



# PLOC2D-621-17NIR

PLOC2D

ROBOT GUIDANCE SYSTEMS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	part no.
PLOC2D-621-17NIR	1118607

Other models and accessories → [www.sick.com/PLOC2D](http://www.sick.com/PLOC2D)



### Detailed technical data

#### Features

<b>Product name</b>	PLOC2D-FIX0011
<b>System features</b>	Stand-alone sensor with easy teach, for localization of parts using 2D measurements
<b>Example field of view</b>	For details see field of view diagram
<b>Working distance</b>	300 mm ... 1,500 mm
<b>Light source</b>	
Internal lighting	LED, infrared, 850 nm, ± 25 nm
Feedback spot	LED, visible green light, 525 nm, ± 15 nm
Adjustment aid	Laser, visible red light, 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>Optical focus</b>	Adjustable focus (electric)
<b>LED class</b>	Risk group 1 (low risk, IEC 62471 (2006-07) / EN 62471 (2008-09))
<b>Localization principle</b>	Shape comparison
<b>Sensor resolution</b>	1,280 px x 1,024 px (1.3 MP)
<b>Lens</b>	
Mounting method	Integrated
Focal length	17.1 mm
<b>Technology</b>	2D snapshot, image analysis
<b>Description</b>	Basic resolution 2D localization of parts in medium fields of view at medium reading distances

#### 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>	24 V, ± 20 %
<b>Power consumption</b>	4 W, ± 20 %
<b>Housing material</b>	Aluminum die cast
<b>Housing color</b>	Light blue (RAL 5012)
<b>Window material</b>	PMMA

<sup>1)</sup> When using optics cover and male connector.

<b>Dimensions (L x W x H)</b>	71 mm x 43 mm x 35.6 mm
<b>Weight</b>	170 g
<b>Enclosure rating</b>	IP65 <sup>1)</sup>

<sup>1)</sup> When using optics cover and male connector.

### Performance

<b>Part localization time</b>	< 0.5 seconds for the first part in the image and then < 100 ms for additional parts in the image
<b>Localization accuracy</b>	± 0.5 px, ± 0.1°
<b>Output data</b>	X, Y (mm), rotation around Z (degrees)

### Interfaces

<b>Ethernet</b>	✓
Data transmission rate	100 Mbit/s
Protocol	TCP/IP XML and CSV (robot), TCP/IP (operator) PROFINET EtherNet/IP™ FTP
Electrical connection	M12 female connector, 4-pin
<b>Supply voltage</b>	
Electrical connection	Male connector M12, 17-pin
<b>User interface</b>	Web server
<b>Data storage and retrieval</b>	Image and data logging via microSD memory card and external FTP

### Ambient data

<b>Ambient temperature, operation</b>	0 °C ... +50 °C, permissible relative humidity: 0% ... 90% (non-condensing)
<b>Ambient temperature, storage</b>	-20 °C ... +70 °C <sup>1)</sup>
<b>Shock load</b>	EN 60068-2-27:2009-05
<b>Vibration load</b>	EN 60068-2-6:2008-02

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

### General notes

<b>Items supplied</b>	Camera, complete with integrated optics and illumination PLOC2D software
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### Classifications

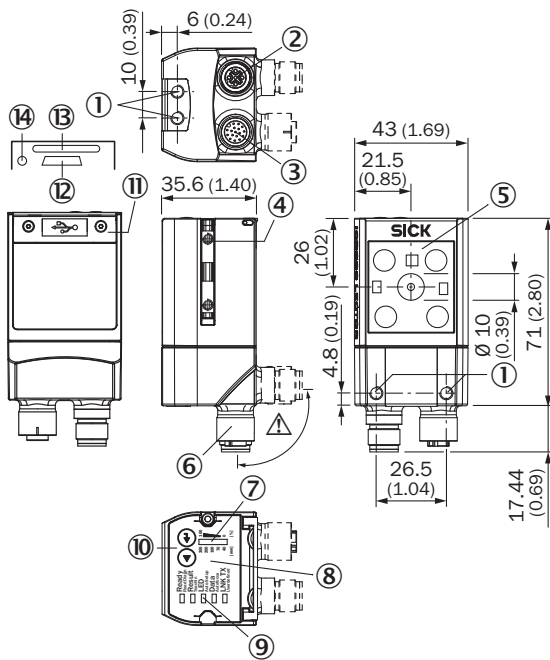
<b>ECLASS 5.0</b>	27381501
<b>ECLASS 5.1.4</b>	27381501
<b>ECLASS 6.0</b>	27381590
<b>ECLASS 6.2</b>	27381590
<b>ECLASS 7.0</b>	27381590
<b>ECLASS 8.0</b>	27381590
<b>ECLASS 8.1</b>	27381590
<b>ECLASS 9.0</b>	27381590
<b>ECLASS 10.0</b>	27381590
<b>ECLASS 11.0</b>	27381591

