



PLOC2D-621-10NIR

PLOC2D

ROBOT GUIDANCE SYSTEMS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
PLOC2D-621-10NIR	1139166

Other models and accessories → www.sick.com/PLOC2D



Detailed technical data

Features

Product name	PLOC2D-FIX0017	
System features	Stand-alone sensor with easy teach, for localization of parts using 2D measurements	
Example field of view	For details see field of view diagram	
Working distance	70 mm ... 1,500 mm	
Light source	Internal lighting	Infrared LED, invisible, 850 nm, ± 25 nm
	Feedback spot	LED, visible green light, 525 nm, ± 15 nm
	Adjustment aid	Laser, visible red light, 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	
Optical focus	Adjustable focus (electric)	
LED class	Risk group 1 (low risk, IEC 62471 (2006-07) / EN 62471 (2008-09))	
Localization principle	Shape comparison	
Sensor resolution	1,280 px x 1,024 px (1.3 MP)	
Lens	Mounting method	Integrated
	Focal length	9.6 mm
Technology	2D snapshot, image analysis	
Description	Medium resolution 2D localization of parts in medium/large fields of view at medium/long reading distances	

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	≤ 24 V, ± 20 %
Power consumption	4 W, ± 20 %
Housing material	Aluminum die cast
Housing color	Light blue (RAL 5012)
Window material	PMMA
Dimensions (L x W x H)	71 mm x 43 mm x 35.6 mm

Weight	170 g
Enclosure rating	IP65 (when using optics cover and male connector)

Performance

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

Interfaces

Ethernet	✓
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
Supply voltage	
Electrical connection	Male connector M12, 17-pin
User interface	Web server
Data storage and retrieval	Image and data logging via microSD memory card and external FTP

Ambient data

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

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

General notes

Items supplied	Camera, complete with integrated optics and illumination PLOC2D software
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Certificates

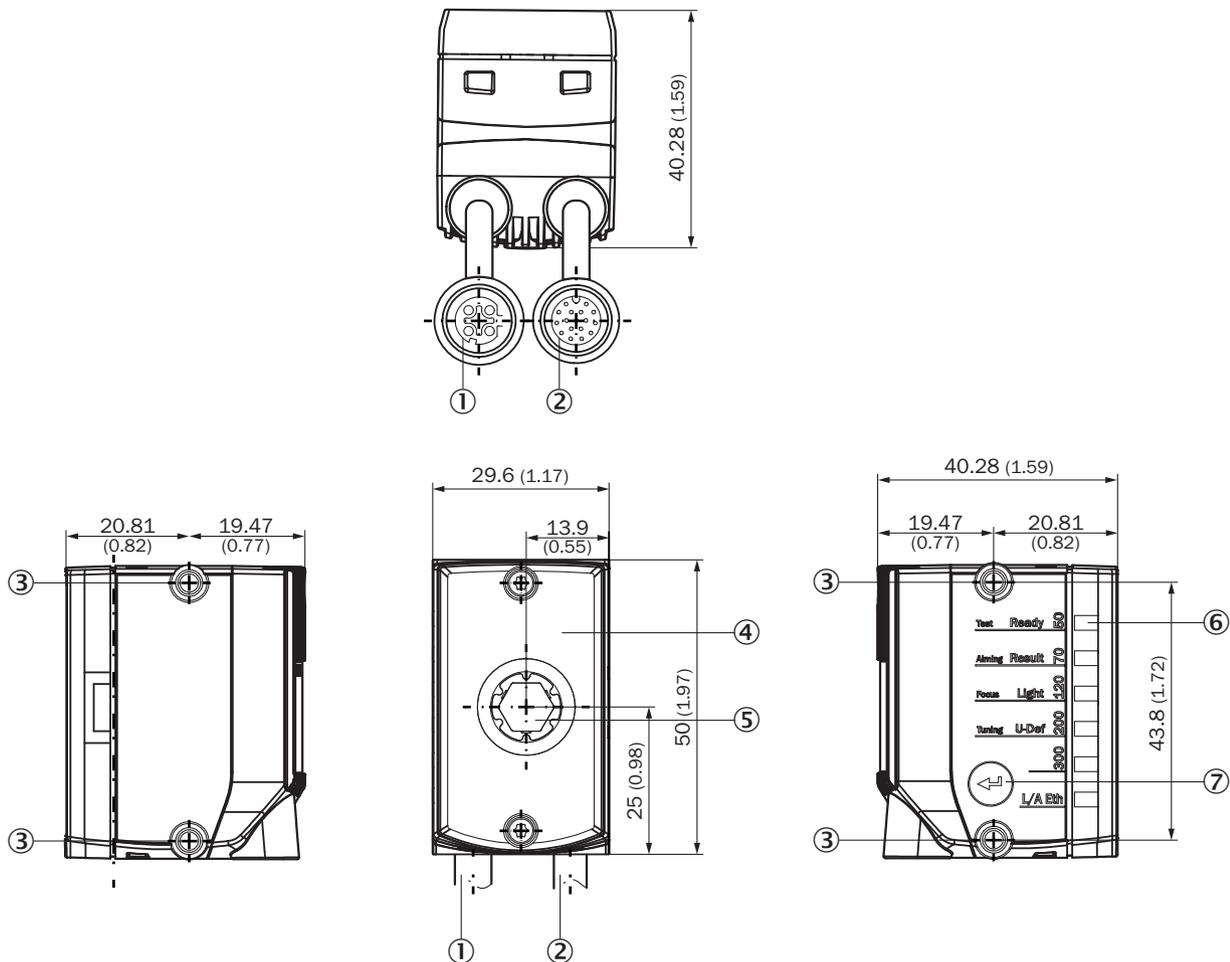
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
China RoHS	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

