PLB-53B0102

PLB

ROBOT GUIDANCE SYSTEMS

PLB-53B0102 | PLB
ROBOT GUIDANCE SYSTEMS

Ordering information

Type	part no.
PLB-53B0102	1141946

Other models and accessories ➔ www.sick.com/PLB

Detailed technical data

Features

Product version	PLB-522
Field of view	Small
Classification	Prime
Tasks	Position determination
Applications	Robot guidance
Camera type	3D snapshot
Example volume of view (L x W x H)	200 mm x 450 mm x 100 mm
Image resolution	0.2 mm ... 0.3 mm, depending on the distance to the camera
Light source	
	LED, blue, 465 nm
LED class	Risk group 1
3D CAD format	IGES, STEP
Localization principle	Geometrical shape and edge localization
Technology	3D snapshot, image analysis

Mechanics/electronics

Connection type	PoE++
Supply voltage	24 V DC or PoE PD class 8 (90W)
Current consumption	10 A
Dimensions (L x W x H)	506 mm x 58 mm x 100 mm
Weight	1,160 g
Enclosure rating	IP65/ IP67

Performance

Part localization time	0.1 s ... 10 s, typical
Part size	(approx.) > 10 mm x 10 mm x 10 mm
Part characteristics	Simple and complex part shapes
2D colour sensor resolution	2 MP (1920 px x 1200 px)
3D sensor resolution	5 MP (2472 px x 2064 px)

Interfaces

Ethernet	✔ (2) , camera <--> PC, PC<--> robot

Data transmission rate	1 Gbit/s (camera), 10/100 Mbit/s (robot)
Protocol	TCP/IP (camera)
Electrical connection	M12 female connector, 8-pin, X-coded

Ambient data

Ambient temperature, operation	0 °C ... +40 °C, Non-condensing
Shock load	60 g / 1,9 ms, 25 g / 6 ms [1]
Vibration load	30-500 Hz / 5 g

[1] IEC 60068-2-27.

General notes

Items supplied	C57 camera PLB Application 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

Certificates

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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
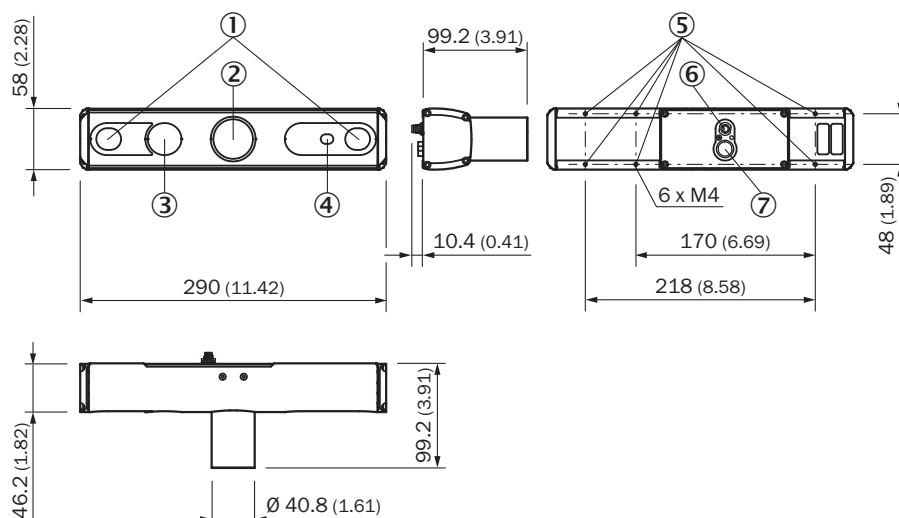
Dimensions in mm (inch)
① 3D sensors
② Projector
③ LED projection module
④ 2D sensor
⑤ Fastening threads (6x M4x0,7)
⑥ Power (M8, 4-pin)
⑦ Ethernet (M12, 8 pin, x-coded)

Detection volume and field of view
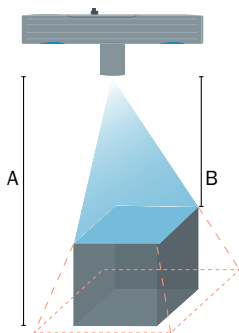
Parameter	PLB-522 small	PLB-522 medium	PLB-522 large
Image resolution	0.2 mm ... 0.3 mm, depending on the distance to the camera	0.3 mm ... 0.4 mm, depending on the distance to the camera	0.3 mm ... 0.6 mm, depending on the distance to the camera
Part size	(approx.) > 10 mm x 10 mm x 10 mm	(approx.) > 10 mm x 10 mm x 10 mm	(approx.) > 20 mm x 20 mm x 20 mm
Min. distance	910 mm	860 mm	750 mm
Max. distance	1060 mm	1140 mm	1450 mm
Field of view at min. distance (L x W)	470 mm x 400 mm	660 mm x 560 mm	770 mm x 650 mm
Field of view at max. distance (L x W)	510 mm x 460 mm	800 mm x 740 mm	1270 mm x 1250 mm
Example volume of view (L x W x H)	200 mm x 450 mm x 100 mm	600 mm x 550 mm x 400 mm	700 mm x 600 mm x 600 mm

Recommended accessories

Other models and accessories ➜ www.sick.com/PLB

Brief description	Type	part no.
Power supply units and power supply cables		
• **Input voltage:** ≤ 230 V AC • **Output voltage:** 24 V DC • **Output current:** 10 A • **Description:** Power supply unit	Power supply unit	6032863

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