


VISOR® V20 Robotic Professional, wide field of view

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

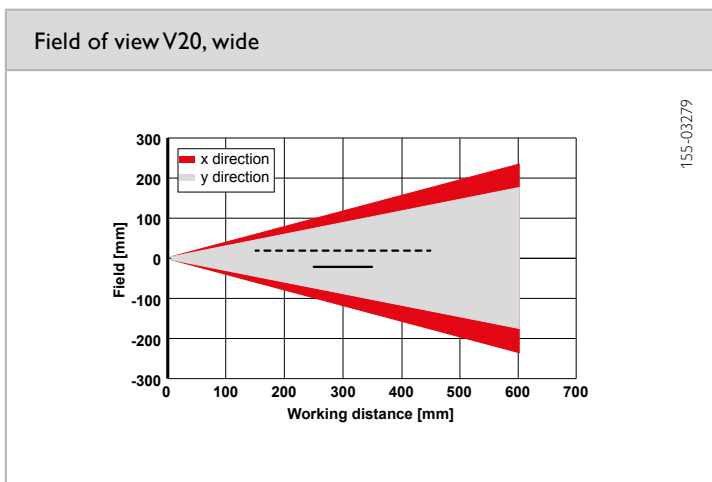
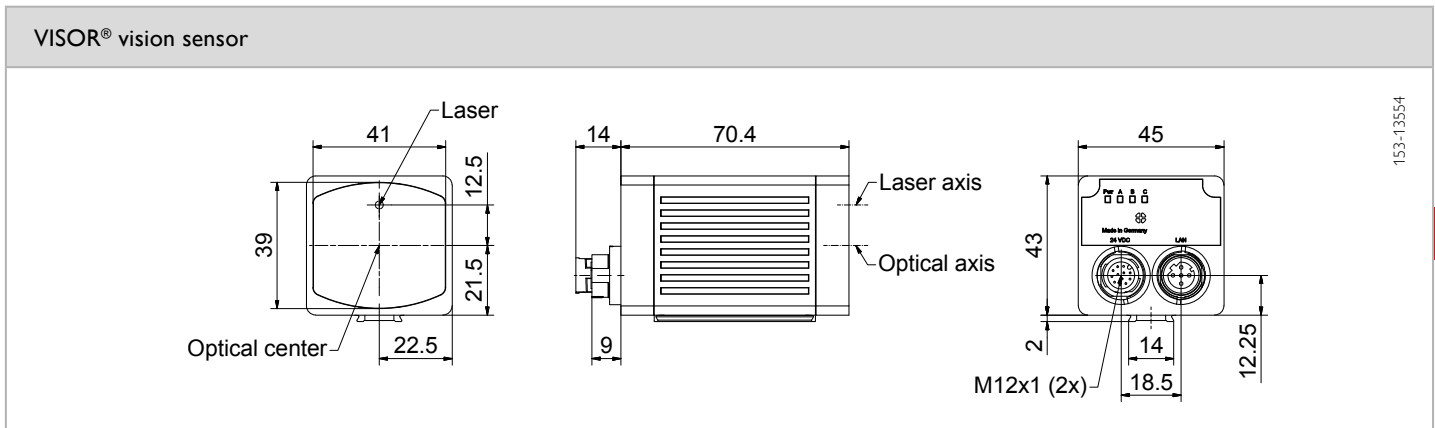


PRODUCT HIGHLIGHTS

- Calibration methods for robotics applications
- Result offset 3D for direct gripper point transmission to robot
- 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 Pixel	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, 3D contour : teach-in and detection of patterns and contours; Calliper : distance between edges; BLOB, grey threshold, brightness : evaluation of brightness; Contrast : evaluation of contrast;
Integrated lens, focal length [mm]	6.5 (wide)		Barcode : reading 1D bar codes, EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, GS1, pharm code, codabar; Datacode : reading 2D codes: ECC200, QR code, GS1, PDF 417; OCR reading of fonts; Result processing: Text, Math : checking and calculating with results from detectors
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) ¹ , infrared (850 nm) ¹ 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 _B	18 ... 30 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 -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	✓		

¹ Not color hardware ² color hardware ³ max. ripple < 5V_s ⁴ 80 % air humidity, noncondensing



- Increased depth of field
- Normal depth of field

illumination	Part number	Article number	Accessories	
White	V20-RO-P3-W-W-M2-L	632-91120	Connection cables	From Page A-46
Red	V20-RO-P3-R-W-M2-L	632-91123	Illumination	From Page A-33
Infrared	V20-RO-P3-I-W-M2-L	632-91126	Brackets	From Page A-4
White	V20C-RO-P3-W-W-M2-L	632-91130	Interface accessories	From Page A-53