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DATA SHEET

VSPI-4F2111

Inspector
2D machine vision

SICK Sensor Intelligence



2D MACHINE VISION

VSPI-4F2111

ORDERING INFORMATION

Type	part no.
VSPI-4F2111	1047913

Further device versions and accessories at www.sick.com/Inspector

DETAILED TECHNICAL DATA

FEATURES

Technology	2D snapshot
Configurable	✓
Toolkit	Object Locator Contour Pixel Counter Edge Pixel Counter Pattern
Image sensor	CMOS monochrome
Optical focus	Adjustable focus (manual)
Working range	≥ 50 mm
Operating distance with internal illumination	50 mm ... 200 mm
Field of view of internal illumination	22 mm x 15 mm ... 79 mm x 58 mm
Illumination	Integrated
Illumination color	White
LED class	Risk group 1 (low risk, IEC62471 : 2006)
Spectral range	Approx. 400 nm ... 750 nm
Offline support	Emulator
Lens	S-mount
Optical format	1/3"
Focal length	10 mm
Task	Detecting - Standard objects Measuring - Dimension, contour and volume Measuring - Number Identifying - OCR Identifying - Pattern Determining position - 2D position determination

MECHANICS/ELECTRONICS

Supply voltage	24 V DC, ± 20 %
Ripple	< 5 V_{pp}
Current consumption	≤ < 450 mA Without output load
Enclosure rating	IP67 [1]
Housing material	Aluminum
Window material	PMMA
Weight	350 g
Dimensions (L x W x H)	100 mm x 53 mm x 38 mm

[1] With front window mounted.

PERFORMANCE

Sensor properties	
Sensor resolution	640 px x 480 px (0.3 MP)
Scan/frame rate	40 fps [1]
Number of inspections	32
Reference images	32 objects

[1] Max. 250 fps.

INTERFACES

EtherNet/IP™	✓
Data transmission rate	100 Mbit/s
Operator interfaces	Inspector Viewer
Configuration software	SOPAS ET
Data storage and retrieval	Log for 30 images, record images on PC, store images to FTP
Ethernet communication	EtherNet/IP™
Digital input	4 inputs (24 V)
Configurable inputs	External trigger, encoder input, External teach, reference object selection
Digital output	3 digital outputs, 24 V (B-type)
Configurable outputs	Output by logical expressions, Additional image storage possibility via FTP
Output current	≤ 100 mA
Standard outputs	No object detected, Everything OK, Detail error
Maximum encoder frequency	Max. 40 kHz
External illumination	5 V TTL
I/O box extension	5 x inputs for object selection, 16 outputs

AMBIENT DATA

Shock load	EN 60068-2-27
Vibration load	IEC 60068-2-6
Ambient operating temperature	0 °C ... +45 °C [1]
Storage temperature	-20 °C ... +70 °C [1]

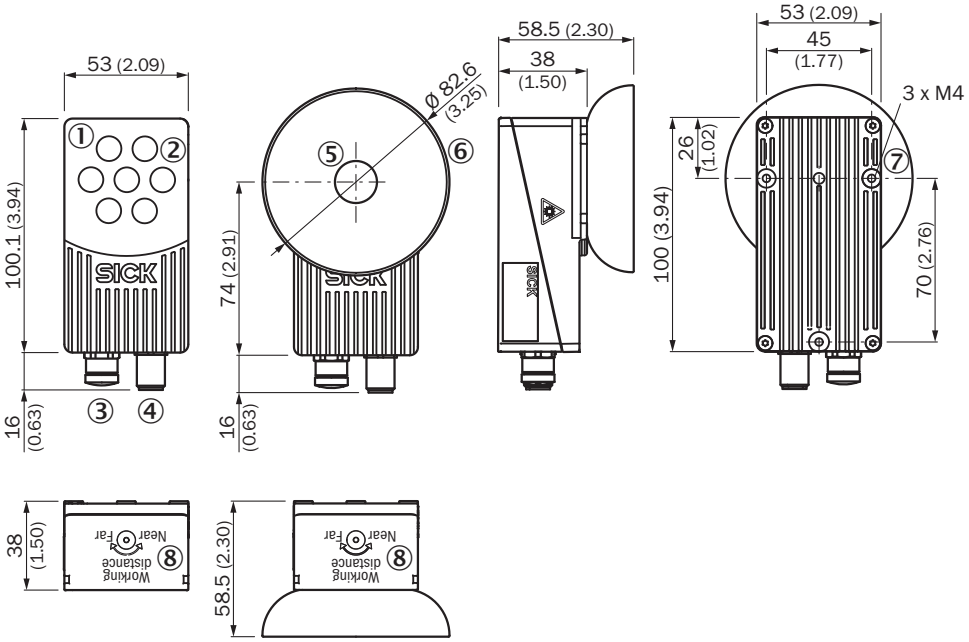
[1] Relative humidity: 35% ... 85%, 95% in storage.

