

# V20C-RO-A3-W-M-M2-L

**Ordering information**

|                                 |                                                                                                                                                              |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Designation for ordering</b> | V20C-RO-A3-W-M-M2-L                                                                                                                                          |
| <b>Part number</b>              | 632-91075                                                                                                                                                    |
| <b>Order text</b>               | VISOR® V20 Robotic Color, Advanced, 255 jobs each with 255 detectors, white illumination, medium field of view, motorized focus, LAN interface, target laser |
| <b>Components supplied</b>      | VISOR® vision sensor, Operating manual, Mounting bracket (MK 45) and Allen key                                                                               |

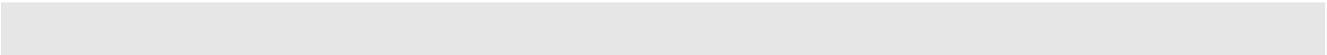


| Optical data                    |                    |
|---------------------------------|--------------------|
| Image chip type                 | Color              |
| Light source                    | LED                |
| Light color                     | White              |
| Wavelength [°K]                 | 4500               |
| LED risk category [RG]          | 1                  |
| Explanation of risk category    | Acc. to EN 62471   |
| Resolution                      | HDV2               |
| Number of pixels (H x V) [px]   | 1440 x 1080        |
| Imaging chip technology         | CMOS               |
| Sensor size ["]                 | 1/2.9              |
| Pixel size [µm]                 | 3.45               |
| Field of view type              | Medium             |
| Operating distance [mm]         | 25 ... 10,000      |
| Focal length [mm]               | 12.0               |
| Opening angle [°]               | 24.0               |
| Min. field of view (X x Y) [mm] | 10 x 8             |
| Aperture number                 | 2.8                |
| Depth of field                  | Standard           |
| Focus drive                     | Motorized          |
| Target laser                    | Laser red (655 nm) |
| Laser class                     | 1 (IEC 60825-1)    |

| Functions                |                                                                                                                                                                                                                                                          |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Network protocol         | TCP/IP, Profinet, EtherNet/IP, sFTP, SMB, FTP, Service Port                                                                                                                                                                                              |
| Hardware                 | VISOR®                                                                                                                                                                                                                                                   |
| Max. number of jobs      | 255                                                                                                                                                                                                                                                      |
| Max. number of detectors | 255                                                                                                                                                                                                                                                      |
| Alignment                | Contour comparison, Pattern matching, Edge detection                                                                                                                                                                                                     |
| Available detectors      | Pattern matching, Contour, BLOB, Target mark (3D), Brightness, Contrast, Grayscale, Color value, Color area, Caliper, Color list                                                                                                                         |
| Result processing        | Numbers, Robotics                                                                                                                                                                                                                                        |
| Pre-processing           | Arrangement, Filter                                                                                                                                                                                                                                      |
| Calibration              | Board (measurement), Board (robotics), Scaling (measurement), Point pair list (robotics)                                                                                                                                                                 |
| Robotic functions        | Gripper clearance check, Result offset, image coordinates, Result offset 2D, Result offset 3D                                                                                                                                                            |
| Additional functions     | Archiving, Image transmission, individual overlays, Multiple image acquisition, Color channel, color distance and binarization, Multiple detection for contour and pattern matching detector, Multiple detection for detector contour (3D), Job checksum |

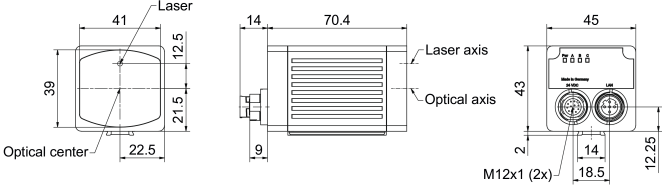
| Electrical data                     |                                                               |
|-------------------------------------|---------------------------------------------------------------|
| Operating voltage $U_B$ [V DC]      | 18 ... 30                                                     |
| Typical current draw [mA]           | 350                                                           |
| Type of voltage source              | The device must be supplied by a "Class 2" power supply unit. |
| Readiness delay [ms]                | $\leq 16,000$                                                 |
| Reverse polarity protection         | Yes                                                           |
| Overvoltage protection              | No                                                            |
| Residual ripple [%]                 | $\leq 5$ Vss, level 3                                         |
| Explanation of residual ripple      | EN 61000-4-17                                                 |
| Polarity                            | PNP/NPN                                                       |
| Short circuit protection            | Yes                                                           |
| Input threshold (High)              | $> U_B - 1V$                                                  |
| Input threshold (Low)               | $< 3V$                                                        |
| Input resistance [k $\Omega$ ]      | $> 20$                                                        |
| Max. output current [mA]            | 50                                                            |
| Explanation of max. output current  | max. 100 mA on pin 12                                         |
| Inductive loads                     | Typ.: Relay 17 K / 2 H, pneumatic valve 1.4 K / 190 mH        |
| Max. output current (total) [mA]    | 200                                                           |
| Ethernet transmission rate [Mbit/s] | 100                                                           |
| Number of switchable IOs            | 6                                                             |
| Number of outputs                   | 2                                                             |
| Number of inputs                    | 2                                                             |
| Encoder functions                   | Yes                                                           |

| Mechanical data                               |                                                               |
|-----------------------------------------------|---------------------------------------------------------------|
| Height [mm]                                   | 85.0                                                          |
| Length [mm]                                   | 45.0                                                          |
| Width [mm]                                    | 45.0                                                          |
| Weight [g]                                    | ~ 220                                                         |
| Front panel material                          | PMMA                                                          |
| Housing material                              | Aluminum (cast)                                               |
| Connection name                               | Supply                                                        |
| - Number of pins                              | 12                                                            |
| - Coding                                      | A                                                             |
| - Thread                                      | M12x1                                                         |
| - Material                                    | Metal                                                         |
| - Type                                        | Plug                                                          |
| Connection name                               | LAN                                                           |
| - Number of pins                              | 4                                                             |
| - Coding                                      | D                                                             |
| - Thread                                      | M12x1                                                         |
| - Material                                    | Metal                                                         |
| - Type                                        | Socket                                                        |
| Ambient temperature: operation [°C]           | 0 ... 50                                                      |
| Explanation of ambient temperature: operation | < 95 % humidity, non-condensing                               |
| Ambient temperature: storage [°C]             | -20 ... 60                                                    |
| Explanation of ambient temperature: storage   | < 95 % humidity, non-condensing                               |
| Protection class                              | IP 65, IP 67                                                  |
| Explanation of protection class               | For C-mount devices, only in combination with protective tube |
| Vibration and shock resistance                | EN 60068-2-6, EN 60068-2-27                                   |



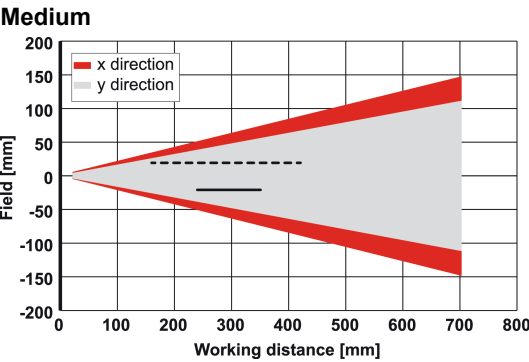
**Technical drawings**

**Dimensional drawing**



153-13554

**Field of view**



155-03099

**Product link**

<https://www.sensopart.com/en/products/details/632-91075>