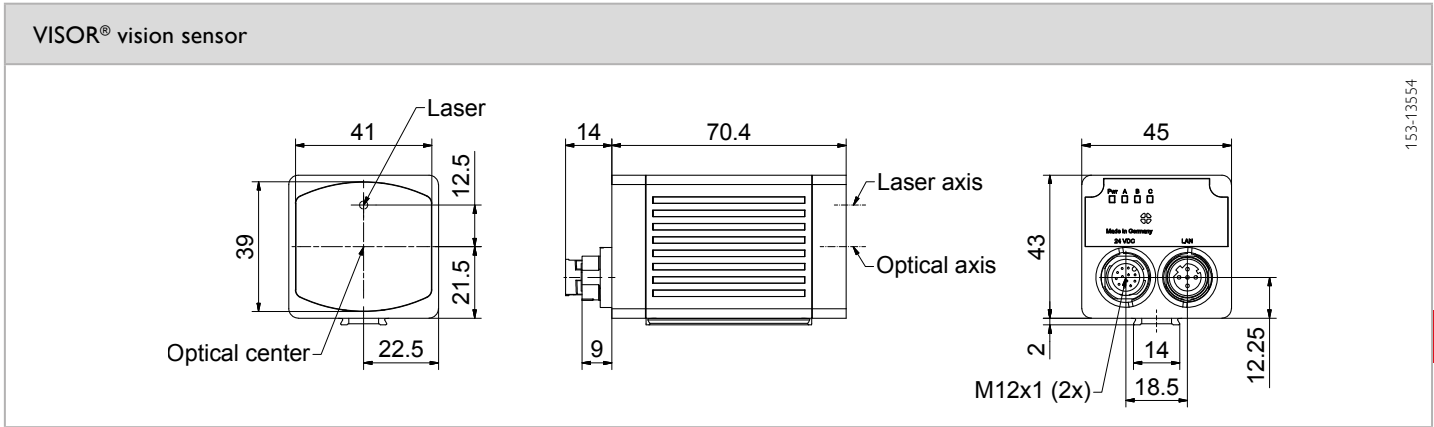


## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Comprehensive tools for flexible and easy connection to PC and PLC environments

Optical data		Functions	
Resolution	800 x 600 pixels	Number of jobs / detectors	8 / 2
Imaging chip CMOS	1/3.6", monochrome	Detectors	<b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417;
Integrated lens, focal length [mm]	9.6 (medium)		
Pixel size	4.8 µm x 4.8 µm		
Focus	Motorized		
Adjustment range	12 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	7 x 3 mm		
Electrical data		Mechanical data	
Operating voltage, +U <sub>B</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>B</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>B</sub> -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	Vibration resistance	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 4 selectable inputs/outputs	Shock resistance	EN 60068-2-27
Encoder	No		

<sup>1</sup> Max. ripple < 5V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing



----- Increased depth of field  
 \_\_\_\_\_ Normal depth of field

Illumination	Part number	Article number	Accessories
White	V10-CR-S3-W-M-M2	631-91062	Connection cables Illumination Brackets Interface accessories <a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a>
White	V10-CR-S3-W-MD-M2	631-91037	
Red	V10-CR-S3-R-M-M2	631-91065	
Red	V10-CR-S3-R-MD-M2	631-91067	
Infrared	V10-CR-S3-I-M-M2	631-91070	
Infrared	V10-CR-S3-I-MD-M2	631-91071	



# VISOR® V10 Code Reader Standard, narrow field of view

Reading of 1D and 2D codes



## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Comprehensive tools for flexible and easy connection to PC and PLC environments

Optical data		Functions	
Resolution	800 x 600 pixels	Number of jobs / detectors	8 / 2
Imaging chip CMOS	1/3.6", monochrome	Detectors	<b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417;
Integrated lens, focal length [mm]	20 (narrow)		
Pixel size	4.8 µm x 4.8 µm		
Focus	Motorized		
Adjustment range	100 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	14 x 10 mm		
Electrical data		Mechanical data	
Operating voltage, +U <sub>B</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>B</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>B</sub> -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 VISOR® V20-CR-Advanced	Ethernet (LAN), EtherNet/IP, PROFINET, SensoWeb	Vibration resistance	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 4 selectable inputs/outputs	Shock resistance	EN 60068-2-27
Encoder	No		

<sup>1</sup> Max. ripple < 5 V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing

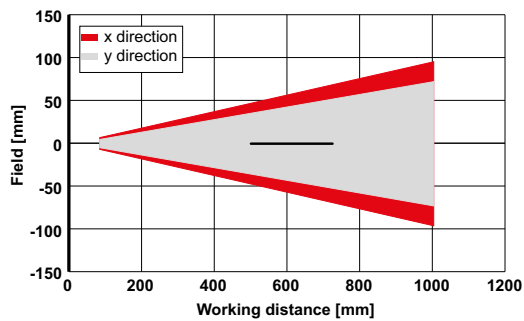
VISOR® vision sensor



153-13554

4

Field of view V10, narrow



155-03097

— Normal depth of field

Illumination	Part number	Article number	Accessories
White	V10-CR-S3-W-N-M2	631-91063	Connection cables
Red	V10-CR-S3-R-N-M2	631-91068	Illumination
Infrared	V10-CR-S3-I-N-M2	631-91072	Brackets
			Interface accessories

