


VISOR® V20 Robotic Professional, narrow field of view

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

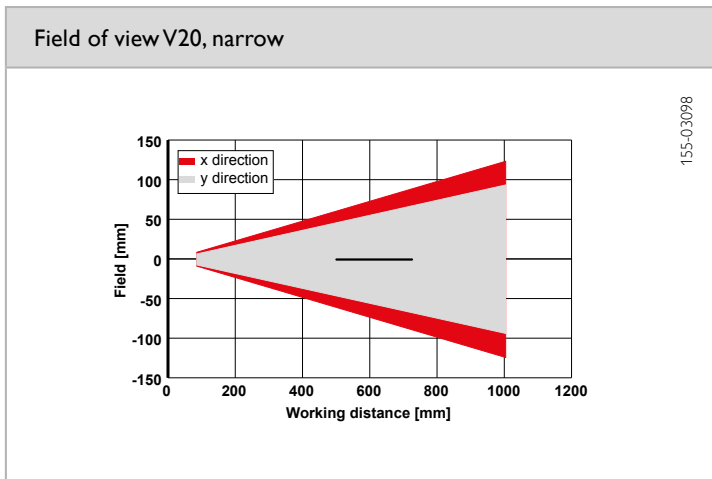
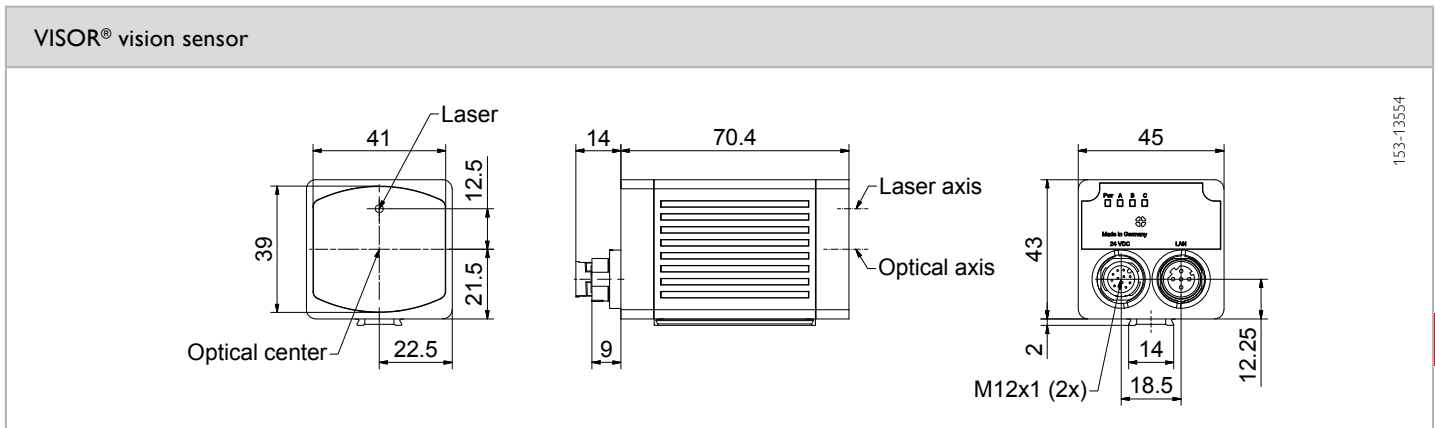


PRODUCT HIGHLIGHTS

- Calibration methods for robotics applications
- Detectors for position determination
- Result offset
- Offset of work plane
- Gripping space check
- Can be used for all common 2D codes (ECC 200 data matrix) , common 1D bar codes and OCR

Optical data		Functions	
Resolution	1440 x 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 Barcode: reading 1D bar codes, EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, GS1, pharm code, codabar; Datacode: reading 2D codes: ECC200, QR code, GS1, PDF 417; OCR reading of fonts
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) ¹ , infrared (850 nm) ¹ 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 _B	18 ... 30V DC ³	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 _B / short-circuit protection of all outputs	Material, housing	Aluminium, die-cast, RoHS compliant
Power On Delay	Approx. 13 s after Power on	Material, front screen	Plastic
Outputs	PNP/NPN (switchable)	Ambient temperature: operation	0 ... +50 °C ⁴
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C ⁴
Switching threshold inputs incl. encoder	PNP/NPN High > U _B -1V / Low < 3V	Weight	Approx. 200 g
Input resistance	> 20 kΩ	Plug connections	Supply and I/O M12, 12-pin Ethernet M12, 4-pin
Interfaces	Ethernet (LAN), EtherNet/IP, PROFINET, SensoWeb, Service Port	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_s ⁴ 80 % air humidity, noncondensing



— Normal depth of field

Illumination	Part number	Article number	Accessories	
White	V20-RO-P3-W-N-M2-L	632-91122	Connection cables	From Page A-38
Red	V20-RO-P3-R-N-M2-L	632-91125	Illumination	From Page A-27
Infrared	V20-RO-P3-I-N-M2-L	632-91128	Brackets	From Page A-4
White	V20C-RO-P3-W-N-M2-L	632-91132	Interface accessories	From Page A-38