



## 2D vision Inspector, Inspector PIM-series, Inspector PIM60 Base

VSPM-6B2113



**Model Name** > [VSPM-6B2113](#)  
**Part No.** > [1064565](#)

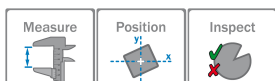


#### At a glance

- High-speed positioning, inspection and measurement
- Expanded toolbox for diameter, angle and flexible distance measurement
- Multiple, simultaneous inspection of blobs, patterns, edges and pixel counting
- Image calibration, including mm output
- Configurable communication through EtherNet/IP and TCP/IP
- Simple, out-of-the-box web server
- Import of customized web pages

#### Your benefits

- The multi-functional vision toolbox offers smart camera-level performance but with sensor ease-of-use
- Flexible measurement tools enable super easy pass/fail verification of dimensions over digital outputs as well as exact measurement value over Ethernet
- 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
- The built-in web server is an easy and cost efficient way to monitor the production process
- Ability to design a customized user interface (style, logo and functionality) to easily visualize and control the data you need



#### Features

|             |                                                                                                                                                                |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Task:       | Inspection<br>Measuring<br>Positioning                                                                                                                         |
| Technology: | 2D<br>Image analysis<br>Snapshot                                                                                                                               |
| Toolset:    | Pattern<br>Blob locator<br>Object locator<br>Polygon<br>Edge counter<br>Find maximum<br>Edge pixel count<br>Pixel count<br>Distance<br>Edge<br>Circle<br>Angle |

|                                         |                                                        |
|-----------------------------------------|--------------------------------------------------------|
| 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:    | Free of choice by lens selection                       |
| Spectral range:                         | Ca. 400 nm ... 750 nm                                  |
| LED class:                              | Risk group 1 (low risk, IEC62471 : 2006)               |
| Offline support:                        | Emulator                                               |
| Calibration:                            | Perspective and lens distortion correction, mm results |
| Sensor resolution:                      | 640 px x 480 px                                        |
| Internal lighting:                      | White                                                  |
| Robot coordinate alignment:             | ✓                                                      |

## Performance

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|                        |            |
|------------------------|------------|
| Maximum performance:   | 200 fps    |
| Typical performance:   | 40 fps     |
| Number of inspections: | 64         |
| Reference images:      | 32 objects |

## Interfaces

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|                                    |                                                                                   |
|------------------------------------|-----------------------------------------------------------------------------------|
| Operator interfaces:               | Web server                                                                        |
| Data store and retrieve:           | Record images on PC<br>Store images to FTP<br>30 images device log                |
| Ethernet communication:            | Web API                                                                           |
| Digital inputs:                    | 4 inputs (24 V)                                                                   |
| Configurable inputs:               | Reference object selection<br>Encoder input<br>External trigger<br>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<br>Any fail<br>No object detected                                        |
| Maximum encoder frequency:         | 40 kHz                                                                            |
| Control of external illumination:  | 5 V TTL                                                                           |
| I/O Box extension:                 | 16 outputs<br>5 x inputs for object selection                                     |
| Serial (RS-232, RS-422):           | -                                                                                 |
| Ethernet:                          | ✓                                                                                 |
| Data transmission rate (Ethernet): | 100 Mbit/s                                                                        |
| Protocol (Ethernet):               | TCP/IP, EtherNet/IP                                                               |
| Configuration software:            | SOPAS                                                                             |

## Mechanics/electronics

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|                    |                                                           |
|--------------------|-----------------------------------------------------------|
| Connectors:        | M12, 12-pin male connector<br>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                                                  |