Classifications

ECLASS 5.0	27381501
ECLASS 5.1.4	27381501
ECLASS 6.0	27381590
ECLASS 6.2	27381590
ECLASS 7.0	27381590

ECLASS 8.0	27381590
ECLASS 8.1	27381590
ECLASS 9.0	27381590
ECLASS 10.0	27381590
ECLASS 11.0	27381591
ECLASS 12.0	27381591

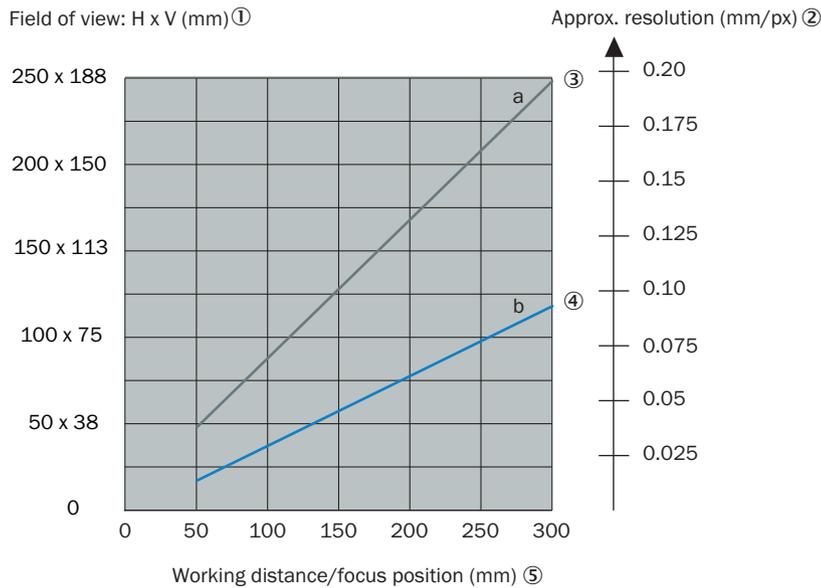
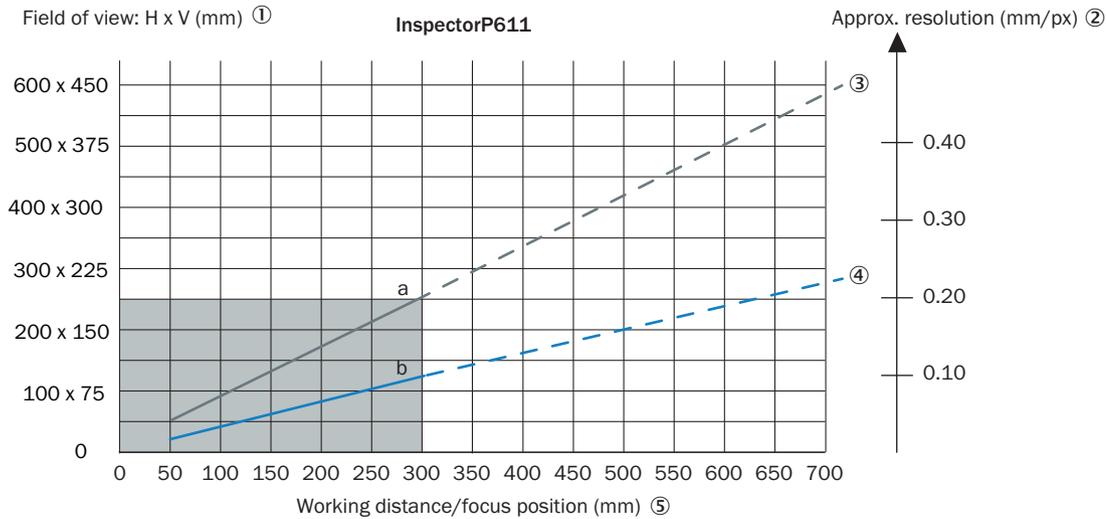
Dimensional drawing



Dimensions in mm (inch)

- ① Connecting cable with "Ethernet" connection (female connector, M12, 4-pin, D-coded), length of cable: 0.25 m
- ② Connecting cable with "Power/Serial Data/CAN/I/O" connection (male connector, M12, 17-pin, A-coded), length of cable: 0.35 m
- ③ 4 x M4 blind tapped holes, 6.4 mm deep for mounting the device
- ④ Viewing window with 8 integrated illumination LEDs, 2 LED alignment aids, 1 feedback LED, 1 time-of-flight sensor
- ⑤ Optics, manual focus adjustment with the help of a focus adjustment tool
- ⑥ 6 status LEDs to display the focus position and working distance, device status and device function (3 display levels)
- ⑦ Function key

Characteristic curve



- a: f = 6 mm - - - with external illumination ⑥
- b: f = 12 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 approximate resolution in mm/px
- ③ f = 6 mm. Solid line with internal lighting, and dashed line with appropriate external illumination accessories.
- ④ f = 12 mm. Solid line with internal lighting, and dashed line with appropriate external illumination accessories.
- ⑤ Working distance/Focus position in mm
- ⑥ With external illumination

Recommended accessories

Other models and accessories → www.sick.com/PLOC2D

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