<b>ECLASS 12.0</b>	27381591
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### Certificates

<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>China RoHS</b>	✓
<b>Information according to Art. 3 of Data Act (Regulation EU 2023/2854)</b>	✓

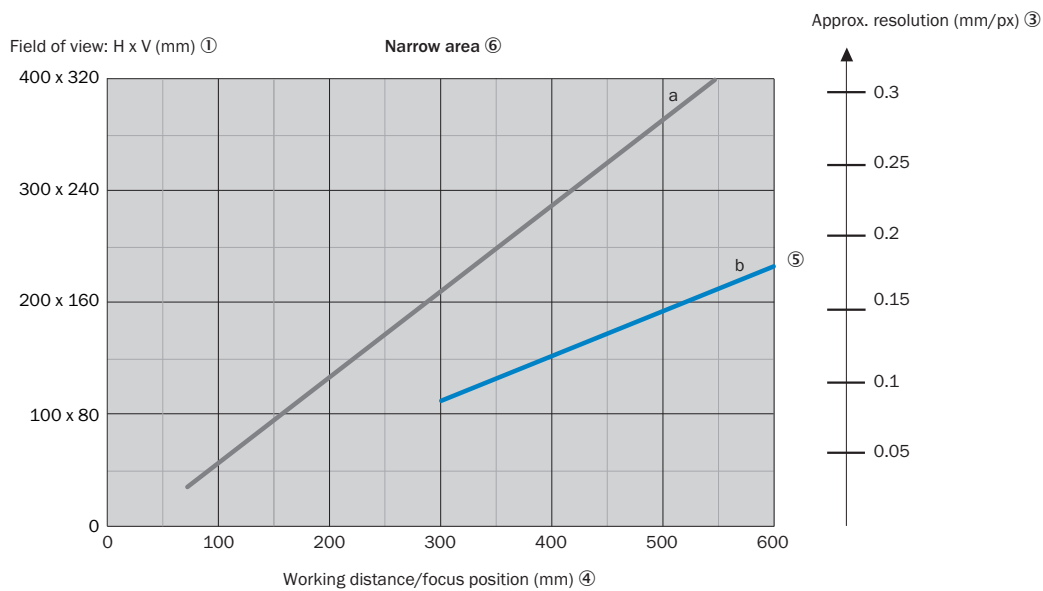
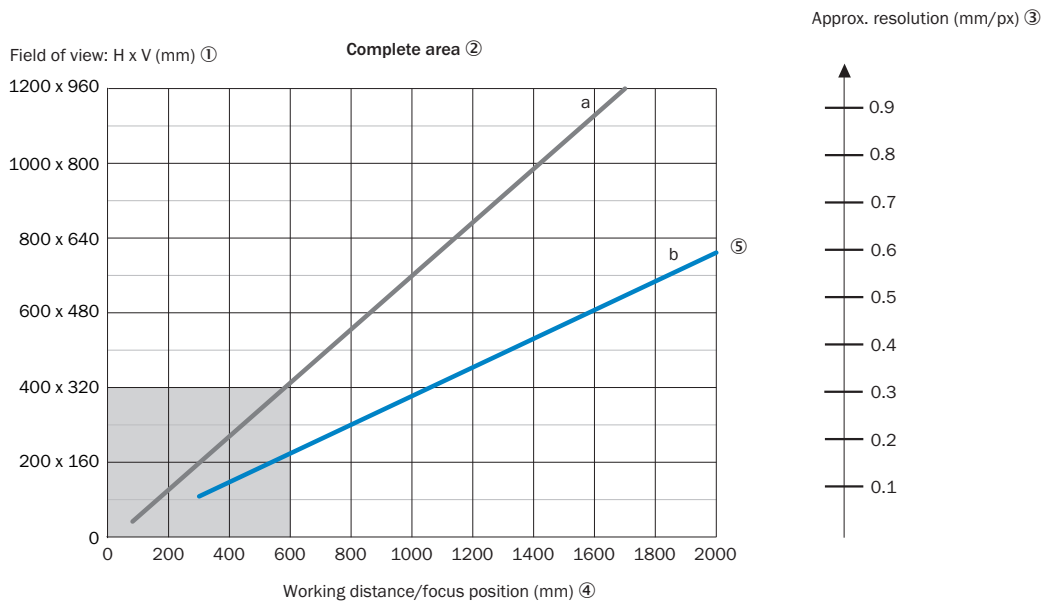
### Dimensional drawing



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

## Characteristic curve




— 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/PLOC2D](http://www.sick.com/PLOC2D)

	Brief description	Type	part no.
Commissioning aids and test equipment			
	<ul style="list-style-type: none"><li>• <b>Product:</b> Test equipment</li><li>• <b>Description:</b> Target for alignment and calibration, A3-size</li></ul>	PLOC2D alignment and calibration target A3	4092645

## 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)