VISOR® V20 Allround Advanced, wide field of view

Combines VISOR® Object Color, Code Reader



PRODUCT HIGHLIGHTS

- All evaluations ("Detectors") of object sensor and code reader united in one device
- Highly accurate evaluation via 1.5 megapixel chip
- Real-world engineering units at a mouse click
- Precise determination of X/Y position, orientation and tracking
- Can be used for all common 2D codes (ECC 200-Datamatrix) and common 1D barcodes
- Detection of differences in height in the pseudo height image with multishot technology

Optical data	
Resolution	1440 x 1080 pixels
Imaging chip CMOS	1/2.9", monochrome / color
Integrated lens, focal length [mm]	6.5 (wide)
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], ultraviolet (365 nm) LEDs
Minimum field of view, X x Y	6 x 4 mm
Target laser	Laser: red (635 nm) class 1 (IEC 60825-1)

Functions	
Number of jobs / detectors	Max. 255 / max. 255
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 value[2]:** output of color values; **Color area[2]:** area inspection of colors, with selectable tolerance; **Color list[2]:** finding the most similar colors **Barcode:** reading 1D barcodes; EAN, UPC, RSS, 2/5 Interleaved, 2/5 Industrial, code 32, code 39, code 93, code 128, ECC200 GS1, pharm code, codabar; **Datacode:** reading 2D codes: ECC200 (GS1), QR code (GS1), Micro QR code, Aztec code (GS1), PDF 417; **OCR:** reading of fonts; **Result processing: Text, Math:** checking and calculating with results from detectors

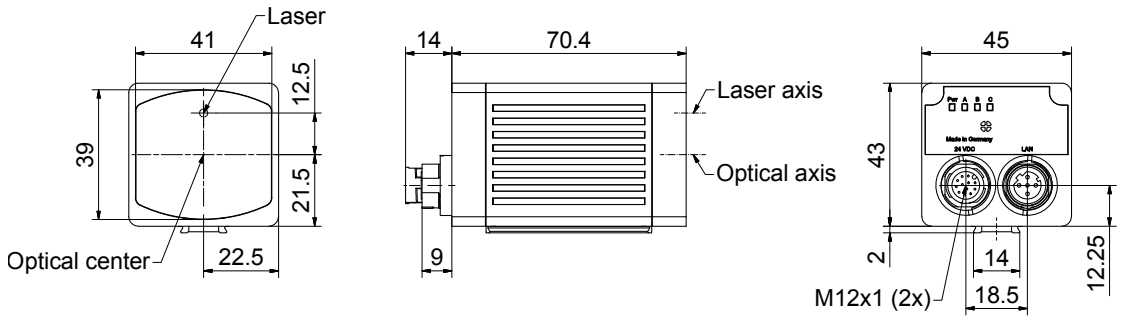
Electrical data	
Operating voltage, $+U_B$	18 ... 30 V DC[3]
Current consumption (without I/O)	≤ 300 mA
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection of all outputs
Power On Delay	Approx. 13 s after Power on
Outputs	PNP/NPN (switchable)
Max. output current (per output)	50 mA, 100 mA (pin 12)
Switching threshold inputs incl. encoder	PNP/NPN High > U_B-1 V / Low < 3 V
Input resistance	> 20 kΩ
Interfaces	Ethernet (LAN), EtherNet/IP, PROFINET, SensoWeb, Service Port
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs
Encoder	✓

Mechanical data	
Dimensions	70.4 x 45 x 45 mm (without plug)
Enclosure rating	IP 67 & IP 65
Material, housing	Aluminium, die-cast, RoHS compliant
Material, front screen	Plastic
Ambient temperature: operation	0 … +50 °C[4]
Ambient temperature: storage	-20 … +60 °C[4]
Weight	Approx. 200 g
Plug connections	Supply and I/O M12, 12-pin Ethernet M12, 4-pin
Vibration resistance	EN 60068-2-6
Shock resistance	EN 60068-2-27

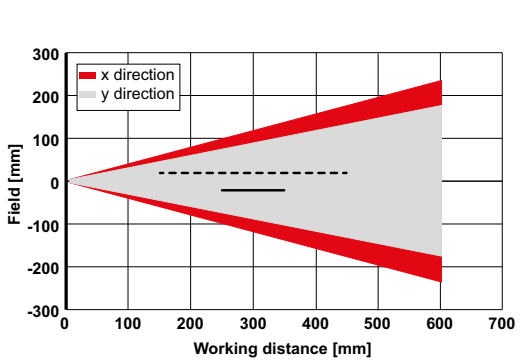
[1] Not color hardware [2] Color hardware [3] Max. ripple < 5 V_{SS} [4] 80 % air humidity, noncondensing

Version: 06/2022. Subject to changes; diagrams similar

VISOR® vision sensor



Field of view V20, wide



Increased depth of field
Normal depth of field

Illumination, Multishot



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-A3-W-W-M2-L	632-91026	Connection cables	www.sensopart.com/en/accessories
Red	V20-ALL-A3-R-W-M2-L	632-91023	Illumination	
Infrared	V20-ALL-A3-I-W-M2-L	632-91020	Brackets	
Ultraviolet	V20-ALL-A3-U-W-M2-L	632-91173	Interface accessories	
White	V20C-ALL-A3-W-W-M2-L	632-91030		
Ultraviolet	V20C-ALL-A3-U-W-M2-L	632-91176		