In All Dimensions.

LiDAR Sensors Selection Guide



Your automation, our passion.

PEPPERL+FUCHS

Technical data

NEW ITEM



R2000 (OMD) Measurement



2000 (OBD) Detection



R2400

Type	**360° Scanning**		
Best Uses	Contour/Navigation	Presence Detection	Navigation/Monitoring – Tight-Space Installation
Features	Highest resolution and accuracy	Simplified detection with discrete outputs	Compact high-resolution scanning
Model	OMD15M-R2000-B23-V1V1D OMD30M-R2000-B23-V1V1D-1L OMD60M-R2000-B23-V1V1D-1L OMD120M-R2000-B23-V1V1D	OBD15M-R2000-4EP-V1V17 OBD30M-R2000-4EP-V1V17-1L	OMD25M-R2400-B23-V1V1D
Measuring range	15 m to object / 60 m to reflector (OMD15M) 30 m to object / 200 m to reflector (OMD30M) 60 m to object / 200 m to reflector (OMD60M) 120 m to object / 200 m to reflector (OMD120M)	15 m to object / 30 m to reflector (OBD15M) 30 m to object / 30 m to reflector (OBD30M)	25 m to object / 40 m to reflector
Angular resolution	≥ 0.014°	≥ 0.071°	0.05°
Measuring rate	Up to 250,000 measurements per second	54,000 measurements per second	72,000 measurements per second
Scanning angle	360°	360°	360°
Repeat accuracy	< 12 mm	< 12 mm	< 16 mm
Resolution	1 mm	1 mm	1 mm
Interface	Ethernet: TCP/IP, UDP/IP, HTTP	4 configurable inputs/outputs	Ethernet: UDP/IP, HTTP
Data output	Distance/angle/echo/timestamp	Discrete outputs for presence detection	Distance/angle/echo/timestamp

Applications

AGV navigation	Excellent	Not well suited	Great
AMR navigation	Great	Not well suited	Excellent
SLAM / mapping	Excellent	Not well suited	Great
Localization and positioning	Excellent	Not well suited	Great
Contour measurement/ dimensioning	Excellent	Not well suited	Very Good
Collision avoidance	Good	Excellent	Great
Vehicle detection	Good	Excellent	Good
Area monitoring	Good	Excellent	Good
Machine protection	Not well suited	Excellent	Not well suited
Cliff detection	Very Good	Not well suited	Very Good
Presence detection	Not well suited	Great	Not well suited
Pallet and load detection	Very Good	Great	Good

Additional Information

Scan for more information	**pepperl-fuchs.com/pf-r2000h**	**pepperl-fuchs.com/pf-r2000d**	**pepperl-fuchs.com/pf-r2400**
Highlights	■ Highly precise measurement data ■ 360° scanning angle ■ Interactive, all-around display ■ Detection of very small objects	■ Measuring range 30 m ■ 360° scanning angle ■ Interactive, all-around display ■ Configurable detection fields	■ Measuring range 25 m ■ 360° scanning angle ■ Rugged device design ■ Compact housing



R2300 Multiplane

3-D LiDAR
3-D measurement and detection
4-layer multiplane scanning
OMD10M-R2300-B23-V1V1D-4S
10 m on white (90%) 4 m on black (10%)
0.1°
50,000 measurements per second
100° horizontal, 9° vertical
< 12 mm
1 mm
Ethernet: UDP/IP, HTTP
Distance/angle/echo/timestamp
Great
Great
Good
Very Good
Very Good
Excellent
Excellent
Excellent
Excellent
Excellent
Very Good
Excellent



R2300 Singleplane

High Speed
High-speed applications
High-speed single layer
OMD10M-R2300-B23-V1V1D-4S
10 m on white (90%) 4 m on black (10%)
0.1°
50,000 measurements per second
100°
< 12 mm
1 mm
Ethernet: UDP/IP, HTTP
Distance/angle/echo/timestamp
Very Good
Very Good
Good
Very Good
Very Good
Great
Great
Great
Great
Good
Great
Great



R2100

Solid State
Cost-effective detection
Multiray LED scanning
OMD8000-R2100-R2-2V15 OMD8000-R2100-B16-2V15
0.2 ... 8 m
8°
50 s–1 (1 scan = 11 measurements)
88°
+/- 50 mm (orthogonal)
1 mm
CANopen / RS232
11 distance measurement values
Not well suited
Not well suited
Not well suited
Not well suited
Not well suited
Good
Very Good
Great
Very Good
Good
Excellent
Great

pepperl-fuchs.com/pf-r2300

- Measuring range 10 m
- 100° scanning angle
- Up to 4 scanning layers
- Pilot laser

pepperl-fuchs.com/pf-r2300

- Measuring range 10 m
- 100° scanning angle
- High-speed single layer
- Pilot laser

pepperl-fuchs.com/pf-r2100

- Measuring range 8 m
- 88° scanning angle

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- Industrial Sensors
- Industrial Communication and Interfaces
- Enterprise Mobility
- Hazardous Area Products and Solutions

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Printed in USA • Part. No. 70212513 09/26

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