

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



Detailed technical data

Features

Technology	2D snapshot
Product category	Configurable
Sensor	CMOS matrix sensor, grayscale values
Shutter technology	Global-Shutter
Optical focus	Adjustable focus (electric)
Working distance	50 mm ... 350 mm ¹⁾ 50 mm ... 700 mm ²⁾
Illumination	Integrated
Illumination color	Red, LED, Visible, 617 nm, ± 15 nm Blue, LED, Visible, 470 nm, ± 15 nm
Feedback spot	LED, Visible, green, 525 nm, ± 15 nm
Alignment aid	Laser, Red, 630 nm ... 680 nm
Laser class	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)
Lens	
Focal length	9.6 mm
Task	Localizing, navigating and guiding - Navigating Determining position - 2D position determination

¹⁾ Depending on application.

²⁾ Depending on application, on SICK PL22 reflector.

Mechanics/electronics

Connection type	1 x M12, 17-pin male connector (serial, I/Os, voltage supply) 1 x M12, 4-pin female connector (Ethernet)
Supply voltage	12 V DC ... 24 V DC, ± 10 %
Power consumption	Typ. 4 W
Enclosure rating	IP65 (EN 60529 (1991-10), EN 60529/A2 (2002-02))

Protection class	III
Housing material	Aluminum die cast
Window material	PMMA
Weight	170 g
Dimensions (L x W x H)	71 mm x 43 mm x 35.6 mm

Performance

Sensor resolution	1,280 px x 1,024 px (1.3 Mpixel)
Repeatability	0.05 mm ... 0.1 mm typical ¹⁾
Target	Drill holes (Hole diameter 8 mm ... 15 mm)

¹⁾ Depending on application, layer 1: 0.05 mm, layer 2: 0.1 mm.

Interfaces

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

Ambient data

Shock load	EN 60068-2-27:2009-05
Vibration load	EN 60068-2-6:2008-02
Ambient operating temperature	0 °C ... +50 °C ¹⁾
Storage temperature	-20 °C ... +70 °C ¹⁾
Depth precision	0.05 mm ... 0.1 mm typical ²⁾

¹⁾ Permissible relative humidity: 0% ... 90% (non-condensing).

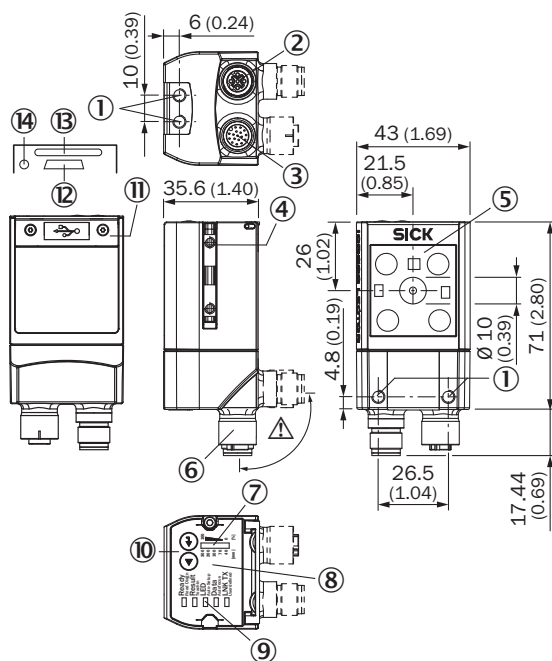
²⁾ Depending on application, layer 1: 0.05 mm, layer 2: 0.1 mm.

