Online data sheet



IVC-3D21112

IVC-3D

3D VISION

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
IVC-3D21112	1041710

In accordance with Article 2 (4), this product does not fall within the scope of RoHS directive 2011/65/EU and is also not designed for use in products which fall within the scope of this directive. You can find additional information in the product information.

Other models and accessories ➜ www.sick.com/IVC-3D

Detailed technical data

Features

Task	Positioning, inspection, measuring, reading
Technology	3D, LineScan, image analysis
Working distance	195 mm ... 279 mm [1)]
Example field of view	50 mm x 150 mm
Light source	Visible red light (laser, 658 nm, ± 15 nm)
Laser class	2 (IEC 60825-1:2014, EN 60825-1:2014)
Width at minimum operating distance	134 mm
Width at maximum operating distance	174 mm
Maximum height range	84 mm
Imaging angle	53°
Offline support	Emulator
Lens	Fixed

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

Performance

Image sensor	CMOS
Processor	800 MHz
Scan/frame rate	5,000 3D profiles/s
Memory	128 MB RAM, 16 MB flash
Typical height resolution	0.04 mm
3D profile resolution	2,048 points

Interfaces

Ethernet	✓, TCP/IP, UDP/IP
Remark	Including OPC server
Data transmission rate	10/100 MBit/s
EtherNet/IP™	✓
Data transmission rate	10/100 MBit/s
Serial	✓, RS-422, RS-485

Function	Encoder (RS-422)
Data transmission rate	Maximum encoder frequency: 2 MHz
Operator interfaces	Application-specific user interfaces can be set up as stand-alone web pages. The integrated OPC server supports data exchange with SCADA systems, for example.
Configuration software	IVC Studio
Data storage and retrieval	Images and data can be stored to and retrieved from flash and external FTP servers
Digital inputs	3 program controlled inputs (1 trigger input), HIGH = 10 V ... 28.8 V
Digital outputs	3 programmable type B switching outputs, Max. output current 100 mA, trigger output
Encoder interface	RS-422
Maximum encoder frequency	2 MHz

Mechanics/electronics

Connections	M12, 4-pin female connector, D-coded (Ethernet) M12, 8-pin female connector (RS-485) M12, 8-pin male connector, A-coded (voltage supply, I/O) M12, 5-pin male (Encoder)
Connector material	Nickel plated brass
Supply voltage	24 V DC, ± 20 %
Ripple	< 5 V_{pp}
Current consumption	< 1 A, without output load
Enclosure rating	IP65
Protection class	III
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

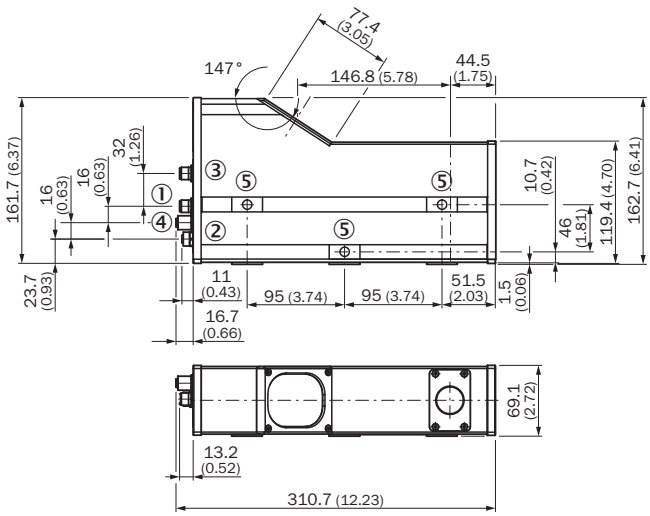
Ambient data

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

Classifications

ECl@ss 5.0	27310205
ECl@ss 5.1.4	27310205
ECl@ss 6.0	27310205
ECl@ss 6.2	27310205
ECl@ss 7.0	27310205
ECl@ss 8.0	27310205
ECl@ss 8.1	27310205
ECl@ss 9.0	27310205
ETIM 5.0	EC001820
ETIM 6.0	EC001820
UNSPSC 16.0901	43211731