[www.sensopart.com/en/accessories](http://www.sensopart.com/en/accessories)


# VISOR® V10 Code Reader Advanced, wide field of view

Multi-Code Reader for 1D and 2D codes



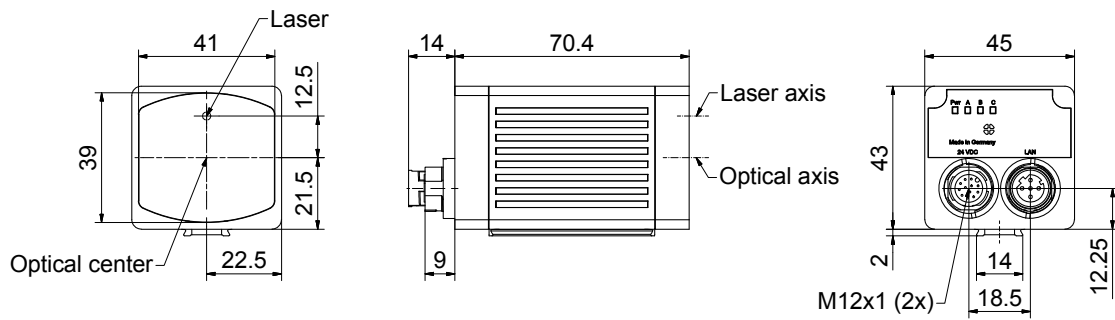
## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Reliable detection of even poorly readable codes under difficult ambient conditions
- Comprehensive tools for flexible and easy connection to PC and PLC environments
- Reading of several similar or differing types of codes in one reading pass

Optical data		Functions	
Resolution	800 x 600 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/3.6", monochrome	Detectors	<b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>Result processing: Text:</b> checking and calculating with results from detectors
Integrated lens, focal length [mm]	5.2 (wide)		
Pixel size	4.8 µm x 4.8 µm		
Focus	Motorized		
Adjustment range	0 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	2 x 1 mm		
Target laser	Laser: red (635 nm) class 1  (IEC 60825-1)		
Electrical data		Mechanical data	
Operating voltage, +U <sub>B</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>B</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>B</sub> -1 V / Low < 3V	Weight	Approx. 200 g
Input resistance	> 20 kΩ	Plug connections	Supply and I/O M12, 12-pin Ethernet M12, 4-pin
Interfaces VISOR® V20-CR-Advanced	Ethernet (LAN), EtherNet/IP, PROFINET, SensoWeb, Service Port	Vibration resistance	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs	Shock resistance	EN 60068-2-27
Encoder	✓		

<sup>1</sup> Max. ripple < 5V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing

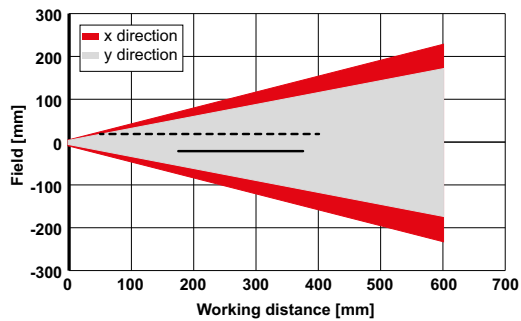
VISOR® vision sensor



153-13554

4

Field of view V10, wide



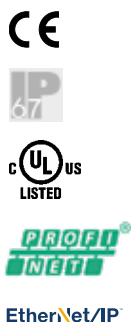
155-03101

----- Increased depth of field  
 ——— Normal depth of field

Illumination	Part number	Article number	Accessories
White	V10-CR-A3-W-W-M2-L	631-91051	Connection cables Illumination Brackets Interface accessories <a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a>
White	V10-CR-A3-W-WD-M2-L	631-91035	
Red	V10-CR-A3-R-W-M2-L	631-91054	
Red	V10-CR-A3-R-WD-M2-L	631-91033	
Infrared	V10-CR-A3-I-W-M2-L	631-91057	
Infrared	V10-CR-A3-I-WD-M2-L	631-91031	


