



# PLOC2D-2000

PLOC2D

ROBOT GUIDANCE SYSTEMS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	part no.
PLOC2D-2000	1086007

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



### Detailed technical data

#### Features

<b>Product name</b>	PLOC2D-2000
<b>System features</b>	Stand-alone sensor with easy teach, for localization of parts using 2D measurements
<b>Example field of view</b>	2000 mm x 2000 mm
<b>Working distance</b>	≤ 3,000 mm
<b>Light source</b>	VI83I-BU1441M0 ring light, blue, medium, Laser alignment aid: visible red light ( $\lambda = 630 \text{ nm} \dots 680 \text{ nm}$ )
<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>	Fixed focus
<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>	2,048 px x 2,048 px (4.2 Mpixel)
<b>Lens</b>	C-mount
<b>Optical format</b>	1"
<b>Technology</b>	2D snapshot, image analysis
<b>Description</b>	High resolution 2D localization of parts, with device factory calibrated for field of view 2000 x 2000 mm at approximately 3 m reading distance

#### Mechanics/electronics

<b>Connection type</b>	1 x M12, 17-pin male connector (serial, I/Os, voltage supply) 1 x M8, 4-pin female connector (USB, not used) 2 x M12, 8-pin socket (Gigabit Ethernet, only one connection used)
<b>Supply voltage</b>	24 V, ± 20 %
<b>Power consumption</b>	10 W, ± 20 %
<b>Housing material</b>	Aluminum die cast
<b>Housing color</b>	Light blue (RAL 5012)
<b>Window material</b>	PMMA
<b>Dimensions (L x W x H)</b>	142.8 mm x 90 mm x 106.1 mm (Housing only, without lens and optics protection hood)
<b>Weight</b>	635 g

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

<b>Enclosure rating</b>	IP65 <sup>1)</sup>
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<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>	+/-1 mm, +/-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)PROFINETEtherNet/IP™FTP
Electrical connection	M12 male connector, 8-pin, x-coded
<b>Supply voltage</b>	
Electrical connection	M12, 4-pin, A-coded
<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 Optics and illumination PLOC2D software
<b>Factory calibrated</b>	✓

### Certificates

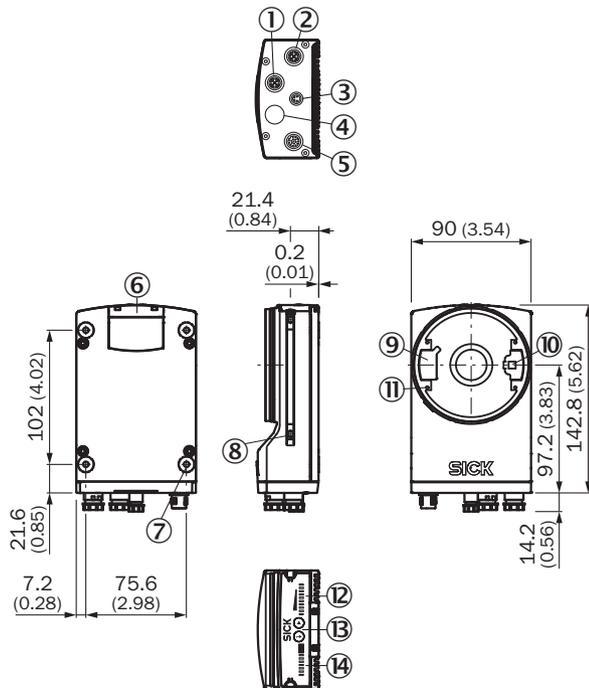
<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>China-RoHS</b>	✓
<b>Information according to Art. 3 of Data Act (Regulation EU 2023/2854)</b>	✓

### 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

### Dimensional drawing



Dimensions in mm (inch)

- ① “Ethernet” P1 connection
- ② P3 connection “Ethernet”
- ③ X2 “USB” connection or “trigger external lighting”, depending on type
- ④ P2 connection “CAN OUT”, depending on type
- ⑤ X1 “Power/Serial Data/CAN/I/O” connection or “CAN IN”, depending on type
- ⑥ cover for the microSD memory card
- ⑦ M5 blind tapped holes, 5 mm deep (4 x), for mounting the sensor
- ⑧ sliding nut M5, 5.5 mm deep (2 x), for mounting (as alternative)
- ⑨ plug connector for connecting the integrated lighting
- ⑩ laser alignment aid exit
- ⑪ 2.5 mm blind tapped holes (4 x) for mounting the spacers for the integrable illumination
- ⑫ Bar graph display
- ⑬ Function button (2 x)
- ⑭ LED for status display (2 levels), 10 x

## 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)