

# VISOR® V20 object sensor

Advanced vision sensor for object detection, C-mount



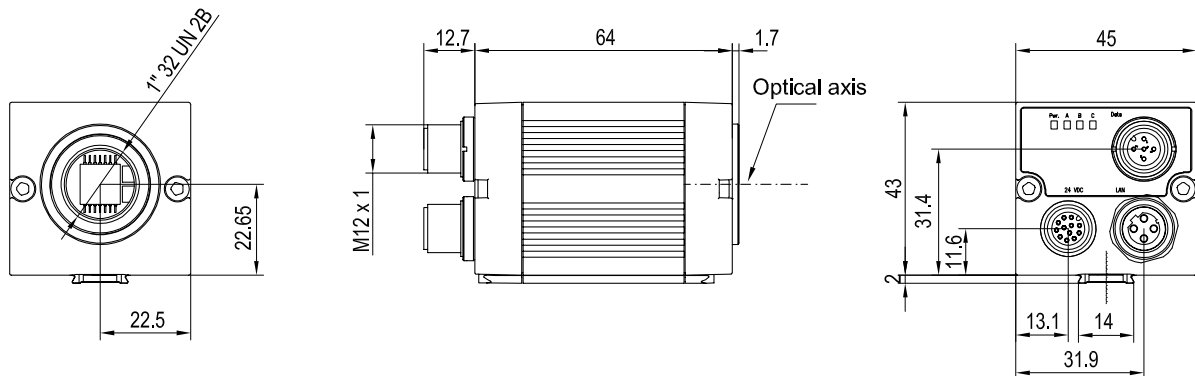
## PRODUCT HIGHLIGHTS

- User-friendly configuration and viewer software with hierarchical user rights
- Object detection with 1.3 mega pixel
- Real-world engineering units and robot coordinates at a mouse click
- Precise position determination: X/Y-position and orientation
- Comprehensive logic functions for digital switching outputs
- Encoder input

Optical data		Functions	
Resolution	1280 × 1024 pixels	Number of jobs / detectors	max. 255 / max. 255
CMOS	1/1.8", monochrome	Detectors	Contour, pattern comparison, calliper, BLOB, contrast, brightness, grey level
Integrated lens, focal length	C-Mount	Properties	Position tracking: X/Y and orientation; pattern comparison / contour: teach-in and detection of patterns and contours; calliper: distance between edges; BLOB; grey threshold, brightness: evaluation of brightness; contrast: evaluation of contrast
Adjustment range	Dependent on lens	Typical cycle times <sup>2</sup>	Typ. 20 ms pattern comparison Typ. 30 ms contour Typ. 8 ms calliper Typ. 30 ms BLOB Typ. 2 ms brightness Typ. 2 ms contrast Typ. 2 ms grey threshold
Integrated illumination	None		
Minimum field of view, X × Y	Dependent on lens		
Electrical data		Mechanical data	
Operating voltage, +U <sub>b</sub>	18 ... 26.4 V DC <sup>1</sup>	Dimensions	65 × 45 × 45 mm (without plug)
Current consumption (without illumination and I/O)	≤ 120 mA	Enclosure rating	IP 65 <sup>3</sup>
Current consumption (without I/O)	≤ 200 mA	Material, housing	Aluminium, plastic
Protective circuits	Reverse-polarity protection, U <sub>b</sub> / short-circuit protection of all outputs	Material, front screen	Plastic
Power On Delay	Ca. 13 s after Power on	Ambient temperature: operation	0 ... +50 °C <sup>4</sup>
Outputs	PNP / NPN (switchable)	Ambient temperature: storage	-20 ... +60 °C <sup>4</sup>
Max. output current (per output)	50 mA, 100 mA (pin 12)	Weight	Ca. 160 g
Inputs	PNP/NPN High > U <sub>b</sub> -1 V, Low < 3 V	Plug connections	Supply and I/O M12, 12-pin Ethernet M12, 4-pin Data M12, 5-pin
Input resistance	> 20 kOhm	Vibration and impact resistance	EN 60947-5-2
Encoder input	High > 4 V		
Interfaces	Ethernet (LAN), RS422, RS232, EtherNet/IP, PROFINET, SensoWeb		
Inputs/outputs	2 inputs, 4 outputs, 4 selectable inputs/outputs		

<sup>1</sup> Max. ripple < 5 V<sub>SS</sub>    <sup>2</sup> With VGA-resolution (640 × 480 Pixel)    <sup>3</sup> With LPT45 C-mount protective casing    <sup>4</sup> 80 % air humidity, non-condensing

Part number	Article number
V20-OB-A2-C	536-91010

**VISOR® vision sensor**


153-00912

4

**Lens**


	LO C 8	LO C 12	LO C 16	LO C 25	LO C 35	LO C 50	LO C 75
<b>Focal length</b>	8 mm	12 mm	16 mm	25 mm	35 mm	50 mm	75 mm
<b>Article number</b>	526-51513	526-51514	526-51515	526-51516	526-51525	526-51113	526-51116

**Accessories**

Connection cables	From Page A-38
Illumination	From Page A-30
Lenses	From Page A-27
Brackets	From Page A-14
Interface accessories	From Page A-42