# VISOR® V10 Code Reader Advanced, medium field of view

Multi-Code Reader for 1D and 2D codes

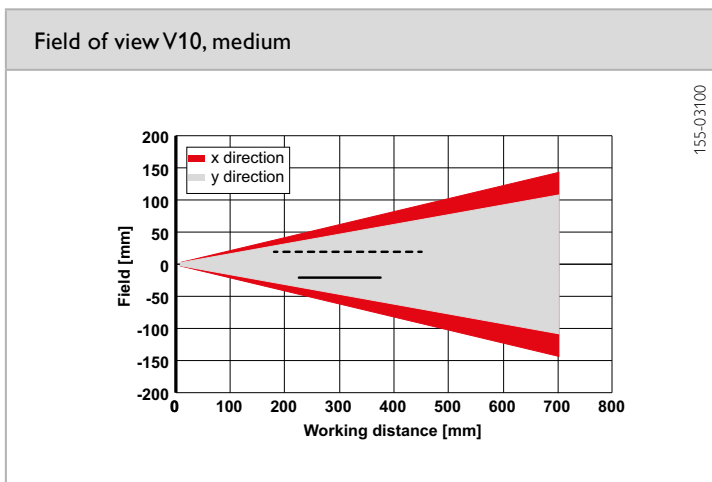
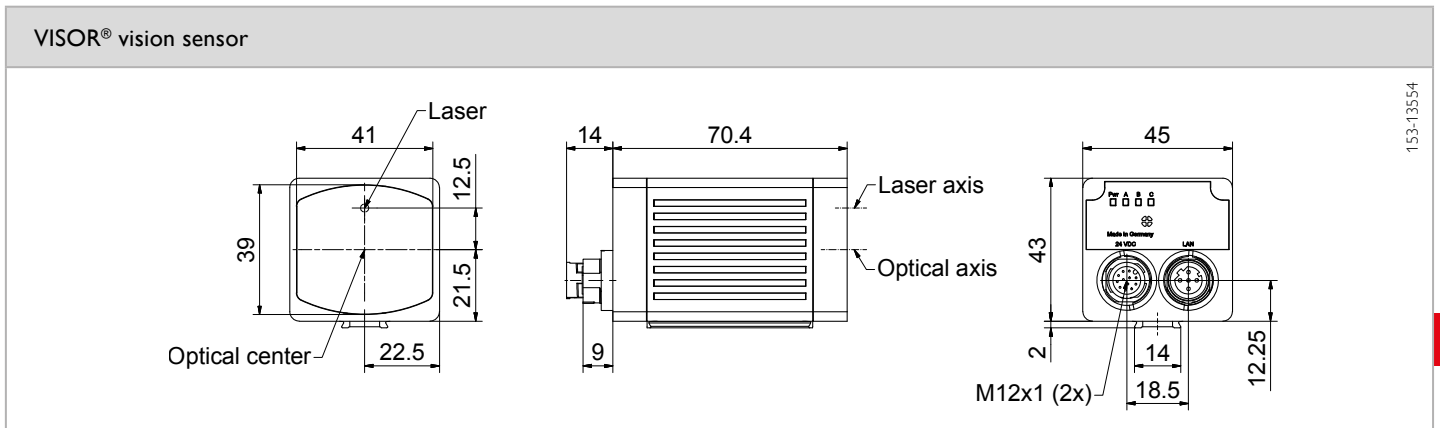


## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Reliable detection of even poorly readable codes under difficult ambient conditions
- Comprehensive tools for flexible and easy connection to PC and PLC environments
- Reading of several similar or differing types of codes in one reading pass

Optical data		Functions	
Resolution	800 x 600 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/3.6", monochrome	Detectors	<b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>Result processing:Text:</b> checking and calculating with results from detectors
Integrated lens, focal length [mm]	9.6 (medium)		
Pixel size	4.8 µm x 4.8 µm		
Focus	Motorized		
Adjustment range	12 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	7 x 3 mm		
Target laser	Laser: red (635 nm) class 1  (IEC 60825-1)		
Electrical data		Mechanical data	
Operating voltage, +U <sub>B</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>B</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>B</sub> -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 VISOR® V20-CR-Advanced	Ethernet (LAN), EtherNet/IP, PROFINET, SensoWeb, Service Port	Vibration resistance	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs	Shock resistance	EN 60068-2-27
Encoder	✓		

<sup>1</sup> Max. ripple < 5V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing



----- Increased depth of field  
 ——— Normal depth of field

Illumination	Part number	Article number	Accessories
White	V10-CR-A3-W-M-M2-L	631-91052	Connection cables Illumination Brackets Interface accessories <a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a>
White	V10-CR-A3-W-MD-M2-L	631-91034	
Red	V10-CR-A3-R-M-M2-L	631-91055	
Red	V10-CR-A3-R-MD-M2-L	631-91032	
Infrared	V10-CR-A3-I-M-M2-L	631-91058	
Infrared	V10-CR-A3-I-MD-M2-L	631-91028	


# VISOR® V10 Code Reader Advanced, narrow field of view

Multi-Code Reader for 1D and 2D codes



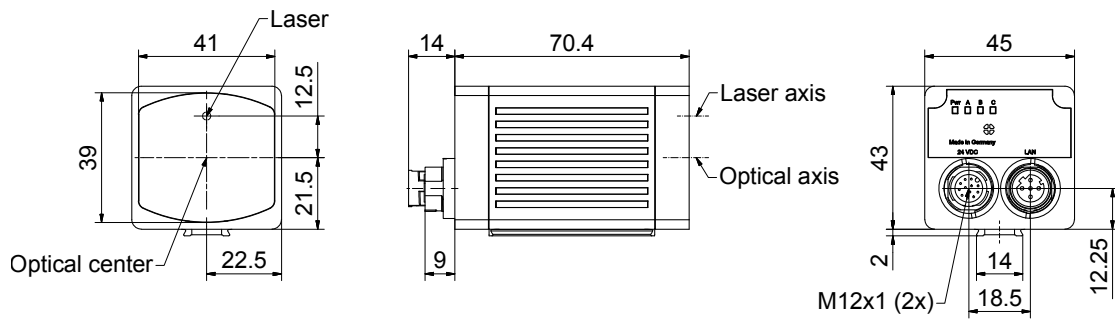
## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Reliable detection of even poorly readable codes under difficult ambient conditions
- Comprehensive tools for flexible and easy connection to PC and PLC environments
- Reading of several similar or differing types of codes in one reading pass