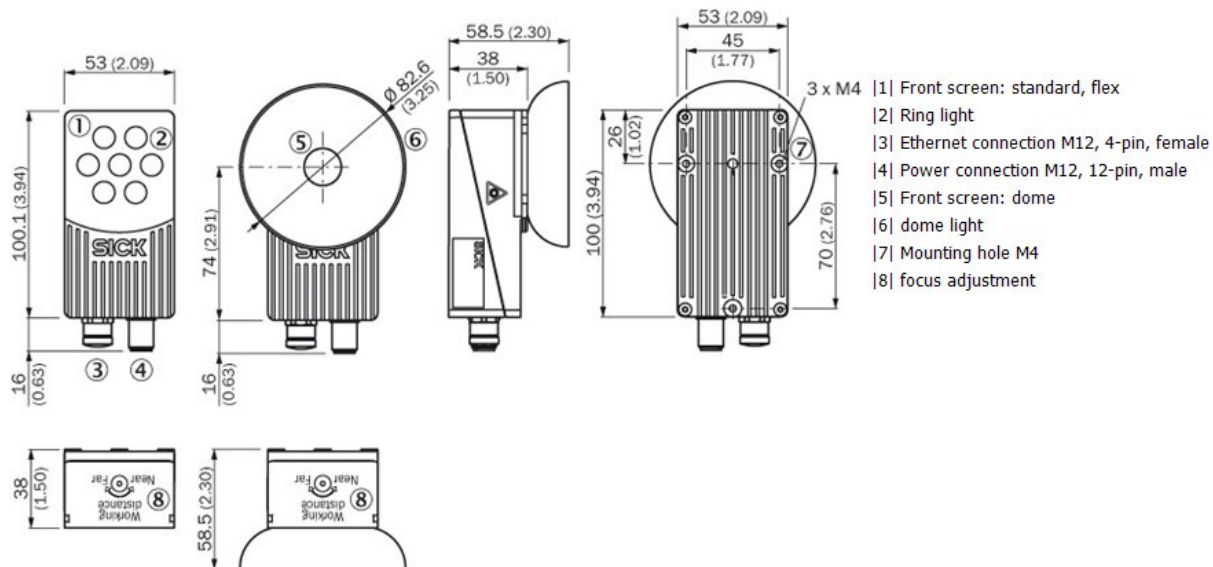
|                         |                          |
|-------------------------|--------------------------|
| Window material:        | No front window included |
| Dimensions (L x W x H): | 100 mm x 53 mm x 38 mm   |
| Optics:                 | Not included (M12-mount) |
| Weight:                 | 350 g                    |

#### Ambient data

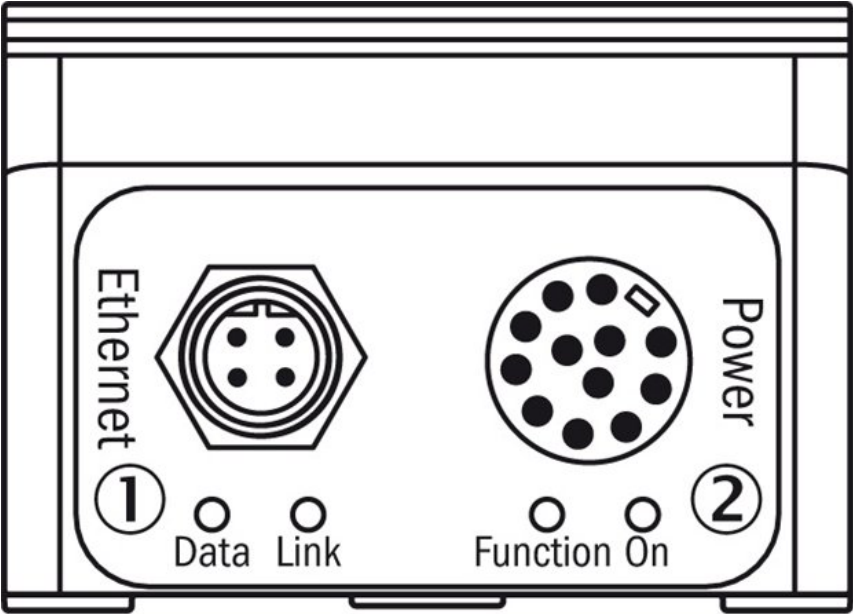
|                                               |                   |
|-----------------------------------------------|-------------------|
| Shock load:                                   | EN 60068-2-27     |
| Vibration load:                               | IEC 60068-2-6     |
| Ambient operating temperature <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

