



# V2D621P-2MSFBB5S51

InspectorP Rack Fine Positioning

2D MACHINE VISION

**SICK**  
Sensor Intelligence.

# V2D621P-2MSFBB5S51 | InspectorP Rack Fine Positioning

2D MACHINE VISION



## Ordering information

Type	part no.
V2D621P-2MSFBB5S51	1118465

Other models and accessories → [www.sick.com/InspectorP\\_Rack\\_Fine\\_Positioning](http://www.sick.com/InspectorP_Rack_Fine_Positioning)



## Detailed technical data

### Features

<b>Technology</b>	2D snapshot
<b>Configurable</b>	✓
<b>Image sensor</b>	CMOS monochrome
<b>Shutter technology</b>	Global-Shutter
<b>Optical focus</b>	Adjustable focus (electrical)
<b>Working range</b>	50 mm ... 350 mm <sup>1)</sup> 50 mm ... 700 mm <sup>2)</sup>
<b>Illumination</b>	Integrated
<b>Illumination color</b>	Red, LED, Visible, 617 nm, ± 15 nm Blue, LED, Visible, 470 nm, ± 15 nm
<b>Feedback spot</b>	LED, Visible, green, 525 nm, ± 15 nm
<b>Alignment aid</b>	Laser, Red, 630 nm ... 680 nm
<b>Laser class</b>	1, complies with 21 CFR 1040.10 except for the conformance according to "Laser Notice No. 50" from June 24, 2007 (IEC 60825-1:2014, EN 60825-1:2014)
<b>LED class</b>	Risk group 1 (IEC 62471 (2006-07) / EN 62471 (2008-09))
<b>Lens</b>	
	Focal length 9.6 mm
<b>Task</b>	Localizing, navigating and guiding - Navigating Determining position - 2D position determination

<sup>1)</sup> Depending on application.

<sup>2)</sup> Depending on application, on SICK PL22 reflector.

### Mechanics/electronics

<b>Connection type</b>	1 x M12, 17-pin male connector (serial, I/Os, voltage supply) 1 x M12, 4-pin female connector (Ethernet)
<b>Supply voltage</b>	12 V DC ... 24 V DC, ± 10 %

<b>Power consumption</b>	Typ. 4 W
<b>Enclosure rating</b>	IP65 (EN 60529 (1991-10), EN 60529/A2 (2002-02))
<b>Protection class</b>	III
<b>Housing material</b>	Aluminum die cast
<b>Window material</b>	PMMA
<b>Weight</b>	170 g
<b>Dimensions (L x W x H)</b>	71 mm x 43 mm x 35.6 mm

## Performance

<b>Sensor properties</b>	
Sensor resolution	1,280 px x 1,024 px (1.3 MP)
<b>Repeatability</b>	0.05 mm ... 0.1 mm typical <sup>1)</sup>
<b>Target</b>	Drill holes (Hole diameter 8 mm ... 15 mm)

<sup>1)</sup> Depending on application, layer 1: 0.05 mm, layer 2: 0.1 mm.

## Interfaces

<b>Ethernet</b>	✓ , TCP/IP
Function	FTP, HTTP
Data transmission rate	10/100 MBit/s
<b>PROFINET</b>	✓
Data transmission rate	10/100 MBit/s
<b>Operator interfaces</b>	Web-Interface
<b>Configuration software</b>	Web-Interface, PLC interface
<b>Data storage and retrieval</b>	Image and data logging via microSD memory card and external FTP
<b>Digital output</b>	4 digital outputs, 24 V
<b>Output current</b>	≤ 100 mA
<b>Control elements</b>	2 buttons
<b>Optical indicators</b>	11 LEDs (5 status displays, 16 LEDs, 5 LED bar graphs, 1 green/red feedback spot)
<b>Acoustic indicators</b>	Beeper

## Ambient data

<b>Shock load</b>	EN 60068-2-27:2009-05
<b>Vibration load</b>	EN 60068-2-6:2008-02
<b>Ambient operating temperature</b>	0 °C ... +50 °C <sup>1)</sup>
<b>Storage temperature</b>	-20 °C ... +70 °C <sup>1)</sup>

<sup>1)</sup> Permissible relative humidity: 0% ... 90% (non-condensing).