Optical data		Functions	
Resolution	800 x 600 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/3.6", monochrome	Detectors	<b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>Result processing: Text:</b> checking and calculating with results from detectors
Integrated lens, focal length [mm]	20 (narrow)		
Pixel size	4.8 µm x 4.8 µm		
Focus	Motorized		
Adjustment range	100 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	14 x 10 mm		
Target laser	Laser: red (635 nm) class 1  (IEC 60825-1)		
Electrical data		Mechanical data	
Operating voltage, +U <sub>B</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>B</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>B</sub> -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 VISOR® V20-CR-Advanced	Ethernet (LAN), EtherNet/IP, PROFINET, SensoWeb, Service Port	Vibration resistance	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs	Shock resistance	EN 60068-2-27
Encoder	✓		

<sup>1</sup> Max. ripple < 5V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing

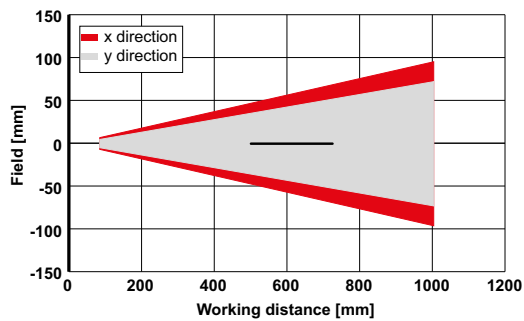
VISOR® vision sensor



153-13554

4

Field of view V10, narrow



155-03097

— Normal depth of field

illumination	Part number	Article number	Accessories
White	V10-CR-A3-W-N-M2-L	631-91053	Connection cables
Red	V10-CR-A3-R-N-M2-L	631-91056	Illumination
Infrared	V10-CR-A3-I-N-M2-L	631-91059	Brackets
			Interface accessories

[www.sensopart.com/en/accessories](http://www.sensopart.com/en/accessories)



# VISOR® V10 Code Reader Advanced, C-mount

Multi-Code Reader for 1D and 2D codes



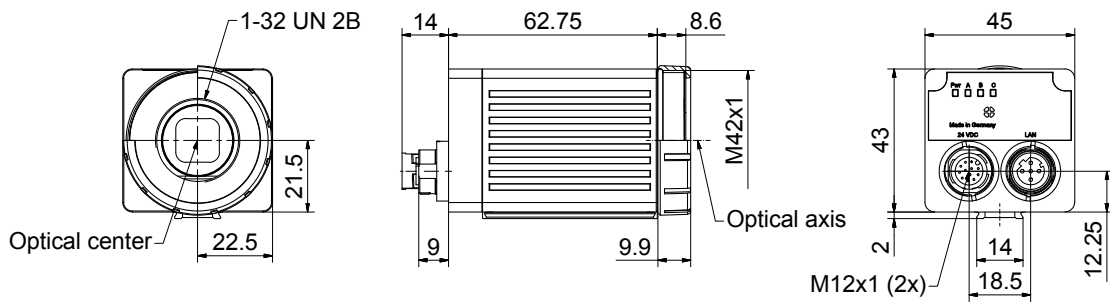
## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Combination of two functions in one device: code reading and object detection
- Reliable detection of even poorly readable codes under difficult ambient conditions
- Comprehensive tools for flexible and easy connection to PC and PLC environments
- Reading of several similar or differing types of codes in one reading pass

Optical data		Functions	
Resolution	800 x 600 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/3.6", monochrome	Detectors	<b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>Result processing:Text:</b> checking and calculating with results from detectors
Integrated lens, focal length [mm]	C-mount		
Pixel size	4.8 µm x 4.8 µm		
Focus	Manual		
Adjustment range	Dependent on lens		
Integrated illumination	None		
Minimum field of view, X x Y	Dependent on lens		
Target laser	None		
Electrical data		Mechanical data	
Operating voltage, +U <sub>B</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65 <sup>2</sup>
Protective circuits	Reverse-polarity protection, U <sub>B</sub> / 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 <sup>3</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>3</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>B</sub> -1 V / Low < 3 V	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	Vibration resistance	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs	Shock resistance	EN 60068-2-27
Encoder	✓		

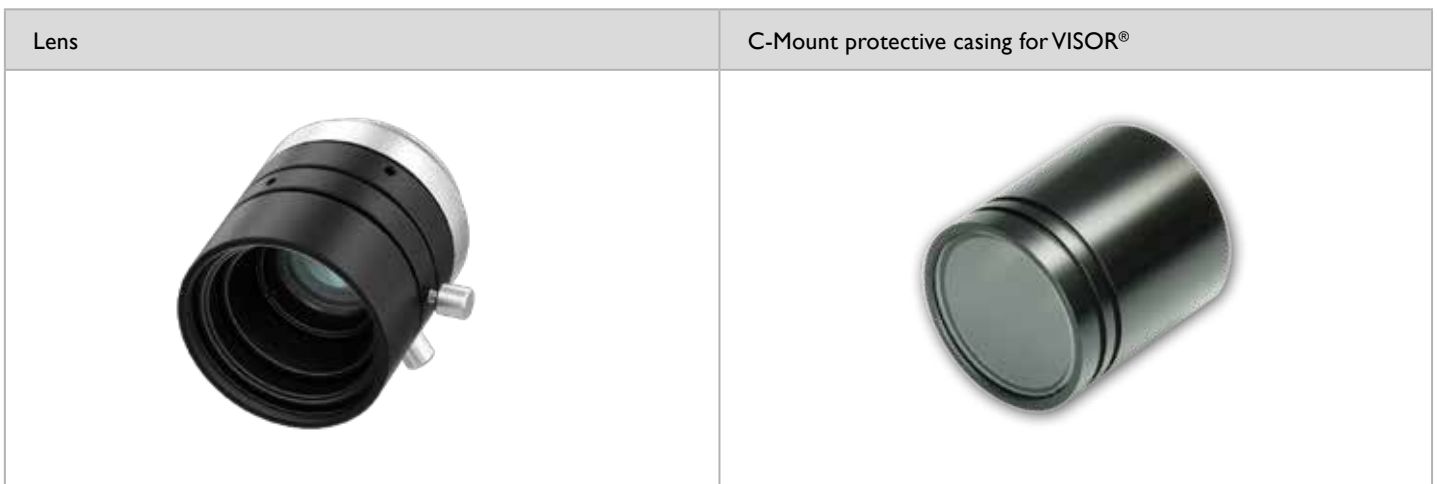
<sup>1</sup> Max. ripple < 5 V<sub>SS</sub>    <sup>2</sup> Only with protective casing    <sup>3</sup> 80 % air humidity, noncondensing

