



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

IVC-3D51111



Model Name > [IVC-3D51111](#)
Part No. > [1043579](#)



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

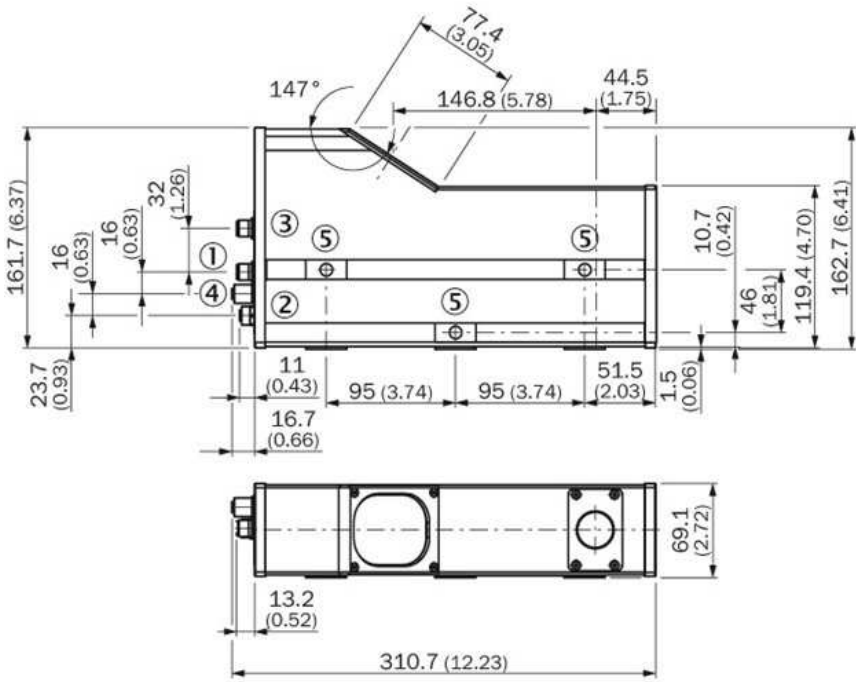
Mechanics/electronics

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:	Safety glass
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

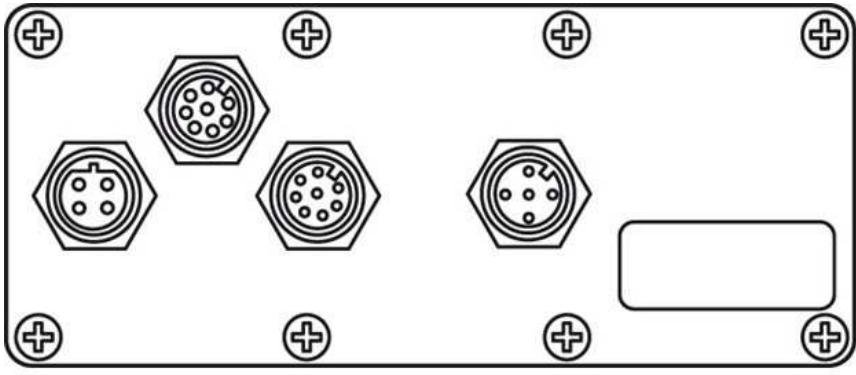
Shock load:	15 g, 3 x 6 directions
Vibration load:	5 g, 58 Hz ... 150 Hz
Ambient operating temperature:	0 °C ... +40 °C
Ambient storage temperature:	-20 °C ... +70 °C

