


VISOR® V20 Object Advanced, narrow field of view

Vision sensor for object detection, presence check, completeness check, position inspection and measurement tasks

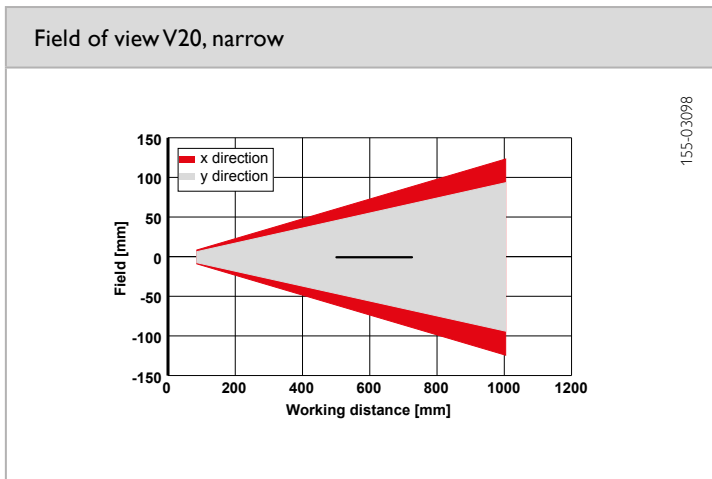
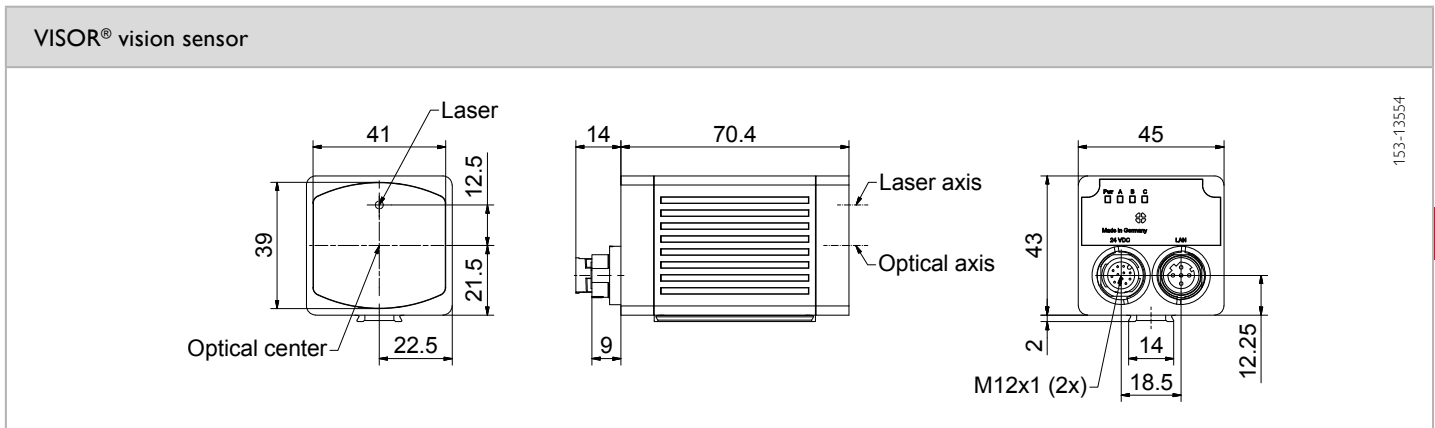


PRODUCT HIGHLIGHTS

- User-friendly configuration and viewer software with hierarchical user rights
- Object detection with 5 megapixel chip
- Real-world engineering units at a mouse click
- Precise position determination: X/Y-position and orientation
- Comprehensive logic and calculation functions for maximum flexibility
- Encoder input

Optical data		Functions	
Resolution	1440 × 1080 pixels	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/2.9", monochrome / color	Detectors	Position tracking: X/Y and orientation; Pattern matching, contour: teach-in and detection of patterns and contours; Calliper: distance between edges; BLOB, grey threshold, brightness: evaluation of brightness; Contrast: evaluation of contrast; Color value²: output of color values; Color area²: area inspection of colors, with selectable tolerance; Color list²: finding the most similar colors; Result processing: Math: checking and calculating with results from detectors
Integrated lens, focal length [mm]	20 (narrow)		
Pixel size	3.45 μm × 3.45 μm		
Focus	Motorized		
Adjustment range	100 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm) ¹ , infrared (850 nm) ¹ LEDs		
Minimum field of view, X × Y	18 × 14 mm		
Target laser	Laser: red (635 nm) class 1  (IEC 60825-1)		
Electrical data		Mechanical data	
Operating voltage, +U _B	18 ... 30 DC ³	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 _B / short-circuit protection of all outputs	Material, housing	Aluminium, die-cast, RoHS compliant
Power On Delay	Approx. 13 s after Power on	Material, front screen	Plastic
Outputs	PNP/NPN (switchable)	Ambient temperature: operation	0 ... +50 °C ⁴
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C ⁴
Switching threshold inputs incl. encoder	PNP/NPN High > U _B -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	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	✓		

¹ Not color hardware ² color hardware ³ max. ripple < 5V_{SS} ⁴ 80 % air humidity, noncondensing



— Normal depth of field

illumination	Part number	Article number	Accessories	
White	V20-OB-A3-W-N-M2-L	632-91033	Connection cables	From Page A-46
Red	V20-OB-A3-R-N-M2-L	632-91036	Illumination	From Page A-33
Infrared	V20-OB-A3-I-N-M2-L	632-91039	Brackets	From Page A-4
White	V20C-OB-A3-W-N-M2-L	632-91043	Interface accessories	From Page A-53