VISOR® vision sensor C-mount



153-13555

4



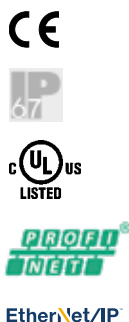
Part number	Article number
LPT Vxx-G37.5	651-01006
LPT Vxx-25.0	651-01007

	LOC-08-HD-30.5x0.5	LOC-12-HD-27x0.5	LOC-16-HD-27x0.5	LOC-25-HD-27x0.5	LOC-35-HD-27x0.5	LOC-50-HD-27x0.5	LOC-75-HD-34x0.5
Focal length	8 mm	12 mm	16 mm	25 mm	35 mm	50 mm	75 mm
Article number	526-51535	526-51536	526-51537	526-51538	526-51539	526-51540	526-51541

Part number	Article number	Accessories
V10-CR-A3-C-2	631-91060	<ul style="list-style-type: none"> <li>Connection cables</li> <li>Illumination</li> <li>Lenses</li> <li>Brackets</li> <li>Interface accessories</li> </ul> <p style="text-align: right;"><a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a></p>

# VISOR® V10 Code Reader Professional, wide field of view

Multi-Code Reader for 1D and 2D codes and OCR



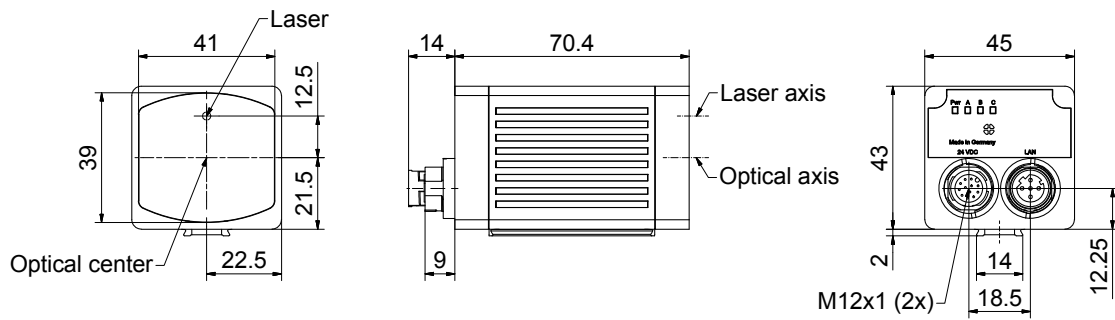
## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Combination of two functions in one device: code reading and object detection
- Reliable detection of even poorly readable codes under difficult ambient conditions
- Comprehensive tools for flexible and easy connection to PC and PLC environments
- Reading of several similar or differing types of codes in one reading pass
- Reading OCR fonts

Optical data		Functions	
Resolution	800 x 600 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/3.6", monochrome	Detectors	Position tracking; X/Y and orientation; <b>Pattern matching, contour:</b> teach-in and detection of patterns and contours; <b>Grey threshold, brightness:</b> evaluation of brightness; <b>Contrast:</b> evaluation of contrast; <b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>OCR:</b> reading of fonts; <b>Result processing; Text:</b> checking and calculating with results from detectors
Integrated lens, focal length [mm]	5.2 (wide)		
Pixel size	4.8 µm x 4.8 µm		
Focus	Motorized		
Adjustment range	0 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	2 x 1 mm		
Target laser	Laser: red (635 nm) class 1  (IEC 60825-1)		
Electrical data		Mechanical data	
Operating voltage, +U <sub>b</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>b</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>b</sub> -1 V / Low < 3 V	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	Vibration resistance	EN 60068-2-6
VISOR® V20-CR-Advanced		Shock resistance	EN 60068-2-27
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs		
Encoder	✓		

<sup>1</sup> Max. ripple < 5 V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing

