



2D vision
Inspector, Inspector I-series, Inspector I20 Dome

VSPI-2D111



Model Name > [VSPi-2D111](#)
Part No. > [1046733](#)



At a glance

- High-speed part inspection
- Robust pattern match algorithm to locate parts independent of position, rotation and scale
- Unique, even dome illumination or high-power white or UV ring light
- Easy-to-use step configuration in PC, including emulator
- Log, statistics and record
- Exchangeable lens
- Input and output extensions via I/O box
- Configurable outputs by logical expressions

Your benefits

- High-speed part inspection ensures quality without production overhead
- The robust pattern match algorithm locates parts independent of position, rotation and scale and guarantees high-quality results even in your toughest production conditions
- Unique UV illumination provides a quick return on investment in solar cell manufacturing by detecting broken wafers
- The compact, IP 67-rated exchangeable lens optimizes performance on different object sizes and working distances and is designed for the best price/performance ratio
- The increased I/O support via the I/O extension box gives you an easy solution for extended production control
- Configurable outputs by logical expression enables reduced cost of additional logical equipment in your production



Features

Task:	Inspection
Technology:	2D Image analysis Snapshot
Toolset:	Object locator Edge pixel count Contour Pixel count
Focus:	Adjustable focus (manually)
Sensor:	CMOS matrix sensor, gray scale values
Sensing distance:	≥ 50 mm
Working distance internal illumination:	50 mm

Field of view internal illumination:	30 mm x 30 mm
Spectral range:	Ca. 400 nm ... 750 nm
LED class:	Risk group 1 (low risk, IEC62471 : 2006)
Focal length:	6 mm
Offline support:	Emulator
Sensor resolution:	384 px x 384 px
Internal lighting:	White dome light
Robot coordinate alignment:	-

Performance

Maximum performance:	250 fps
Typical performance:	40 fps
Number of inspections:	32
Reference images:	16 objects

Interfaces

Operator interfaces:	Inspector Viewer
Data store and retrieve:	Record images on PC 30 images device log
Digital inputs:	4 inputs (24 V)
Configurable inputs:	Reference object selection Encoder input External trigger External teach
Digital outputs:	3 outputs, 24 V (B-type)
Configurable outputs:	Output by logical expressions
Output current:	100 mA
Default outputs:	All pass Any fail No object detected
Maximum encoder frequency:	40 kHz
Control of external illumination:	5 V TTL
I/O Box extension:	16 outputs 4x inputs for object selection
Serial (RS-232, RS-422):	-
Ethernet:	✓
Data transmission rate (Ethernet):	100 Mbit/s
Configuration software:	SOPAS

Mechanics/electronics

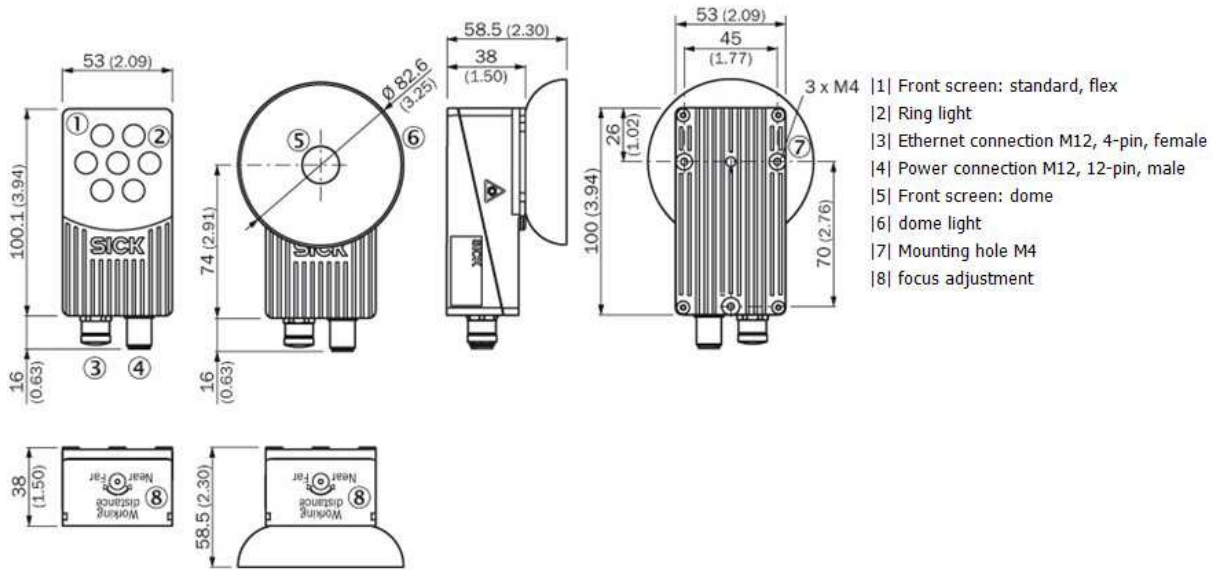
Connectors:	M12, 12-pin male connector M12, 4-pin female connector
Supply voltage:	24 V DC± 20 %
Power consumption:	< 450 mA Without output load
Ripple:	< 5 Vpp
Enclosure rating:	IP 67
Housing material:	Aluminum
Window material:	PMMA
Dimensions (L x W x H):	100 mm x 53 mm x 38 mm
Optics:	Integrated
Weight:	400 g

