VISOR® V20 Code Reader Professional, narrow field of view

Multi Code Reader for 1D and 2D codes and OCR

CE
IP 67
c(UL)us LISTED
PROFI NET®
EtherNet/IP™
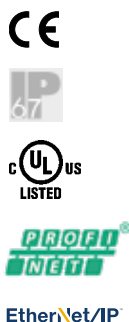
PRODUCT HIGHLIGHTS

- Can be used for all common 2D codes (ECC 200 data matrix) and common 1D barcodes
- Combination of two functions in one device: code reading and object detection
- Reliable detection of even poorly readable codes under difficult ambient conditions
- Comprehensive tools for flexible and easy connection to PC and PLC environments
- Reading of several similar or differing types of codes in one reading pass
- Reading OCR fonts

Optical data

Resolution	1440 × 1080 pixels
Imaging chip CMOS	1/2.9‘‘, monochrome
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), infrared (850 nm) LEDs
Minimum field of view, X × Y	18 × 14 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; **Grey threshold, brightness:** evaluation of brightness; **Contrast:** evaluation of contrast; **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:** checking and calculating with results from detectors

Electrical data

|	
Operating voltage, $+U_B$	18 ... 30 DC[1]
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 VISOR® V20-CR-Advanced	Ethernet (LAN), EtherNet/IP, PROFINET, SensoWeb, Service Port
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs
Encoder	✓

Mechanical data

Dimensions	70.4 × 45 × 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[2]
Ambient temperature: storage	-20 … +60 °C[2]
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] Max. ripple < 5 V_{ss} [2] 80 % air humidity, noncondensing

Version: 04/2022. Subject to changes; diagrams similar

VISOR® vision sensor

153-13554

Laser

41

12.5

39

21.5

Optical center

22.5

14   70.4

Laser axis

Optical axis

9

45

43

2   14

M12x1 (2x)   18.5

12.25

4

Field of view V20, narrow

155-03098

x direction
y direction

Field [mm]

150
100
50
0
-50
-100
-150

0   200   400   600   800   1000   1200

Working distance [mm]
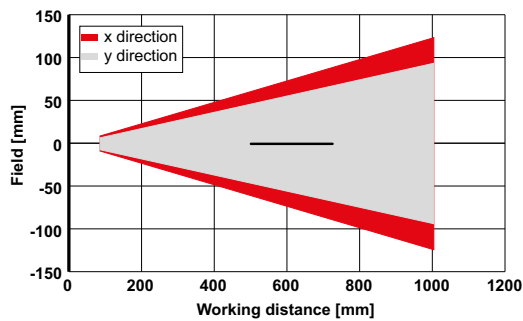
——— Normal depth of field

Illumination	Part number	Article number	Accessories	
White	V20-CR-P3-W-N-M2-L	632-91081	Connection cables	www.sensopart.com/en/accessories
Red	V20-CR-P3-R-N-M2-L	632-91086	Illumination	
Infrared	V20-CR-P3-I-N-M2-L	632-91091	Brackets	
			Interface accessories	