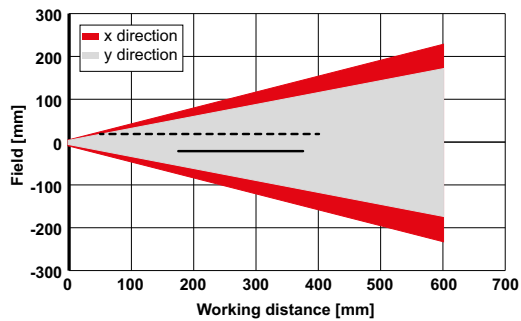
VISOR® vision sensor



153-13554

4

Field of view V10, wide



155-03101

----- Increased depth of field  
 ——— Normal depth of field

Illumination	Part number	Article number	Accessories
White	V10-CR-P3-W-W-M2-L	631-91083	Connection cables Illumination Brackets Interface accessories <a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a>
White	V10-CR-P3-W-WD-M2-L	631-91086	
Red	V10-CR-P3-R-W-M2-L	631-91088	
Red	V10-CR-P3-R-WD-M2-L	631-91091	
Infrared	V10-CR-P3-I-W-M2-L	631-91093	
Infrared	V10-CR-P3-I-WD-M2-L	631-91096	


# VISOR® V10 Code Reader Professional, medium field of view

Multi-Code Reader for 1D and 2D codes and OCR

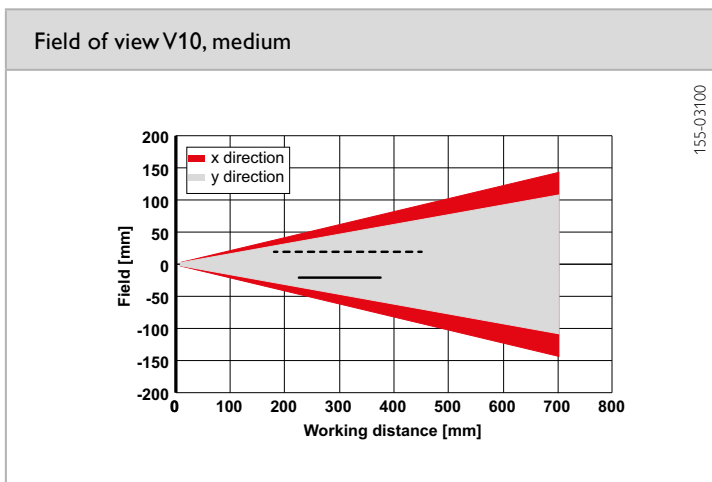
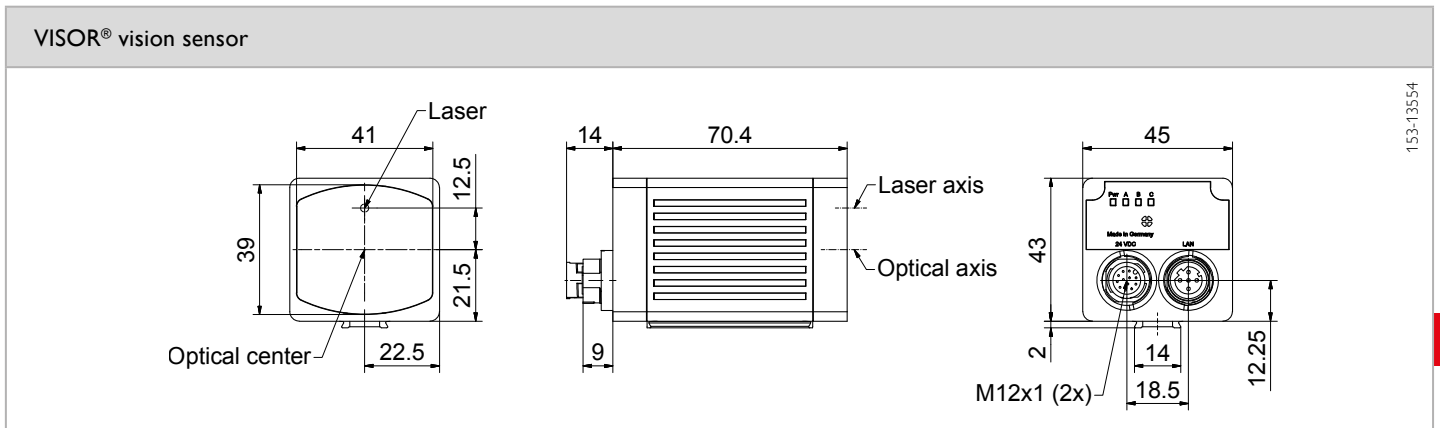


## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Combination of two functions in one device: code reading and object detection
- Reliable detection of even poorly readable codes under difficult ambient conditions
- Comprehensive tools for flexible and easy connection to PC and PLC environments
- Reading of several similar or differing types of codes in one reading pass
- Reading OCR fonts

Optical data		Functions	
Resolution	800 x 600 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/3.6", monochrome	Detectors	Position tracking; X/Y and orientation; <b>Pattern matching, contour:</b> teach-in and detection of patterns and contours; <b>Grey threshold, brightness:</b> evaluation of brightness; <b>Contrast:</b> evaluation of contrast; <b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>OCR:</b> reading of fonts; <b>Result processing; Text:</b> checking and calculating with results from detectors
Integrated lens, focal length [mm]	9.6 (medium)		
Pixel size	4.8 µm x 4.8 µm		
Focus	Motorized		
Adjustment range	12 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	7 x 3 mm		
Target laser	Laser: red (635 nm) class 1 		
Electrical data		Mechanical data	
Operating voltage, +U <sub>b</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>b</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>b</sub> -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	Vibration resistance	EN 60068-2-6
VISOR® V20-CR-Advanced		Shock resistance	EN 60068-2-27
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs		
Encoder	✓		

