



### 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, stainless steel

IVC-3D51113



**Model Name** > [IVC-3D51113](#)

**Part No.** > [1050158](#)

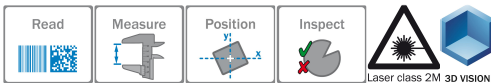


**At a glance**

- 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:	259 mm ... 398 mm <sup>1)</sup>
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

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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

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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

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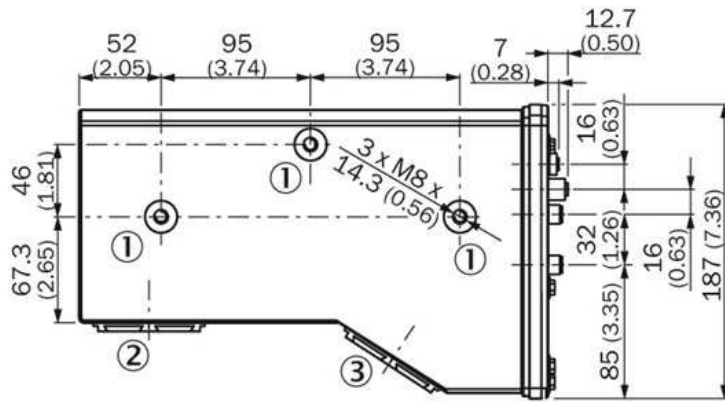
Connectors:	M12, 4-pin female connector, D-coded (Ethernet) M12, 5-pin male (Encoder) M12, 8-pin female connector (RS-485) M12, 8-pin male connector (power I/O)
Connector material:	Stainless steel
Supply voltage:	24 V DC± 20 %
Power consumption:	< 1 A Without output load
Ripple:	< 5 Vpp
Enclosure rating:	IP 67
Housing material:	Stainless steel
Window material:	PMMA
Weight:	5.5 kg
Dimensions (L x W x H):	311 mm x 103 mm x 187 mm
Optics:	Fixed
Protection class:	II, III

## Ambient data

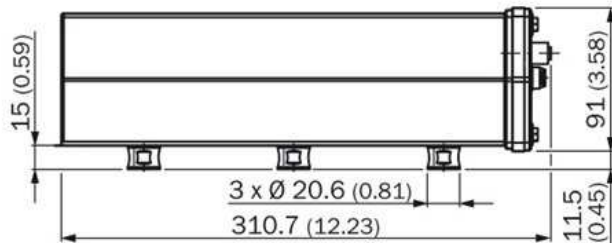
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Shock load:	15 g, 3 x 6 directions
Vibration load:	5 g, 58 Hz ... 150 Hz
Ambient operating temperature:	0 °C ... +40 °C
Ambient storage temperature:	-20 °C ... +70 °C