Ambient data

Shock load: EN 60068-2-27
 Vibration load: IEC 60068-2-6
 Ambient operating temperature ¹⁾: 0 °C ... +45 °C
 Ambient storage temperature ²⁾: -20 °C ... +70 °C

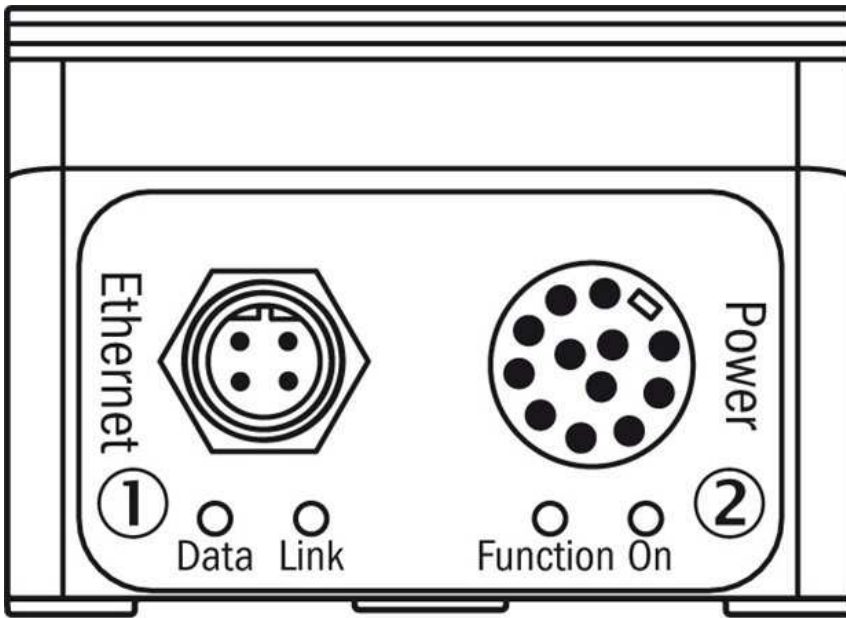
1) 2) Relative humidity: 35 % ... 85 %, 95 % at operation

