



PLOC2D-611-6RB ABB GoFa

PLOC2D

ROBOT GUIDANCE SYSTEMS

SICK
Sensor Intelligence.



Ordering information

Integrated applications	Items supplied	Type	Part no.
Medium resolution 2D localization of parts in medium/large fields of view at medium/long reading distances	Camera, complete with integrated optics and illumination PLOC2D software	PLOC2D-611-6RB ABB GoFa	1136307

Included in delivery: PLOC2D calibration target A4 (1), PLOC2D-611-6RB (1), YF2ASD-050XXXXLECX (1), YM2D24-050E-F4MRJA4 (1)

The software is not included with the set, but can be downloaded from Downloads > Software on this page.

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



Detailed technical data

Features

Industries	Automobiles Electronics Consumer Goods Storage, handling and sorting								
System features	Stand-alone sensor with easy teach, for localization of parts using 2D measurements								
Robot controller	ABB: Omnicore								
Example field of view	For details see field of view diagram								
Working range	50 mm ... 300 mm								
Light source	<table border="0"> <tr> <td>Internal lighting</td> <td>LED, visible red light, 617 nm, ± 15 nm</td> </tr> <tr> <td>Internal lighting</td> <td>LED, visible blue light, 470 nm, ± 15 nm</td> </tr> <tr> <td>Feedback spot</td> <td>LED, visible green light, 525 nm, ± 15 nm</td> </tr> <tr> <td>Adjustment aid</td> <td>Laser, visible red light, 630 nm, ± 15 nm</td> </tr> </table>	Internal lighting	LED, visible red light, 617 nm, ± 15 nm	Internal lighting	LED, visible blue light, 470 nm, ± 15 nm	Feedback spot	LED, visible green light, 525 nm, ± 15 nm	Adjustment aid	Laser, visible red light, 630 nm, ± 15 nm
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Adjustment aid	Laser, visible red light, 630 nm, ± 15 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								
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 960 px (1.2 Mpixel)								
Lens	<table border="0"> <tr> <td>Focal length</td> <td>6 mm</td> </tr> </table>	Focal length	6 mm						
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Mechanics/electronics

Electrical connection	1 x M12, 17-pin male connector (serial, I/Os, voltage supply) 1 x M12, 4-pin female connector (Ethernet)
Supply voltage	12 V ... 24 V, ± 15 %

Power consumption	3.5 W
Housing material	Die-cast zinc
Housing color	Light blue (RAL 5012)
Window material	PMMA
Dimensions, system (L x W x H)	50 mm x 40.3 mm x 29.6 mm
Weight	165 g
Enclosure rating	IP54

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
Operator interfaces	Web server

Ambient data

Ambient operating temperature	0 °C ... +40 °C ¹⁾
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 air humidity: 0 % ... 90 % (non-condensing).

General notes

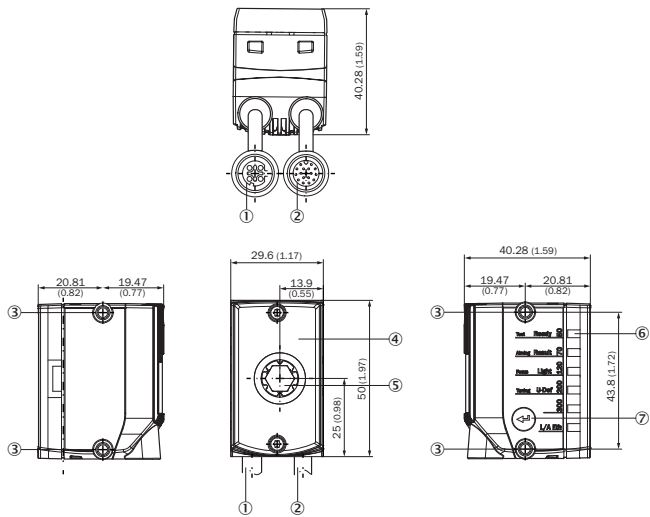
Items supplied	Camera, complete with integrated optics and illumination PLOC2D software
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Classifications

eCl@ss 5.0	27381501
eCl@ss 5.1.4	27381501
eCl@ss 6.0	27381590
eCl@ss 6.2	27381590
eCl@ss 7.0	27381590
eCl@ss 8.0	27381590
eCl@ss 8.1	27381590
eCl@ss 9.0	27381590
eCl@ss 10.0	27381590

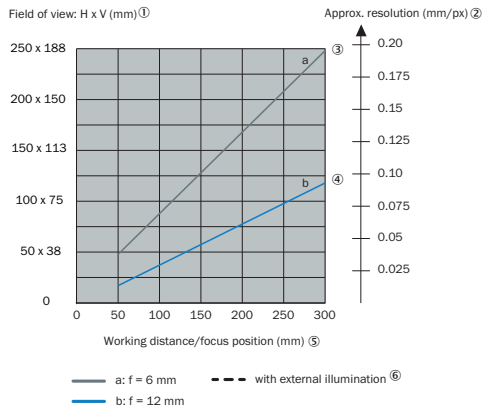
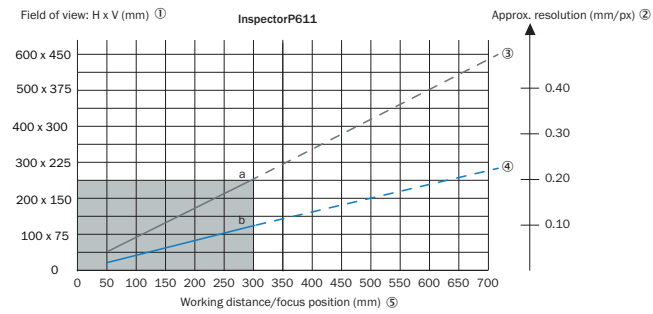
eCl@ss 11.0	27381591
eCl@ss 12.0	27381591

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




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.
Calibration tools			
	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