



Vision systems PLR

PLR3000



Model Name > [PLR3000](#)
Part No. > [1058779](#)



The PLR vision system was designed for robotized de-racking of stamped body parts. It is a stand-alone system including localization software and tools, that make the integration with the robot as easy as using a vision sensor.

The vision system combines state-of-the-art 2D imaging with 3D cross triangulation to create a unique solution that ensures reliable operation in varying environments. The integrated web server user interface and field-proven integration tools support smooth integration into production.

The PLR vision system enables new parts to be easily introduced into existing work cells and short part changeover times. Hardware and software are already pre-set for the application.

SICK's PLR is an ideal solution for cost-efficient robot handling of body parts stored in racks.

At a glance

- Vision system for robotized de-racking applications
- Integrated and factory calibrated stand-alone system
- Precise part localization and short measurement time
- Combined 2D/3D part localization
- Calculation of robot frame correction
- Reliable recognition under varying site conditions
- User interface via web server
- Integration tools for alignment and communication with robot

Your benefits

- The PLR vision system provides the flexibility needed for cost-minimized robotized de-racking operations
- Stand-alone system saves costs - no additional hardware needed (PC and electronic cabinet)
- Factory calibration and robot integration tools enable simple setup of new applications
- Design of the system, including alignment and robot correction functions make it easy for robot integrators to use the system
- Smart combination of 2D/3D image analysis meets tough application requirements
- The integrated web server makes it possible to work with the PLR vision system from any standard browser



Features

Type of system:	Part localization
Applications:	Localization of body parts stored in racks
System features:	Localization of sheet metal parts using 2D and 3D measurement
Working distance:	350 mm ... 1,500 mm (coarse measurement range), 360 mm ... 370 mm (high accuracy range)
Laser class:	2M
Light source:	Laser (660 nm), LED (630 nm)
LED class:	Risk group 1 (low risk, IEC62471 : 2006)
Image resolution (X, Y, Z):	0.26 mm
Example field of view:	200 mm x 260 mm at 365 mm distance (typical)

Performance

Output data:	X, y, z (mm), roll, pitch, yaw (degrees)
Part localization time:	< 500 ms
Part localization accuracy:	$\pm 0.5 \text{ mm}$, $\pm 0.1^\circ$ ¹⁾

¹⁾ Depending on part characteristics such as material reflectivity, edge features, etc.

Interfaces

Ethernet:	✓
Operator interface:	Web server
Function (Ethernet):	Robot interface, operator interface
Data transmission rate (Ethernet):	100 Mbit/s
Protocol (Ethernet):	TCP/IP XML and CSV (robot), TCP/IP (operator)

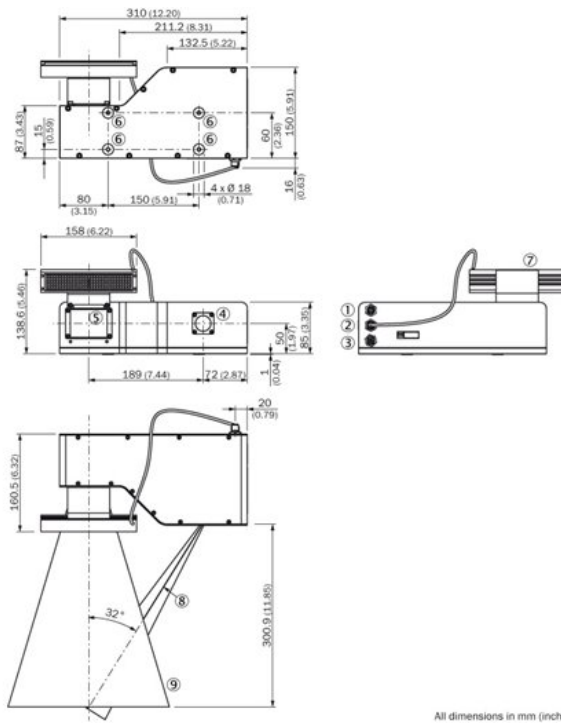
Mechanics/electronics

Supply voltage:	24 V DC $\pm 20 \%$
Weight:	3 kg
Enclosure rating:	IP 40
Housing material:	Aluminum (anodised)
Connectors:	Power: connector M12, 8-pin, male; Ethernet: M12, 4-pin, D-coded
Power consumption:	1.2 A

Ambient data

Ambient operating temperature:	0 °C ... 45 °C
Ambient storage temperature:	-30 °C ... 70 °C
Air humidity:	35 % ... 85 %, 95 % at storage
Shock load:	15 g, 3 x 6 directions
Vibration load:	5 g, 58 Hz ... 150 Hz

Dimensional drawing



All dimensions in mm (inch)

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