Dimensional drawing



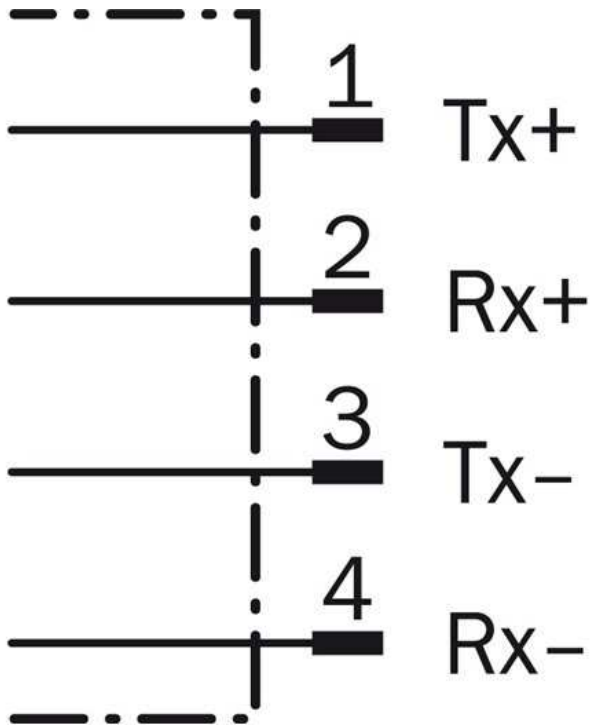
- |1| Front screen: standard, flex
- |2| Ring light
- |3| Ethernet connection M12, 4-pin, female
- |4| Power connection M12, 12-pin, male
- |5| Front screen: dome
- |6| dome light
- |7| Mounting hole M4
- |8| focus adjustment

Connection type

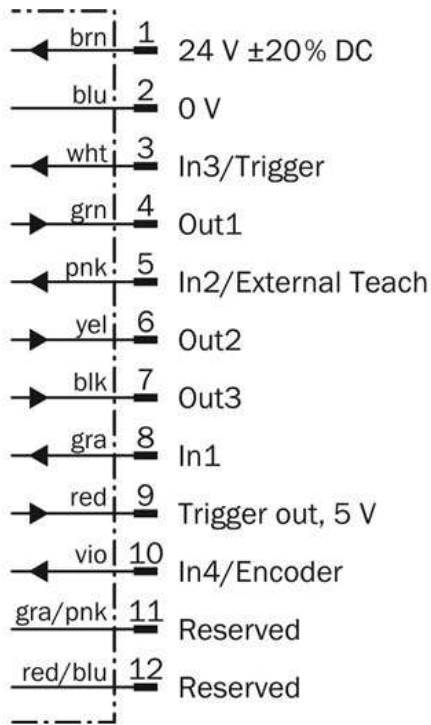


- [1] Ethernet connection M12, 4-pin, female
- [2] Power connection M12, 12-pin, male

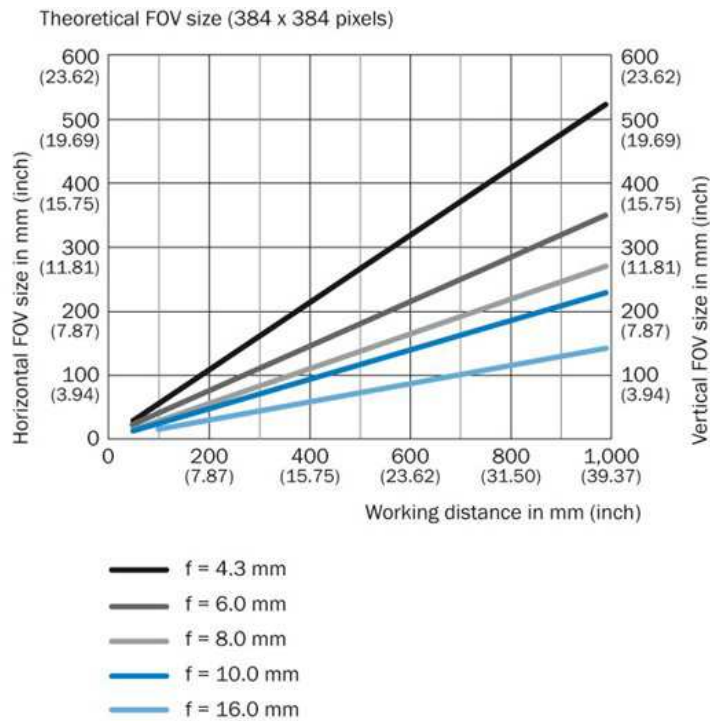
Connection diagram Ethernet



Connection diagram M12, 12-pin



Field of view



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