Classifications

ECLASS 5.0	27310205
ECLASS 5.1.4	27310205
ECLASS 6.0	27310205
ECLASS 6.2	27310205
ECLASS 7.0	27310205
ECLASS 8.0	27310205
ECLASS 8.1	27310205

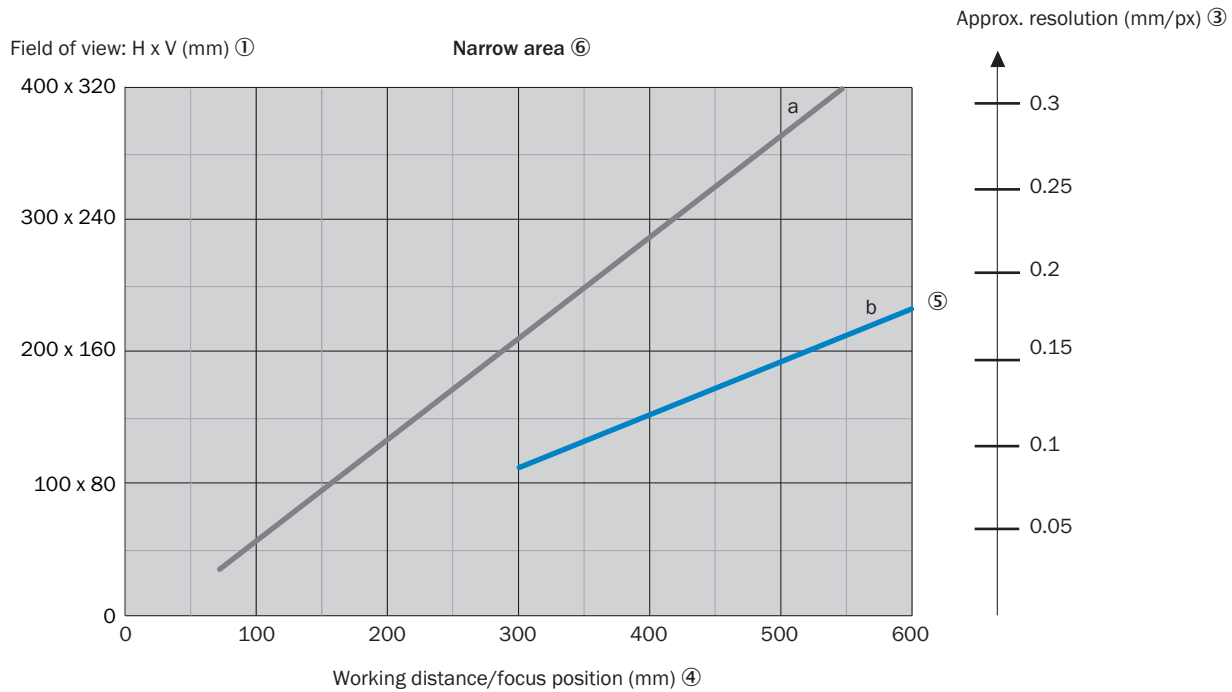
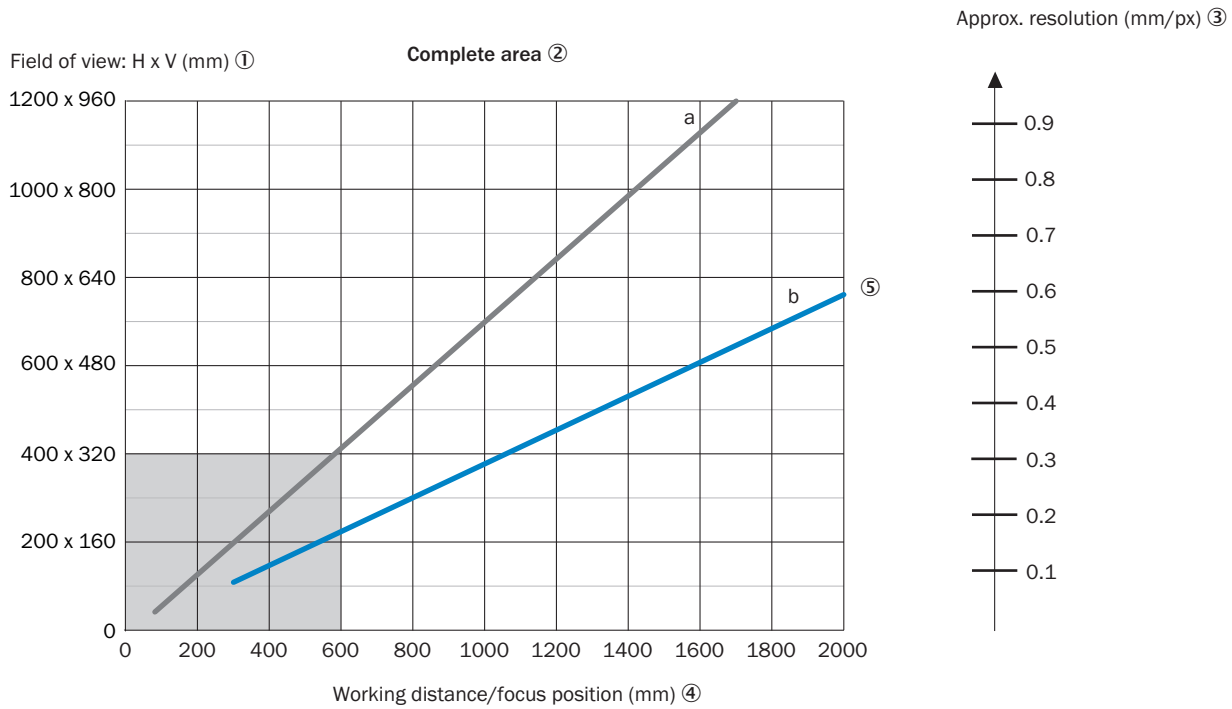
ECLASS 9.0	27310205
ECLASS 10.0	27310205
ECLASS 11.0	27310205
ECLASS 12.0	27310205
ETIM 5.0	EC001820
ETIM 6.0	EC001820
ETIM 7.0	EC001820
ETIM 8.0	EC001820
UNSPSC 16.0901	43211731

