



3D vision

RS-485 Fast Ethernet (10/100 Mbit/s): TCP/IP, UDP/IP, EtherNet/IP OPC server included , IVC-3D, IVC-3D 100, IVC-3D 100, plastic windows

IVC-3D51112



windows

Model Name > [IVC-3D51112](#)

Part No. > [1046912](#)



At a glance

- Easy 3D measurement - provides information about object height, shape and volume
- Independent of contrast and color
- Easy-to-use graphical user interface for fast application development
- Simple connection of PLCs, robots, and other control systems, e.g., via EtherNet/IP or OPC
- Scans up to 5,000 profiles per second
- Industrial, robust metal housing

Your benefits

- The IVC-3D makes advanced 3D shape inspections easy, enabling cost-efficient solutions
- Contrast-independent measurement provides greater reliability even at varying object color and when the object color is the same as the background
- Factory calibrated - instantly providing true metric dimensions at production speed
- The camera's OPC server and EtherNet/IP interface enables simple communication with PLCs, robots and control systems, making integration easy
- Stand-alone operation – no PC is needed after configuration



Features

| | |
|------------------------------------|---|
| Task: | Inspection, Reading, Measuring, Positioning |
| Technology: | 3D Image analysis LineScan |
| Example field of view (H x W): | 100 mm x 200 mm |
| Sensing distance: | 265 mm ... 404 mm ¹⁾ |
| Maximum height range: | 139 mm |
| Light source: | Visible red light (laser, 658 nm, ± 15 nm) |
| Laser class: | 2M (IEC 60825-1 : 2007-03) |
| Width at minimum working distance: | 179 mm |
| Width at maximum working distance: | 255 mm |
| Imaging angle: | 61 ° |
| Offline support: | Emulator |

1) The specified values are valid for single device installations. Please see operating instructions for details.

Performance

| | |
|----------------------------|-------------------------|
| Image sensor: | CMOS |
| Maximum performance: | 5,000 3D profiles/s |
| 3D profile resolution: | 2,048 points |
| Typical height resolution: | 0.05 mm |
| Processor: | 800 MHz |
| Memory: | 128 MB RAM, 16 MB flash |

Interfaces

| | |
|----------------------------|--|
| Configuration software: | IVC Studio |
| Communication interfaces: | RS-485 Fast Ethernet (10/100 Mbit/s): TCP/IP, UDP/IP, EtherNet/IP OPC server included |
| Digital inputs: | 3 program controlled inputs (1 trigger input), HIGH = 10 V ... 28.8 V |
| Digital outputs: | 3 B-type program controlled outputs, Total output load < 100 mA, Trigger output |
| Maximum encoder frequency: | 2 MHz |
| Operator interfaces: | Application specific operator interfaces can be created using ActiveX (COM) or as web page. Included OPC server enables data exchange with e.g. SCADA systems. |
| Data store and retrieve: | Images and data can be stored to and retrieved from flash and external FTP servers |
| Encoder interface: | RS-422 |

Mechanics/electronics

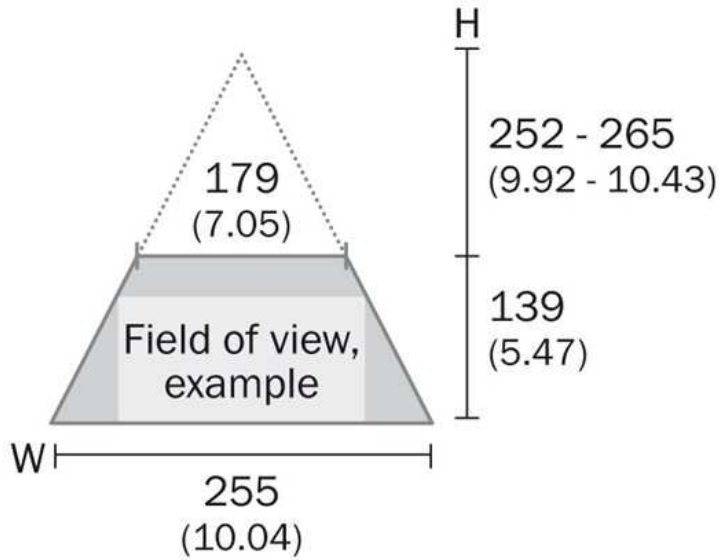
| | |
|-------------------------|---|
| Connectors: | M12, 4-pin female connector, D-coded (Ethernet) M12, 5-pin male (Encoder) M12, 8-pin female connector (RS-485) M12, 8-pin male connector (power I/O) |
| Connector material: | Nickel plated brass |
| Supply voltage: | 24 V DC ± 20 % |
| Power consumption: | < 1 A Without output load |
| Ripple: | < 5 Vpp |
| Enclosure rating: | IP 65 |
| Housing material: | Anodized aluminum |
| Window material: | PMMA |
| Weight: | 3.2 kg |
| Dimensions (L x W x H): | 294 mm x 69 mm x 163 mm |
| Optics: | Fixed |
| Protection class: | II, III |

