


# VISOR® V20 Allround Professional, medium field of view

Combines VISOR® Object Color, Code Reader and Robotic

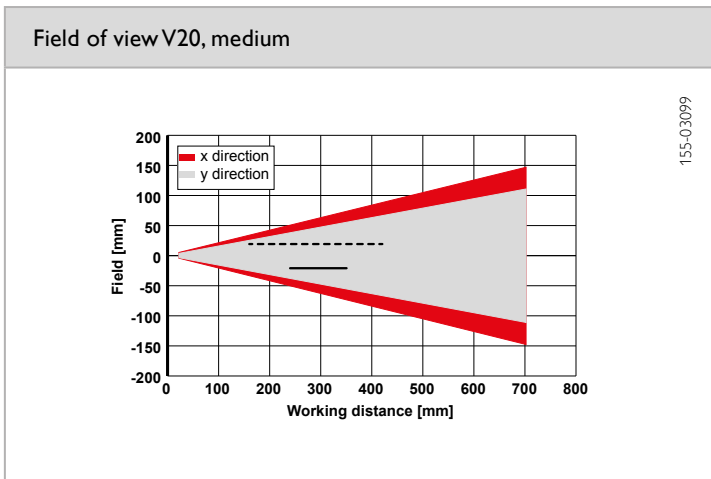
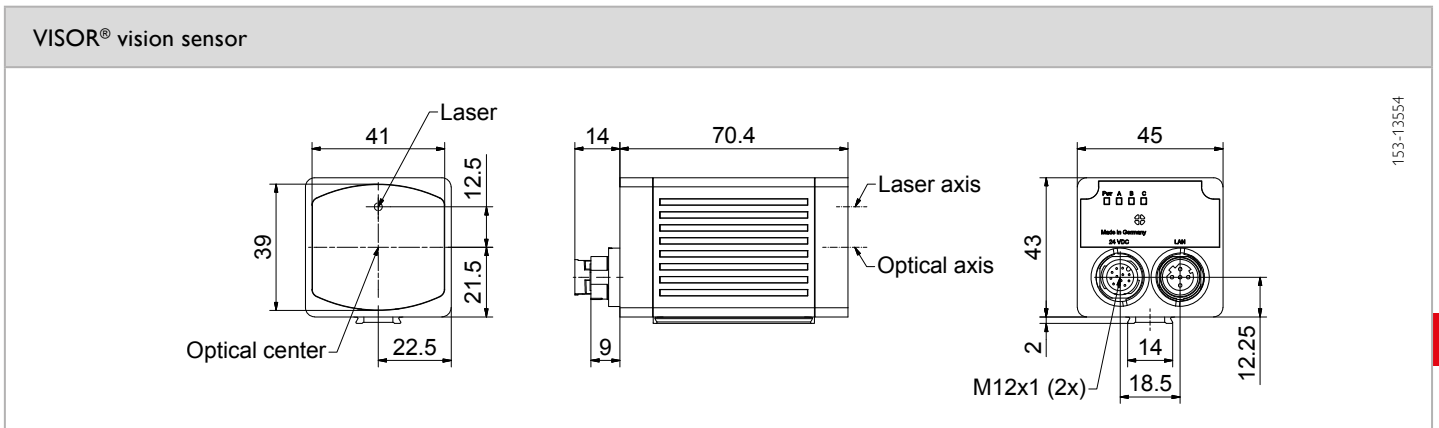


## PRODUCT HIGHLIGHTS

- All evaluations ("Detectors") of object sensor and code reader united in one device
- Highly accurate evaluation via 1,5 mega- pixel chip
- Real-world engineering units and robot coordinates at a mouse click
- Precise position determination: X/Y-position and orientation
- Detection of differences in height in the pseudo height image with multishot technology
- User-friendly configuration and viewer software with graded user rights and online help

| Optical data                             |   | Functions                      |  |
|--|---|--------------------------------|--|
| Resolution                               | 1440 x 1080 Pixel   | Number of jobs / detectors     | max. 255 / max. 255  |
| Imaging chip CMOS                        | 1/2.9", monochrome / color  | Detectors                      | Position tracking: X/Y and orientation;<br><b>Pattern matching / Contour:</b> teach-in and detection of patterns and contours;<br><b>Calliper:</b> distance between edges;<br><b>BLOB, Grey threshold, Brightness:</b> evaluation of brightness;<br><b>Contrast:</b> evaluation of contrast;<br><b>Color value<sup>2</sup>:</b> output of color values;<br><b>Color field<sup>2</sup>:</b> area inspection of colors, with selectable tolerance; <b>Color list<sup>2</sup>:</b> finding the most similar colors<br><b>Barcode:</b> reading 1D bar codes, EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, GS1, pharm code, codabar; <b>Datacode:</b> reading 2D codes: ECC200, QR code, GS1, PDF 417; <b>OCR:</b> reading of fonts |
| 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) <sup>1</sup> , infrared (850 nm) <sup>1</sup> 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>3</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                           | Ca. 13 s after Power on   | Material, front screen         | Plastic  |
| Outputs                                  | PNP/NPN (switchable)  | Ambient temperature: operation | 0 ... +50 °C <sup>4</sup>  |
| Max. output current (per output)         | 50 mA, 100 mA (pin 12)  | Ambient temperature: storage   | -20 ... +60 °C <sup>4</sup>  |
| Switching threshold inputs incl. encoder | PNP / NPN   | Weight                         | Approx. 200 g  |
| Input resistance                         | High > U <sub>B</sub> -1 V / Low < 3V   | Plug connections               | Supply and I/O M12, 12-pin<br>Ethernet M12, 4-pin  |
| Interfaces                               | > 20 kΩ   | Vibration resistance           | EN 60068-2-6   |
| Inputs/outputs                           | Ethernet (LAN), EtherNet/IP, PROFINET, SensoWeb, Service Port   | Shock resistance               | EN 60068-2-27  |
| Encoder                                  | 2 inputs, 2 outputs,<br>6 selectable inputs/outputs   |                                |  |
|  | ✓   |                                |  |

<sup>1</sup> Not Color hardware    <sup>2</sup> Color hardware    <sup>3</sup> Max. ripple < 5V<sub>SS</sub>    <sup>4</sup> 80 % air humidity, noncondensing



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



| Illumination | Part number          | Article number |
|--------------|----------------------|----------------|
| White        | LM 100 WWK-24Q4-2L12 | 532-51096      |
| Red          | LM 100 RWK-24Q4-2L12 | 532-51097      |
| —            | LM 100 W DF          | 532-51098      |

| Illumination | Part number          | Article number | Accessories           |
|--------------|----------------------|----------------|-----------------------|
| White        | V20-ALL-P3-W-M-M2-L  | 632-91000      | Connection cables     |
| Red          | V20-ALL-P3-R-M-M2-L  | 632-91008      | Illumination          |
| Infrared     | V20-ALL-P3-I-M-M2-L  | 632-91005      | Brackets              |
| White        | V20C-ALL-P3-W-M-M2-L | 632-91014      | Interface accessories |

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