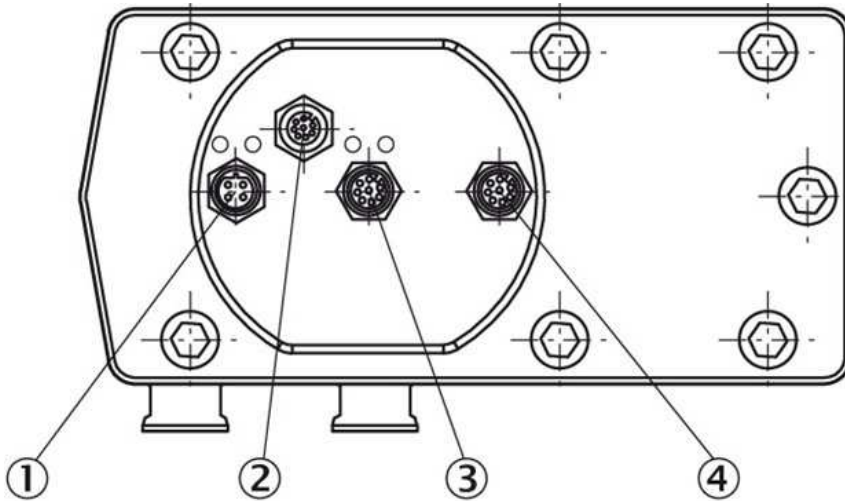
## Dimensional drawing



- |1| Fastening threads
- |2| Laser unit
- |3| Image sensor



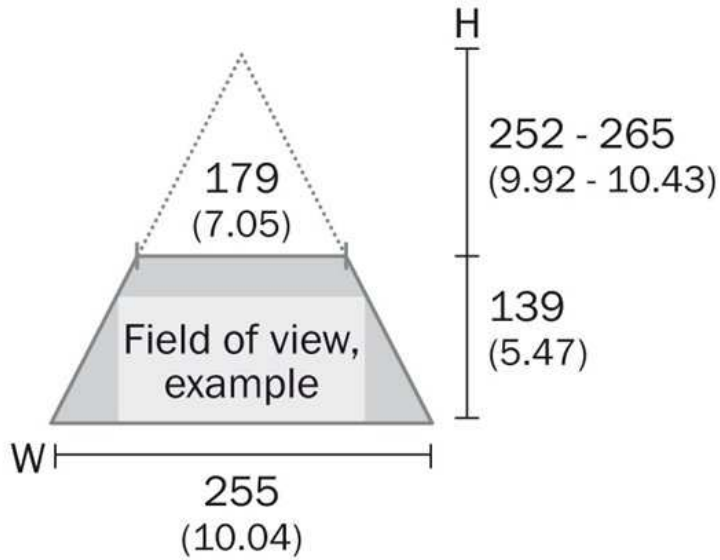
## Connection type



- |1| Ethernet: M12, 4-pin, D-coded, female
- |2| M12, 8-pin female connector (RS-485)
- |3| Power I/O: M12, 8-pin, male (illumination trigger output)
- |4| Encoder: M12, 5-pin, male

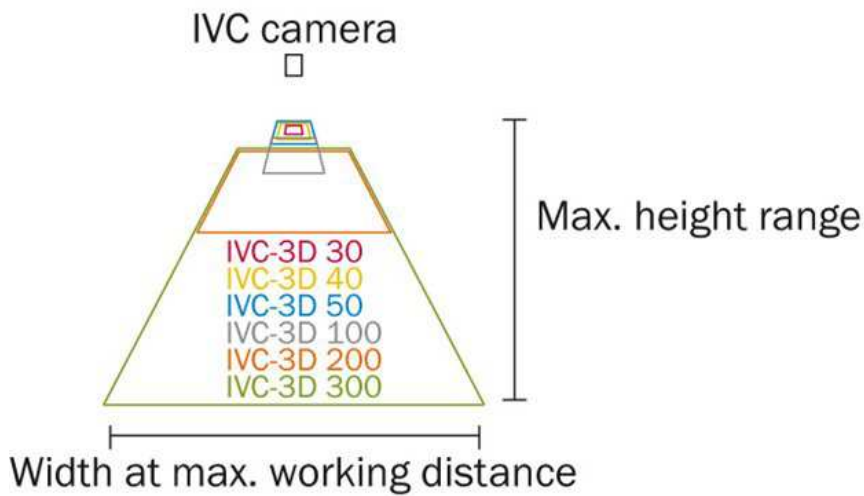
# IVC-3D 100

## Typ. field of view in mm (inch)

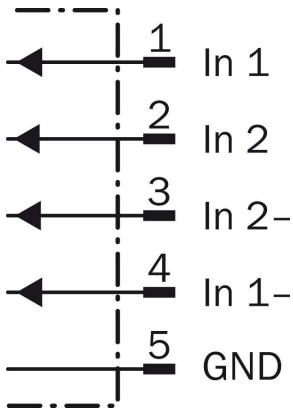


### Field of view overview

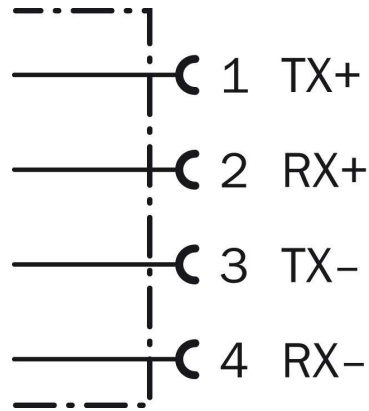
## Typical field of view



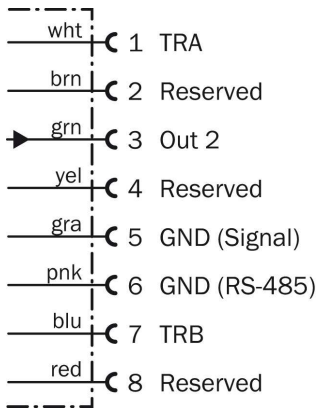
**Connection diagram Encoder**



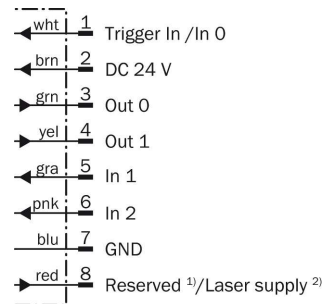
**Connection diagram Ethernet**



**Connection diagram RS-485**



**Connection diagram Power I/O**



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

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

**Australia**

Phone +61 3 9457 0600  
1800 33 48 02 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail marketing@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Česká republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail info@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6881000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 5309 2112  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederland**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail sick@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail sales.gsg@sick.com

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886 2 2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 88 65 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 (800) 325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)