



2D vision  
Inspector, Inspector PI-series, Inspector PI50-IR

VSPP-5F2413



**Model Name** > [VSPP-5F2413](#)  
**Part No.** > [1057303](#)



**At a glance**

- High-speed positioning and inspection
- Expanded toolbox for locating taught-in and free-form objects
- Multiple, simultaneous inspection of blobs, patterns, edges and pixel counting
- Easy device cloning via the web interface
- Image calibration, including mm output
- Configurable communication through EtherNet/IP, TCP/IP and EtherCAT
- HMI integration via web API
- Simple, out-of-the-box web server

**Your benefits**

- Powerful yet simple tools enable flexibility in various positioning and inspection applications
- Device cloning saves time in deployment using only standard web browser
- Web interface enables import/export of unlimited number of reference objects, increasing production flexibility
- Ethernet communication and web API gives excellent connectivity and freedom to customize user's HMI
- The built-in web server is an easy and cost-efficient way to monitor the production process
- The image calibration ensures reliable inspection results on moving and rotated objects in tilted setups, or when using wide angle lenses
- Result calibration gives easy-to-use mm data, simplifying alignment and gripping



**Features**

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

Working distance internal illumination:	50 mm ... 200 mm
Field of view internal illumination:	22 mm x 15 mm ... 79 mm x 58 mm
Spectral range:	Ca. 370 nm ... 900 nm
LED class:	Risk group 0 (exempt risk, IEC62471 : 2006)
Focal length:	10 mm
Offline support:	Emulator
Calibration:	Perspective and lens distortion correction, mm results
Sensor resolution:	640 px x 480 px
Internal lighting:	Infrared
Robot coordinate alignment:	-

## Performance

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Maximum performance:	200 fps
Typical performance:	40 fps
Number of inspections:	32
Reference images:	32 objects

## Interfaces

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Operator interfaces:	Inspector Viewer, Web server
Data store and retrieve:	Record images on PC Store images to FTP 30 images device log
Ethernet communication:	Web API
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, Store images to FTP overflow
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 5 x inputs for object selection
Serial (RS-232, RS-422):	-
Ethernet:	✓
Data transmission rate (Ethernet):	100 Mbit/s
Protocol (Ethernet):	EtherNet/IP
Configuration software:	SOPAS

## Mechanics/electronics

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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:  
Weight:

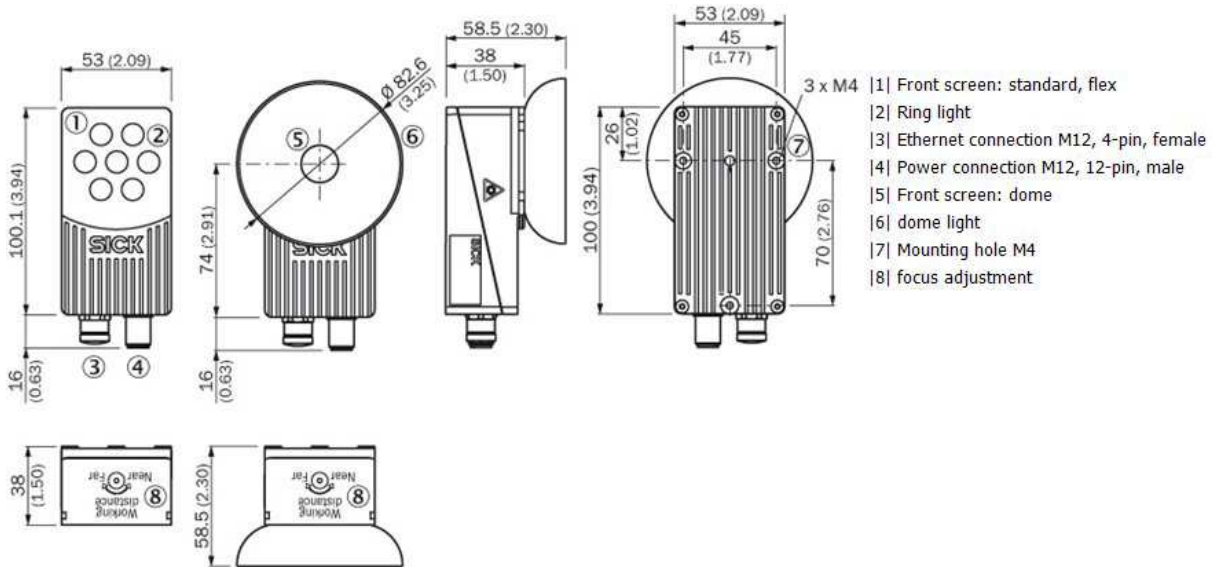
Exchangeable (M12-mount)  
350 g

**Ambient data**

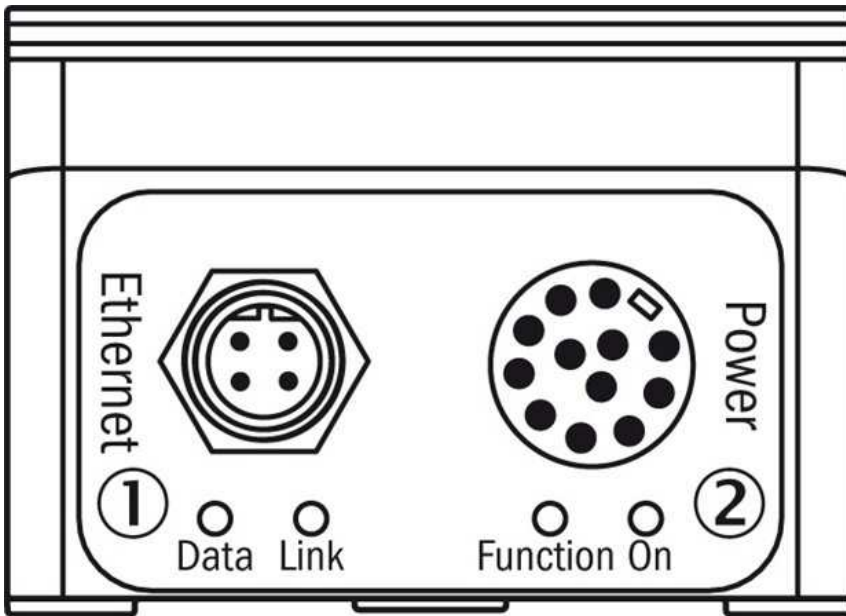
Shock load: EN 60068-2-27  
Vibration load: IEC 60068-2-6  
Ambient operating temperature <sup>1)</sup>: 0 °C ... +45 °C  
Ambient storage temperature <sup>2)</sup>: -20 °C ... +70 °C

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

**Dimensional drawing**

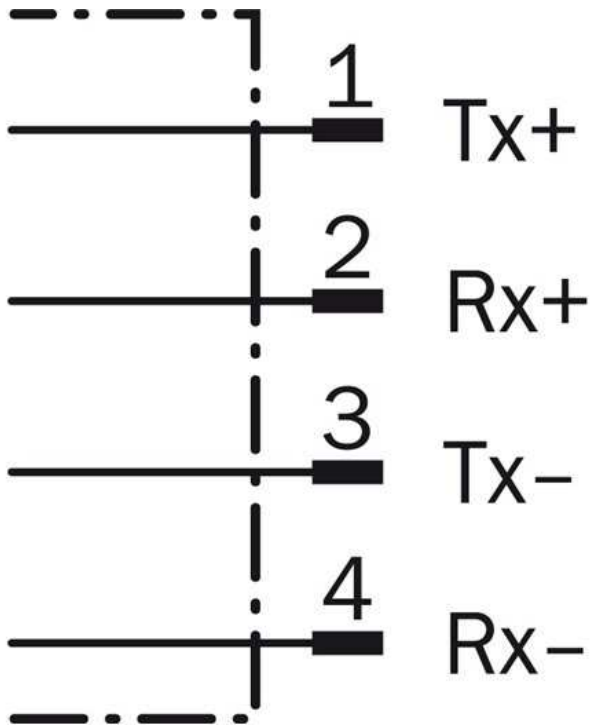


## Connection type



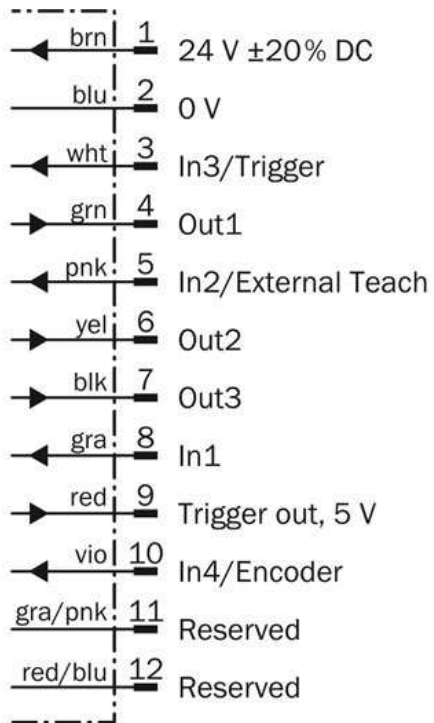
- [1] Ethernet connection M12, 4-pin, female
- [2] Power connection M12, 12-pin, male

## Connection diagram Ethernet



## Connection diagram M12, 12-pin

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