



PLB

Flexible part localization for bin picking and depalletizing

ROBOT GUIDANCE SYSTEMS

SICK
Sensor Intelligence.



Technical data overview

Example volume of view (L x W x H)	800 mm x 1,200 mm x 1,000 mm (max. height range) 1,000 mm x 1,200 mm x 750 mm (max. image area) 1,300 mm x 1,200 mm x 1,000 mm 800 mm x 600 mm x 400 mm 400 mm x 300 mm x 200 mm 1,300 mm x 1,200 mm x 1,000 mm (depending on type)
Image resolution	1 mm ... 4 mm, depending on distance to camera 1 mm ... 1.7 mm, depending on the distance to the camera 0.7 mm ... 0.8 mm, depending on the distance to the camera 0.4 mm ... 0.5 mm, depending on the distance to the camera 0.4 mm ... 1.0 mm, depending on the distance to the camera 0.2 mm ... 0.4 mm, depending on the distance to the camera 0.1 mm ... 0.2 mm, depending on the distance to the camera
Part localization time	5 s ... 10 s (typical) / 3 s ... 10 s (typical) (depending on type)
Localization accuracy	< +/- 2 mm and < +/- 1° (typical) < +/- 1 mm and < +/- 1° (typical) < +/- 0.7 mm and < +/- 0.7° (typical) < +/- 0.5 mm and < +/- 0.5° (typical) < +/- 0.3 mm and < +/- 0.3° (typical)
Enclosure rating	IP65 / IP54 (depending on type)

Product description

The PLB robot guidance system is designed for precise localization of parts stored in boxes or on pallets. The system is very flexible with a selection of 3D cameras to choose from. In combination with multiple localization algorithms, this ensures reliable operation in a large range of applications from small-part handling and depalletizing through to handling of large foundry parts. PLB supports easy configuration through a user interface tailored for part localization. It also includes functions to support simple integration with the robot controller, making it straightforward to integrate the system in production. Both the software and the pre-calibrated cameras are designed to be used right out of the box, so the system can be ready within minutes.

At a glance

- All functions tailored to target applications
- Several localization algorithms based on CAD and geometric part features
- Selection of various pre-calibrated 3D cameras for immediate use
- Thorough check for collision avoidance
- Easy integration with any robot model

Your benefits

- Easy-to-use system facilitating rapid design of new applications thanks to the tailored functions
- Selection of localization functions ensures reliable part-picking independent of the part's shape or orientation
- Range of 3D cameras ensures good image quality independent of part size
- System tailored for bin picking with collision avoidance and overlap detection ensure reliable robot operation and facilitate short robot picking cycle time
- Flexible robot integration functions makes it easy to use PLB together with any robot brand

Fields of application

- Part handling in foundry and forging operations
- Part loading of machine tools
- Part picking in assembly tasks
- Depalletizing of goods
- Picking of boxes in intralogistics operations

Ordering information

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

Field of view	Image resolution	Type	Part no.
1,300 mm x 1,200 mm x 1,000 mm	1 mm ... 1.7 mm, depending on the distance to the camera	PLB520-L	1098446
1,300 mm x 1,200 mm x 1,000 mm	0.4 mm ... 1.0 mm, depending on the distance to the camera	PLB520-L 5MP	1109364
400 mm x 300 mm x 200 mm	0.1 mm ... 0.2 mm, depending on the distance to the camera	PLB520-S 5MP	1109366
	0.4 mm ... 0.5 mm, depending on the distance to the camera	PLB520-S	1098450
800 mm x 1,200 mm x 1,000 mm (max. height range), 1,000 mm x 1,200 mm x 750 mm (max. image area)	1 mm ... 4 mm, depending on distance to camera	PLB500	1058009
800 mm x 600 mm x 400 mm	0.2 mm ... 0.4 mm, depending on the distance to the camera	PLB520-M 5MP	1109365
	0.7 mm ... 0.8 mm, depending on the distance to the camera	PLB520-M	1098448

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