## Certificates

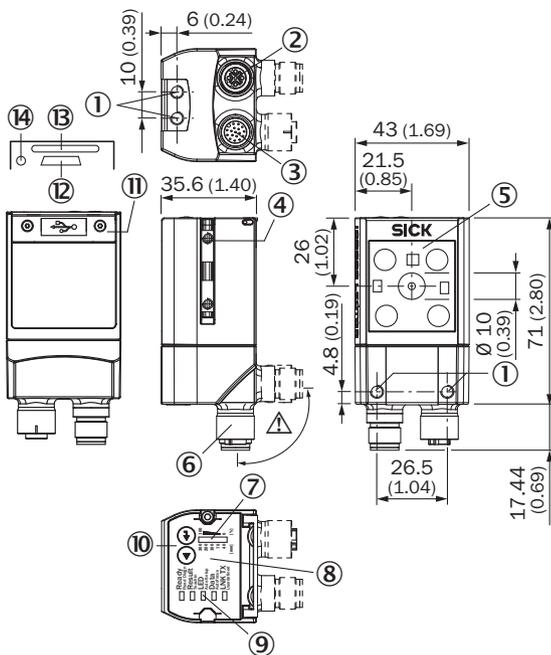
<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>China RoHS</b>	✓
<b>cULus certificate</b>	✓

<b>Profinet certificate</b>	✓
<b>Information according to Art. 3 of Data Act (Regulation EU 2023/2854)</b>	✓
<b>4Dpro</b>	✓

### Classifications

<b>ECLASS 5.0</b>	27310205
<b>ECLASS 5.1.4</b>	27310205
<b>ECLASS 6.0</b>	27310205
<b>ECLASS 6.2</b>	27310205
<b>ECLASS 7.0</b>	27310205
<b>ECLASS 8.0</b>	27310205
<b>ECLASS 8.1</b>	27310205
<b>ECLASS 9.0</b>	27310205
<b>ECLASS 10.0</b>	27310205
<b>ECLASS 11.0</b>	27310205
<b>ECLASS 12.0</b>	27310205
<b>ETIM 5.0</b>	EC001820
<b>ETIM 6.0</b>	EC001820
<b>ETIM 7.0</b>	EC001820
<b>ETIM 8.0</b>	EC001820
<b>UNSPSC 16.0901</b>	43211731

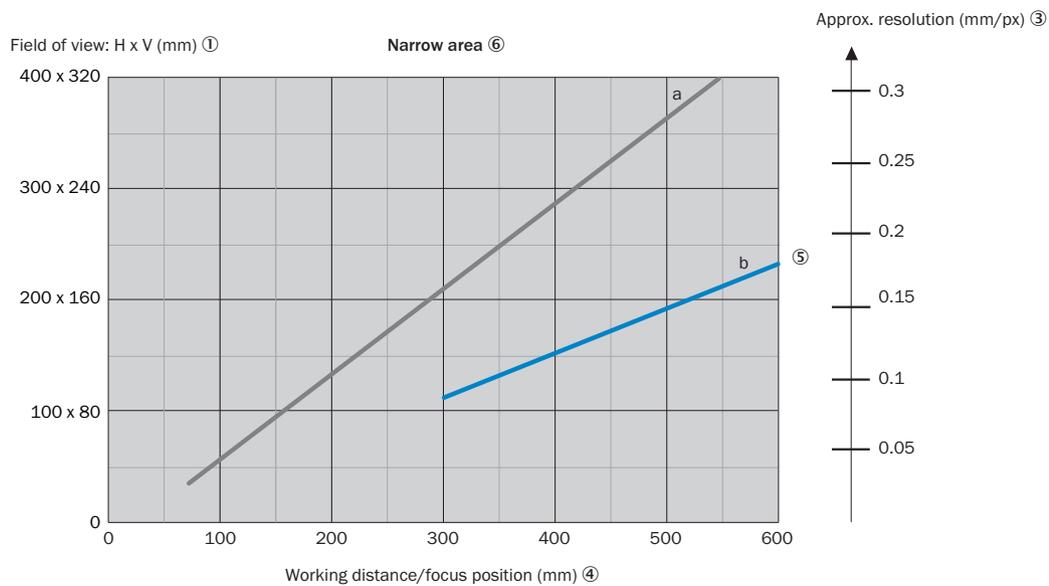
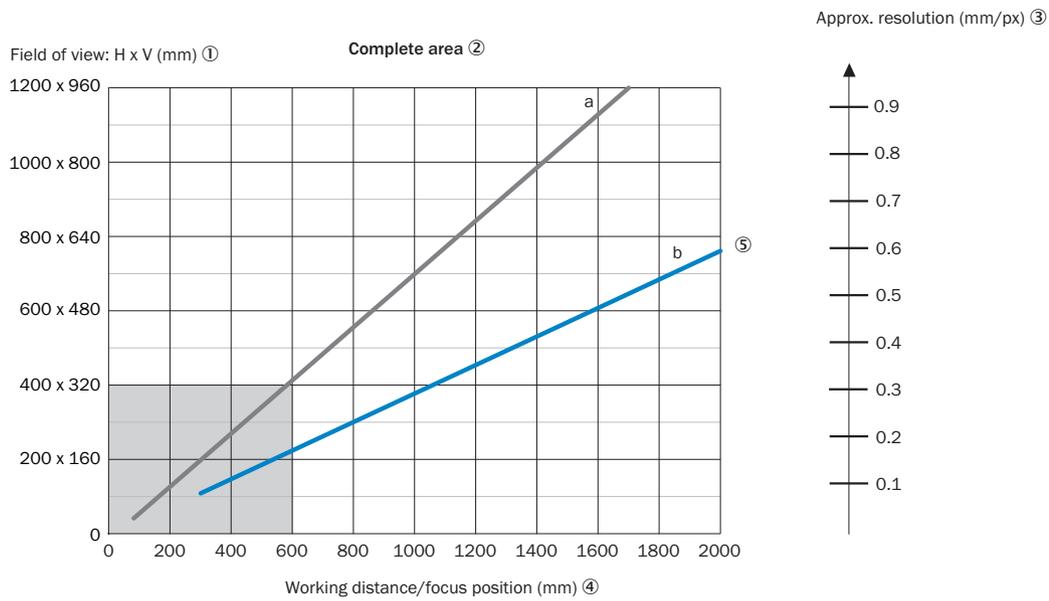
### Dimensional drawing