Ambient data

| | |
|--------------------------------|------------------------|
| Shock load: | 15 g, 3 x 6 directions |
| Vibration load: | 5 g, 58 Hz ... 150 Hz |
| Ambient operating temperature: | 0 °C ... +40 °C |
| Ambient storage temperature: | -20 °C ... +70 °C |

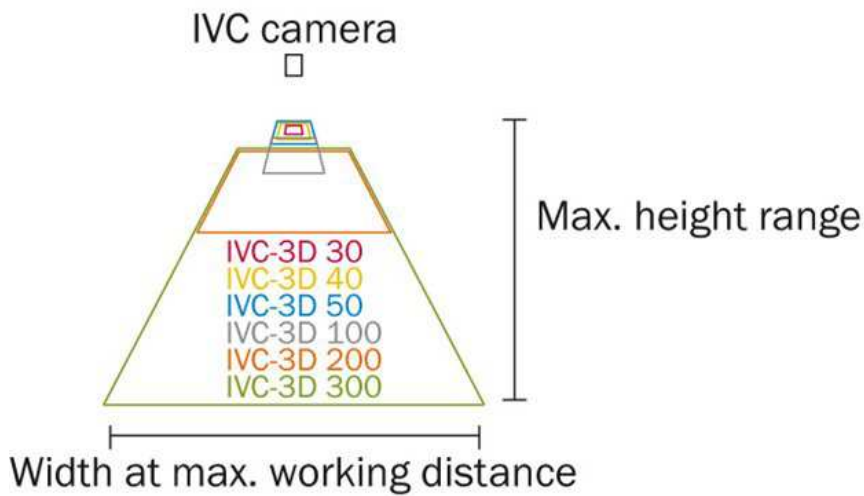
IVC-3D 100

Typ. field of view in mm (inch)

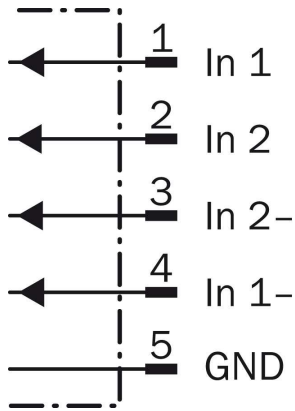


Field of view overview

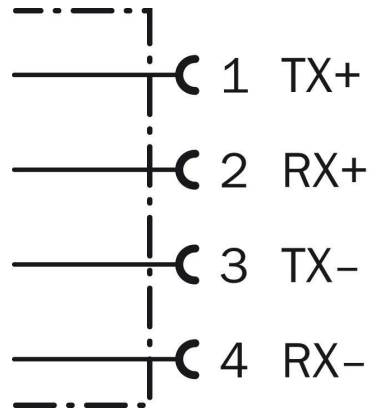
Typical field of view



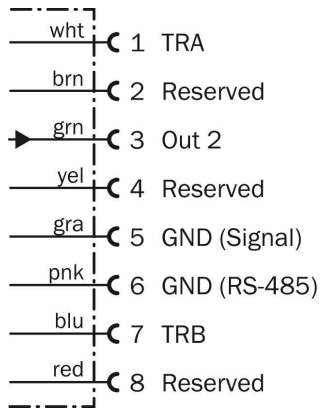
Connection diagram Encoder



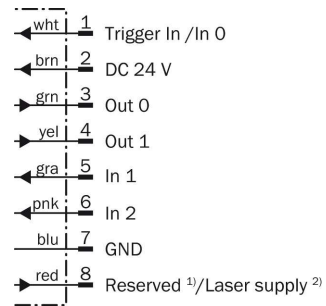
Connection diagram Ethernet



Connection diagram RS-485



Connection diagram Power I/O



¹⁾ Do not connect for IVC-3D products with a type code as IVC-3Dxxx1x.

²⁾ Only in IVC-3D products with a type code as IVC-3Dxxx2x.

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