Dimensional drawing



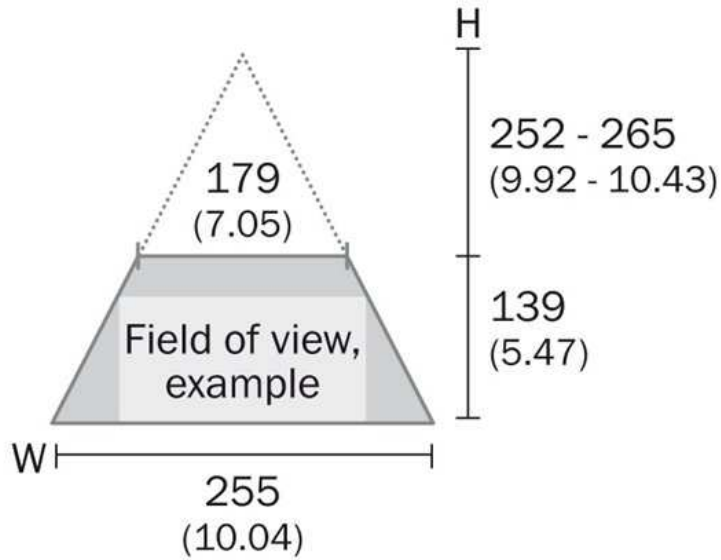
- [1] Power I/O: M12, 8-pin, male
- [2] Ethernet: M12, 4-pin, D-coded, female
- [3] Encoder: M12, 5-pin, male
- [4] M12, 8-pin female connector (RS-485)
- [5] Mounting holes M8 x 10

Connection type



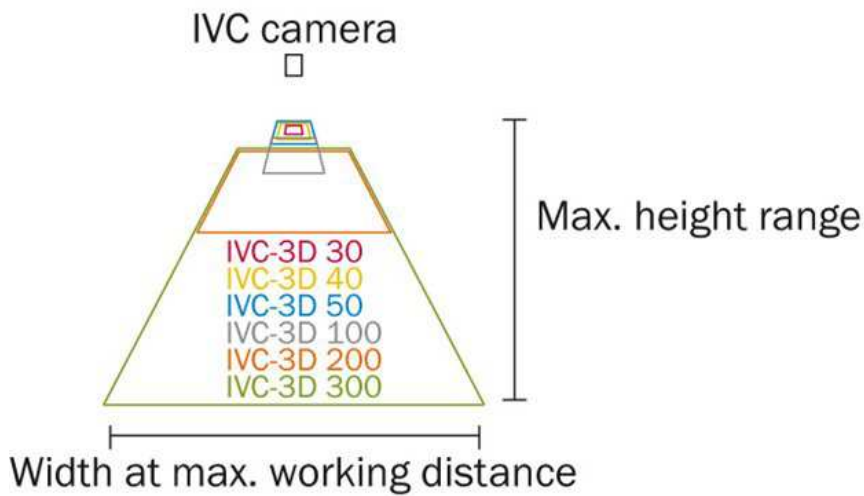
IVC-3D 100

Typ. field of view in mm (inch)

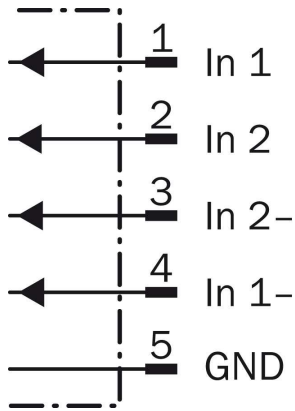


Field of view overview

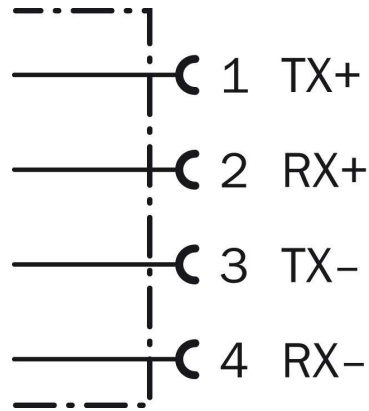
Typical field of view



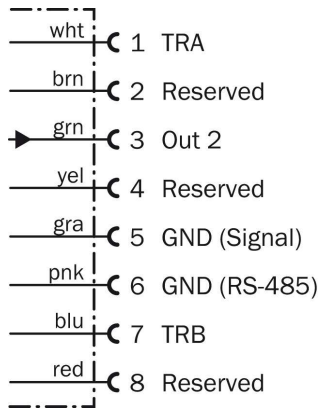
Connection diagram Encoder



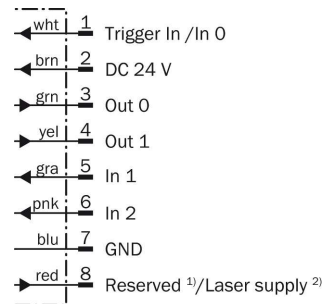
Connection diagram Ethernet



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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