Dimensions in mm (inch)

- ① M5 blind tapped holes, 5 mm deep (4 x), for mounting the sensor
- ② “Ethernet” connection, 4-pin M12 female connector, D-coded
- ③ “Power/Serial Data/CAN/I/O” connection, 17-pin M12 male connector, A-coded
- ④ sliding nut M5, 5.5 mm deep (2 x), for mounting (as alternative)
- ⑤ reading window with internal illumination LEDs (4 x)
- ⑥ swivel connector unit
- ⑦ Bar graph
- ⑧ beeper (under housing cover)
- ⑨ LEDs for status display (2 levels), 5 x
- ⑩ Function button (2 x)
- ⑪ Cover (flap)
- ⑫ “USB” connection (female connector, 5-pin, type Micro-B) interface for temporary use (service)
- ⑬ Slot for microSD memory card
- ⑭ LED for microSD memory card

### Field of view



— a:  $f = 9.6$  mm  
 — b:  $f = 17.1$  mm

Take into account the following aspects when designing the application: the field of view geometry of the device, and the position of the field of view in the space in front of the device. Possible angles at which the objects can arise in relation to the device. For the planned working distance: resultant field of view length and width as well as the approximate resolution.

- ① Field of view: Horizontal x vertical in mm
- ② complete area
- ③ approximate resolution in mm/px
- ④ Working distance/Focus position in mm
- ⑤ Focal length of lens, here example for  $f = 17.1$  mm
- ⑥ Narrow range

### Recommended accessories

Other models and accessories → [www.sick.com/InspectorP\\_Rack\\_Fine\\_Positioning](http://www.sick.com/InspectorP_Rack_Fine_Positioning)

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 17-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Male connector, M12, 17-pin, straight, A-coded</li> <li>• <b>Signal type:</b> Power, serial, CAN, digital I/Os</li> <li>• <b>Cable:</b> 3 m, 17-wire</li> <li>• <b>Description:</b> Power, suitable for 2 A, shielded, Serial, CAN, Digital I/Os</li> <li>• <b>Application:</b> Drag chain operation</li> </ul>	YM2A8D-030XXXF2A8D	6051194
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M12, 4-pin, straight, D-coded</li> <li>• <b>Connection type head B:</b> Male connector, RJ45, 4-pin, straight</li> <li>• <b>Signal type:</b> Ethernet, PROFINET</li> <li>• <b>Cable:</b> 2 m, 4-wire, PUR, halogen-free</li> <li>• <b>Description:</b> Ethernet, shielded, PROFINET</li> <li>• <b>Application:</b> Drag chain operation, Zones with oils and lubricants</li> </ul>	YM2D24-020P-N1MRJA4	2106182
Junction boxes			
		CDB650-204	1064114
Storage media			
	<ul style="list-style-type: none"> <li>• <b>Description:</b> microSD memory card with 2 GB for industrial use</li> </ul>	microSD memory card	4077575
Mounting systems			
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Bracket with adapter board</li> </ul>	Mounting bracket	2042902

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)