CERTIFICATES

EU declaration of conformity	✓
ACMA declaration of conformity	✓

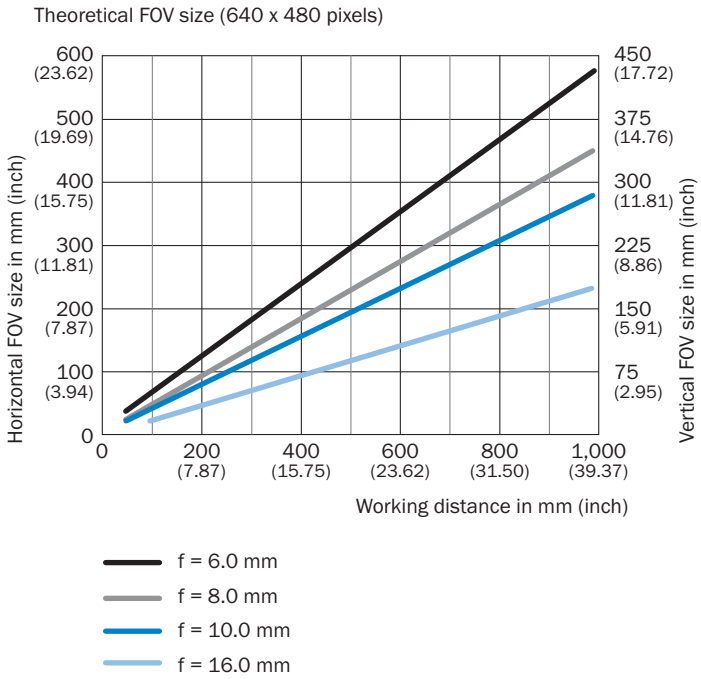
China RoHS	✓
cULus certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

DIMENSIONAL DRAWING STANDARD

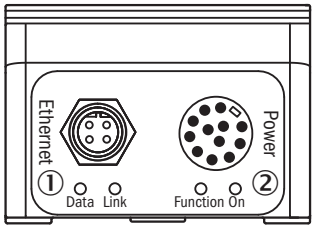


Dimensions in mm (inch)
① Front screen: standard, flex
② ring lighting
③ Ethernet connection M12, 4-pin, female
④ Power connection M12, 12-pin, male
⑤ Front screen: dome
⑥ dome light
⑦ Mounting hole M4
⑧ focus

FIELD OF VIEW

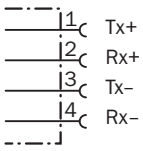


CONNECTION TYPE

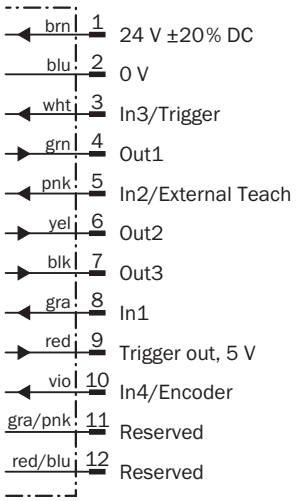


① Ethernet connection M12, 4-pin, female
② Power connection M12, 12-pin, male

ETHERNET CONNECTION DIAGRAM



M12 CONNECTION DIAGRAM, 12-PIN



Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1047913

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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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