



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



Detailed technical data

Features

Product name	PLOC2D-2000
System features	Stand-alone sensor with easy teach, for localization of parts using 2D measurements
Example field of view	2000 mm x 2000 mm
Working distance	≤ 3,000 mm
Light source	VI83I-BU1441M0 ring light, blue, medium, Laser alignment aid: visible red light ($\lambda = 630 \text{ nm} \dots 680 \text{ nm}$)
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	Fixed focus
LED class	Risk group 1 (low risk, IEC 62471 (2006-07) / EN 62471 (2008-09))
Localization principle	Shape comparison
Sensor resolution	2,048 px x 2,048 px (4.2 MP)
Lens	C-mount
Optical format	1"
Technology	2D snapshot, image analysis
Description	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

Connection type	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)
Supply voltage	24 V, ± 20 %
Power consumption	10 W, ± 20 %
Housing material	Aluminum die cast
Housing color	Light blue (RAL 5012)
Window material	PMMA
Dimensions (L x W x H)	142.8 mm x 90 mm x 106.1 mm (Housing only, without lens and optics protection hood)
Weight	635 g

¹⁾ When using optics cover and male connector.

Enclosure rating	IP65 ¹⁾
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¹⁾ 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	+/-1 mm, +/-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 male connector, 8-pin, x-coded
Supply voltage	
Electrical connection	M12, 4-pin, A-coded
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 Optics and illumination PLOC2D software
Factory calibrated	✓

Classifications

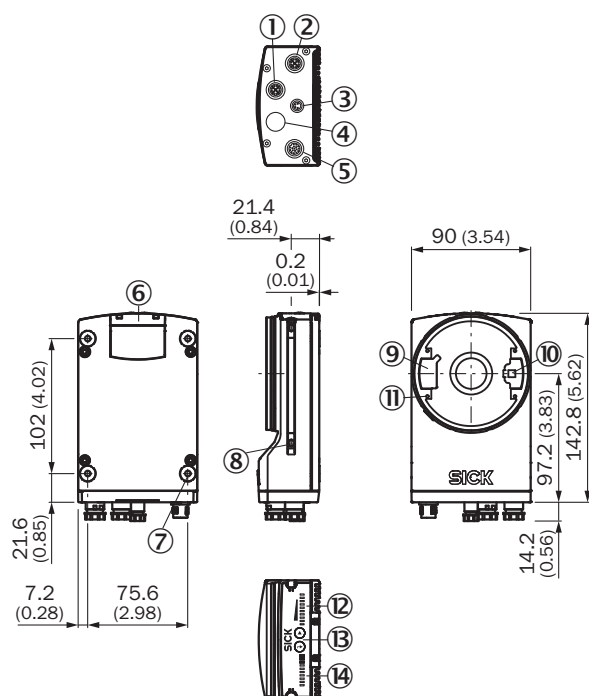
ECLASS 5.0	27381501
ECLASS 5.1.4	27381501
ECLASS 6.0	27381590
ECLASS 6.2	27381590
ECLASS 7.0	27381590
ECLASS 8.0	27381590
ECLASS 8.1	27381590
ECLASS 9.0	27381590
ECLASS 10.0	27381590
ECLASS 11.0	27381591

ECLASS 12.0	27381591
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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)	✓

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

	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:

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