<sup>1</sup> Max. ripple < 5 V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing

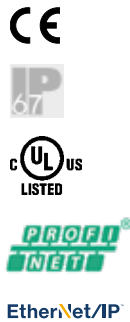


----- Increased depth of field  
 \_\_\_\_\_ Normal depth of field

Illumination	Part number	Article number	Accessories
White	V10-CR-P3-W-M-M2-L	631-91084	Connection cables Illumination Brackets Interface accessories <a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a>
White	V10-CR-P3-W-MD-M2-L	631-91087	
Red	V10-CR-P3-R-M-M2-L	631-91089	
Red	V10-CR-P3-R-MD-M2-L	631-91092	
Infrared	V10-CR-P3-I-M-M2-L	631-91094	
Infrared	V10-CR-P3-I-MD-M2-L	631-91097	

# VISOR® V10 Code Reader Professional, narrow field of view

Multi-Code Reader for 1D and 2D codes and OCR



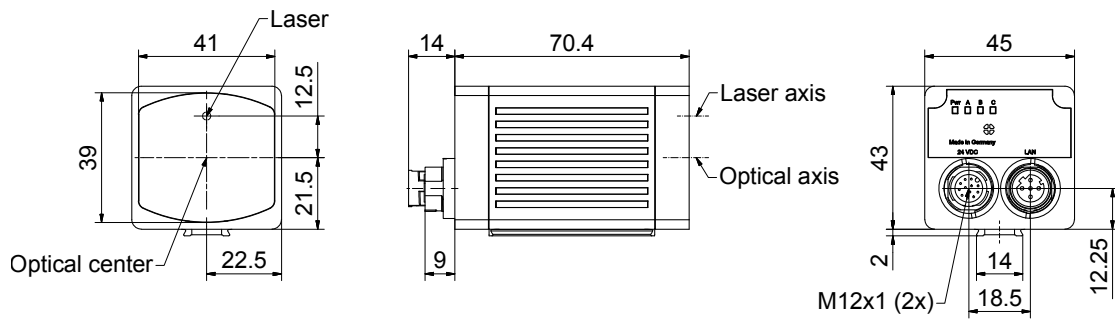
## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Combination of two functions in one device: code reading and object detection
- Reliable detection of even poorly readable codes under difficult ambient conditions
- Comprehensive tools for flexible and easy connection to PC and PLC environments
- Reading of several similar or differing types of codes in one reading pass
- Reading OCR fonts

Optical data		Functions	
Resolution	800 x 600 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/3.6", monochrome	Detectors	Position tracking: X/Y and orientation; <b>Pattern matching, contour:</b> teach-in and detection of patterns and contours; <b>Grey threshold, brightness:</b> evaluation of brightness; <b>Contrast:</b> evaluation of contrast; <b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>OCR:</b> reading of fonts; <b>Result processing:Text:</b> checking and calculating with results from detectors
Integrated lens, focal length [mm]	20 (narrow)		
Pixel size	4.8 µm x 4.8 µm		
Focus	Motorized		
Adjustment range	100 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm), infrared (850 nm) LEDs		
Minimum field of view, X x Y	14 x 10 mm		
Target laser	Laser: red (635 nm) class 1		
Electrical data		Mechanical data	
Operating voltage, +U <sub>b</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U <sub>b</sub> / 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 <sup>2</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>2</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>b</sub> -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	Vibration resistance	EN 60068-2-6
VISOR® V20-CR-Advanced		Shock resistance	EN 60068-2-27
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs		
Encoder	✓		

<sup>1</sup> Max. ripple < 5 V<sub>SS</sub>    <sup>2</sup> 80 % air humidity, noncondensing

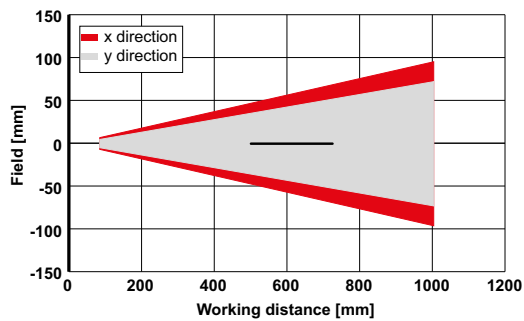
VISOR® vision sensor



153-13554

4

Field of view V10, narrow



155-03097

— Normal depth of field

illumination	Part number	Article number	Accessories
White	V10-CR-P3-W-N-M2-L	631-91085	Connection cables
Red	V10-CR-P3-R-N-M2-L	631-91090	Illumination
Infrared	V10-CR-P3-I-N-M2-L	631-91095	Brackets
			Interface accessories
			<a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a>