Dimensional drawing (Dimensions in mm (inch))

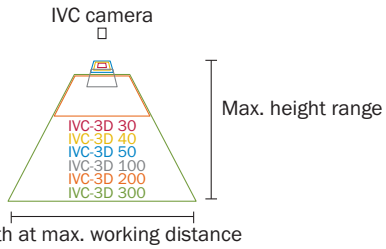


① Power I/O: M12, 8-pin, male
② Ethernet: M12, 4-pin, D-coded, female thread
③ Encoder: M12, 5-pin, male
④ M12, 8-pin female connector (RS-485)
⑤ Mounting holes M8 x 10

Field of view

Field of view overview

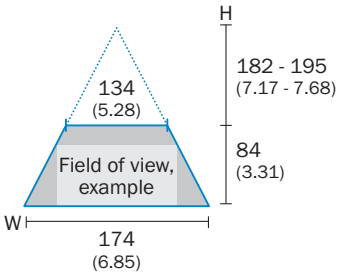
Typical field of view



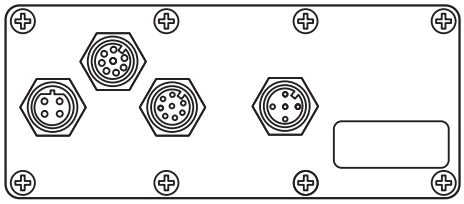
Field of view

IVC-3D 50

Typ. field of view in mm (inch)

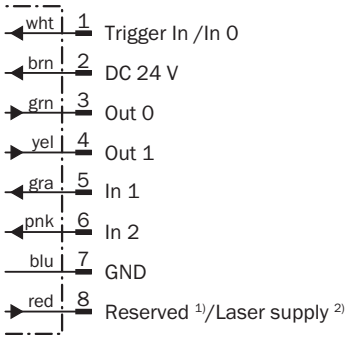


Connection type



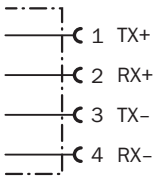
Connection diagram

Connection diagram, voltage I/O

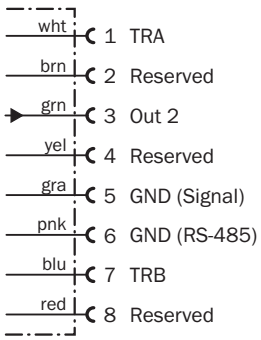


1) Do not connect for IVC-3D products with a type code as IVC-3Dxxx1x.
2) Only in IVC-3D products with a type code as IVC-3Dxxx2x.

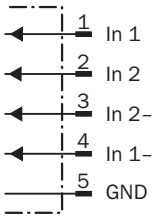
Ethernet connection diagram



Connection diagram RS-485



Encoder connection diagram



Selection Guide

SICK AppSpace



Recommended accessories

Other models and accessories ➜ www.sick.com/IVC-3D

	Brief description	Type	Part no.
Modules and gateways			
	I/O box extension with 2 ethernet ports enabling switch functionality, number of logical input: 4, output: 8	I/O extension box, 4 inputs/8 outputs	6037654
Plug connectors and cables			
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YF2A15-020VB5XLEAX	2096239
	Head A: female connector, M12, 8-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, shielded, 2 m	YF2A28-020VA6XLEAX	2096243
	Head A: male connector, M12, 8-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, shielded, 2 m	YM2A28-020VA6XLEAX	2096232

	Brief description	Type	Part no.
	Head A: female connector, M12, 4-pin, straight Head B: male connector, M12, 4-pin, straight Cable: Ethernet, unshielded Connection cable, extension cable 1:1, shielded, for TTK70 inspector and MLG	EtherNet/IP adapter	2044264
	Head A: male connector, M12, 4-pin, straight, D-coded Head B: male connector, RJ45, 8-pin, straight Cable: PROFINET, PUR, halogen-free, shielded, 3 m	SSL-2J04-G03ME	6029630

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com