



DATA SHEET

VSPM-6F2413

Inspector
2D machine vision

SICK

Sensor Intelligence



2D MACHINE VISION

VSPM-6F2413

ORDERING INFORMATION

Type	part no.
VSPM-6F2413	1062408

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



DETAILED TECHNICAL DATA

FEATURES

Technology	2D snapshot
Configurable	✓
Toolkit	Object Locator Pixel Counter Edge Pixel Counter Pattern Blob Finder Polygon Edge Circle Distance Angle Edge counter Find maximum
Image sensor	CMOS monochrome
Optical focus	Adjustable focus (manual)
Calibration	Perspective and lens distortion correction, mm results
Robot coordinate alignment	✓
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	Infrared
LED class	Risk-free group (no danger, IEC62471: 2006)
Spectral range	Approx. 370 nm ... 900 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, $\pm 20\%$
Ripple	$< 5\text{ V}_{pp}$
Current consumption	$\leq < 450\text{ mA}$ 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		64
Reference images		32 objects

¹⁾ Max. 200 fps.

INTERFACES

Ethernet	Data transmission rate	✓, TCP/IP 100 Mbit/s
EtherNet/IP™	Data transmission rate	✓ 100 Mbit/s
Operator interfaces		Web server
Configuration software		SOPAS ET
Data storage and retrieval		Log for 30 images, record images on PC, store images to FTP
Ethernet communication		Web API
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		$\leq 100\text{ mA}$
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⁾

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

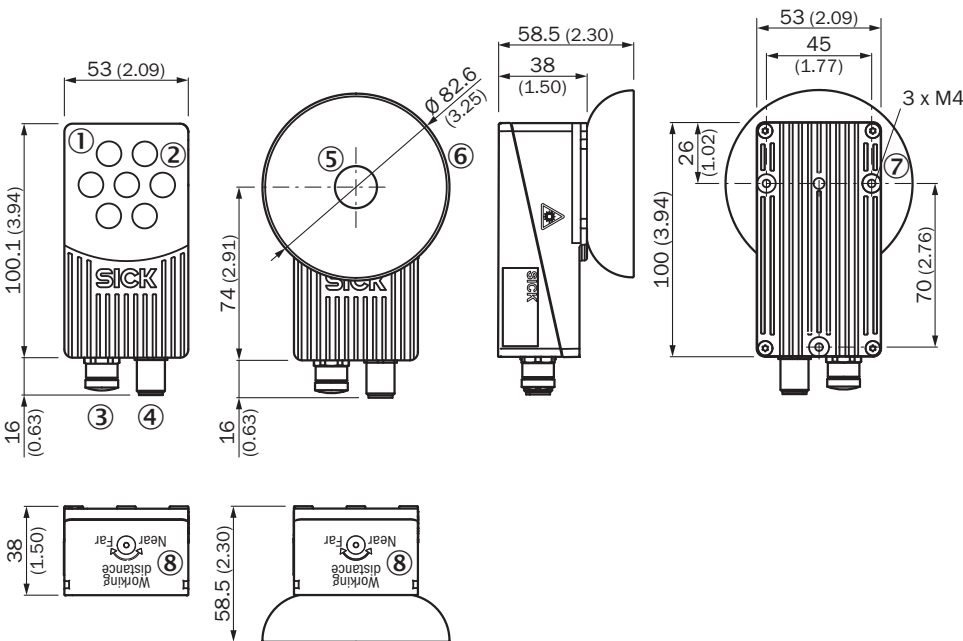
Storage temperature	-20 °C ... +70 °C ¹⁾
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¹⁾ Relative humidity: 35% ... 85%, 95% in storage.

CERTIFICATES

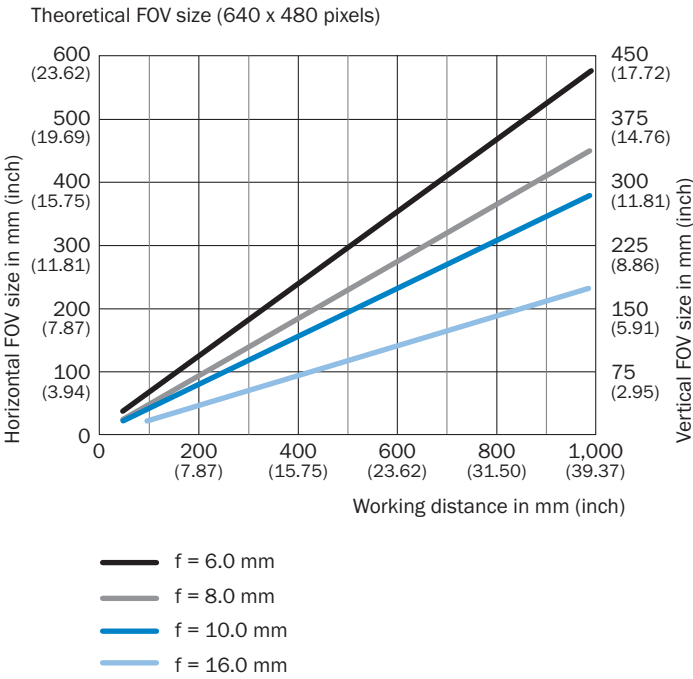
EU declaration of conformity	✓
ACMA declaration of conformity	✓
China RoHS	✓
cULus certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

DIMENSIONAL DRAWING STANDARD

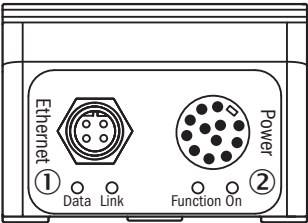


- Dimensions in mm (inch)
- ① Front screen: standard, flex
 - ② ring lighting
 - ③ Ethernet connection M12, 4-pin, female
 - ④ Power connection M12, 12-pin, male
 - ⑤ Front screen: dome
 - ⑥ dome light
 - ⑦ Mounting hole M4
 - ⑧ focus

FIELD OF VIEW

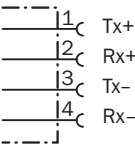


CONNECTION TYPE

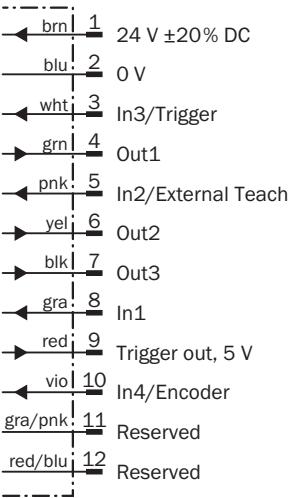


- ① Ethernet connection M12, 4-pin, female
- ② Power connection M12, 12-pin, male

ETHERNET CONNECTION DIAGRAM



M12 CONNECTION DIAGRAM, 12-PIN



Further information as well as suitable accessories, example applications and downloads such as CAD di-
mensional models, operating instructions and software can be found at www.sick.com/1062408



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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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