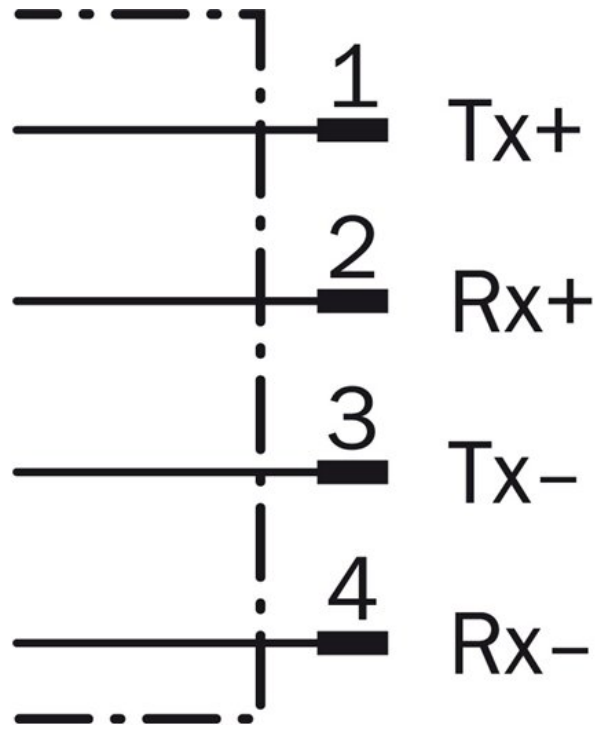


Connection type

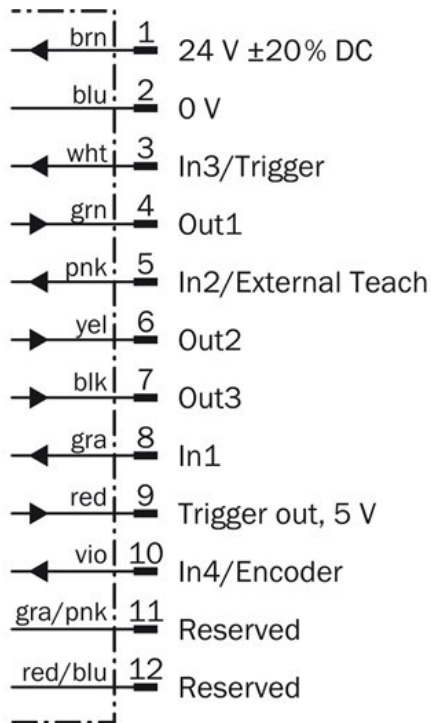


- |1| Ethernet connection M12, 4-pin, female
- |2| Power connection M12, 12-pin, male

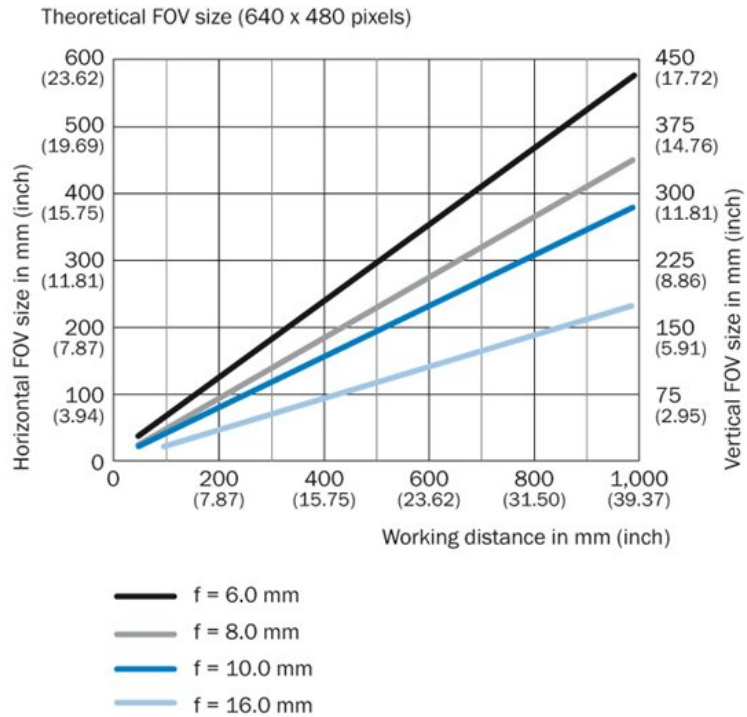
Connection diagram Ethernet



## Connection diagram M12, 12-pin



## Field of view



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