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

	Brief description	Type	Part no.
Storage media			
	microSD memory card with 2 GB for industrial use	microSD memory card	4077575
Mounting brackets and plates			
	Bracket with adapter board	Mounting bracket	2042902
Others			
	<ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 17-pin, straight, A-coded • Connection type head B: Male connector, M12, 17-pin, straight, A-coded • Signal type: Power, serial, CAN, digital I/Os • Cable: 3 m, 17-wire • Description: Power, serial, CAN, digital I/Os, suitable for 2 A, shielded, to connection module CDB650 • Application: Drag chain operation 	YM2A8D-030XXF2A8D	6051194
	<ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 4-pin, straight, D-coded • Connection type head B: Male connector, RJ45, 4-pin, straight • Signal type: Ethernet, PROFINET • Cable: 2 m, 4-wire, PUR, halogen-free • Description: Ethernet, PROFINET, shielded • Application: Drag chain operation, Zones with oils and lubricants 	YM2D24-020PN1MRJA4	2106182
Modules			
	<ul style="list-style-type: none"> • Accessory group: 4DproConnectivity • Product family: Connection Device Basic • Sub product family: CDB650 • Supported products: Lector series, CLV62x - CLV64x (depending on type), CLV69x, RFID read/write device, InspectorP series • Brief description: Connection device basic for connecting one sensor with 2 A fuse, 5 cable glands and RS-232 interface to sensor via M12, 17-pin female connector, all outputs available on screw/spring-loaded terminals. 	CDB650-204	1064114

Recommended services

Additional services → www.sick.com/InspectorP_Rack_Fine_Positioning

	Type	Part no.
Extended warranty		
<ul style="list-style-type: none"> • Product area: Machine vision, LiDAR sensors, safety camera sensors, Safety laser scanners, Safety radar sensors, Radar sensors, Fixed mount barcode scanners, Image-based code readers, RFID, Mobile handheld scanners • Range of services: The services correspond to the scope of the statutory manufacturer warranty (SICK general terms of delivery). • Duration: Five-year warranty from delivery date. 	Extended warranty for a total of five years from delivery date	1680671

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