# VISOR® V10 Code Reader Professional, C-mount

Multi-Code Reader for 1D and 2D codes and OCR



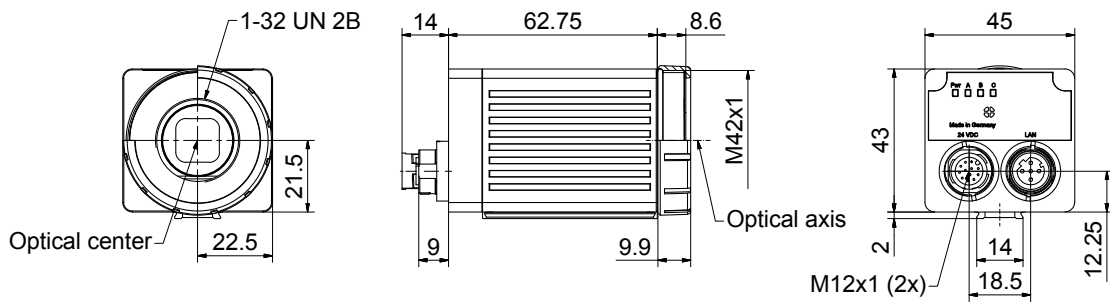
## PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Combination of two functions in one device: code reading and object detection
- Reliable detection of even poorly readable codes under difficult ambient conditions
- Comprehensive tools for flexible and easy connection to PC and PLC environments
- Reading of several similar or differing types of codes in one reading pass
- Reading OCR fonts

Optical data		Functions	
Resolution	800 x 600 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/3.6", monochrome	Detectors	Position tracking; X/Y and orientation; <b>Pattern matching, contour:</b> teach-in and detection of patterns and contours; <b>Grey threshold, brightness:</b> evaluation of brightness; <b>Contrast:</b> evaluation of contrast; <b>Barcode:</b> reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; <b>OCR:</b> reading of fonts; <b>Result processing:Text:</b> checking and calculating with results from detectors
Integrated lens, focal length [mm]	C-mount		
Pixel size	4.8 µm x 4.8 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 <sub>b</sub>	18 ... 30 DC <sup>1</sup>	Dimensions	70.4 x 45 x 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65 <sup>2</sup>
Protective circuits	Reverse-polarity protection, U <sub>b</sub> / 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 <sup>3</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C <sup>3</sup>
Switching threshold inputs incl. encoder	PNP/NPN High > U <sub>b</sub> -1 V / Low < 3 V	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	Vibration resistance	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs	Shock resistance	EN 60068-2-27
Encoder	✓		

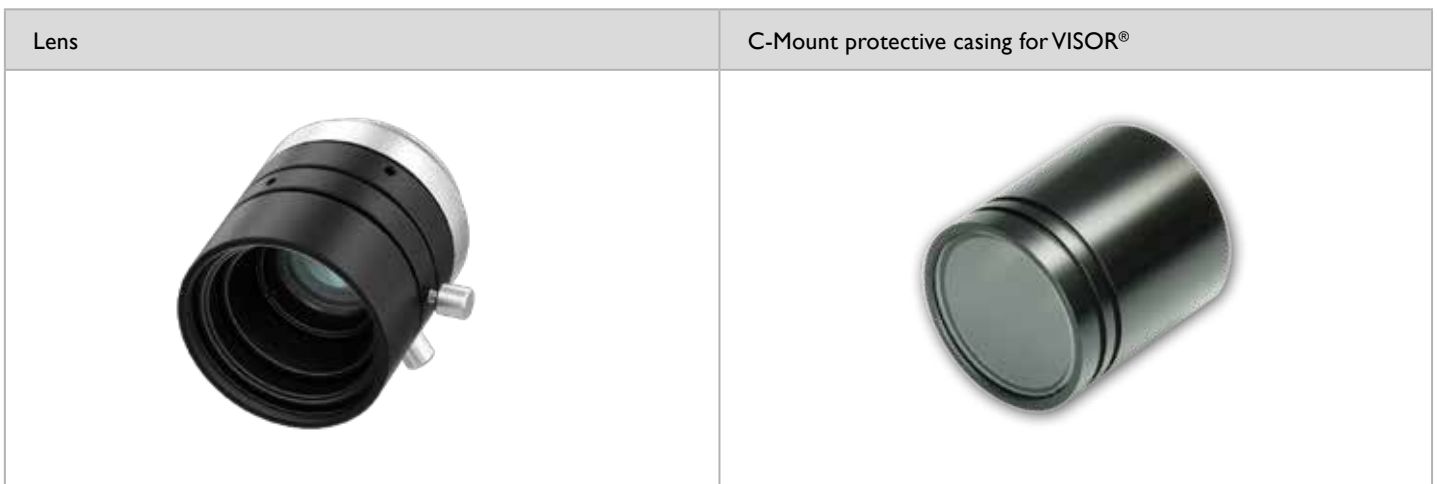
<sup>1</sup> Max. ripple < 5 V<sub>SS</sub>    <sup>2</sup> Only with protective casing    <sup>3</sup> 80 % air humidity, noncondensing

VISOR® vision sensor C-mount



153-13555

4



Part number	Article number
LPT Vxx-G37.5	651-01006
LPT Vxx-25.0	651-01007

	LOC-08-HD-30.5x0.5	LOC-12-HD-27x0.5	LOC-16-HD-27x0.5	LOC-25-HD-27x0.5	LOC-35-HD-27x0.5	LOC-50-HD-27x0.5	LOC-75-HD-34x0.5
Focal length	8 mm	12 mm	16 mm	25 mm	35 mm	50 mm	75 mm
Article number	526-51535	526-51536	526-51537	526-51538	526-51539	526-51540	526-51541

Part number	Article number	Accessories
V10-CR-P3-C-2	631-91098	<ul style="list-style-type: none"> <li>Connection cables</li> <li>Illumination</li> <li>Lenses</li> <li>Brackets</li> <li>Interface accessories</li> </ul>

[www.sensopart.com/en/accessories](http://www.sensopart.com/en/accessories)