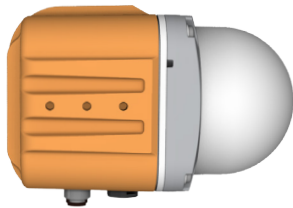
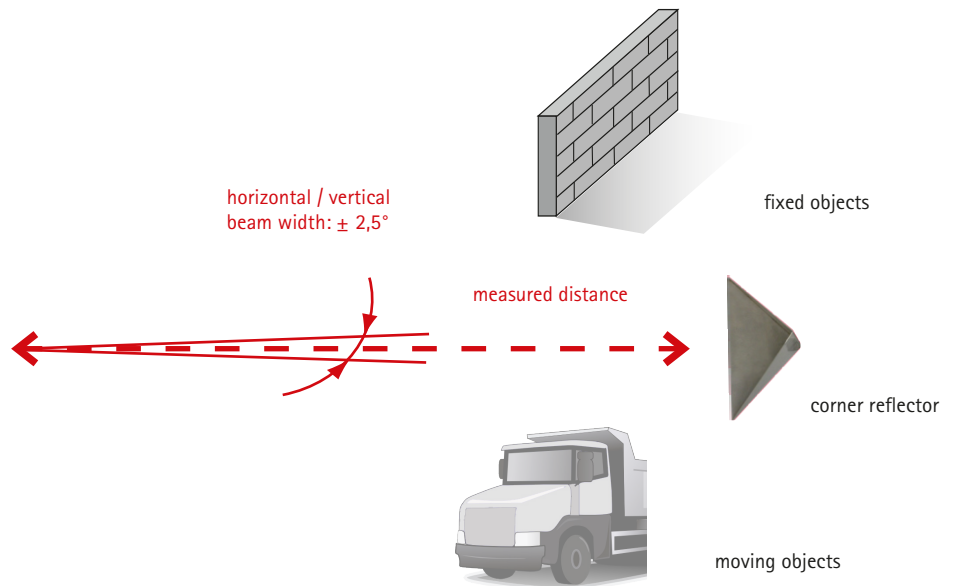


## PRODUCT DATA SHEET



LPR<sup>®</sup>-1DHP-220-R for measurements directly on objects (primary radar)



### LPR<sup>®</sup>-1DHP-220-R

#### Robust Short-Range Distance Measurement with an Accuracy in the Millimeter Domain

- Contactless distance measurement via radio waves with one radar sensor
- Latest ultra-wideband technology for measurements in the millimeter range
- Compact and robust housing
- Impervious to dirt, harsh weather and vibrations
- Simple installation
- Maintenance- and wear-free

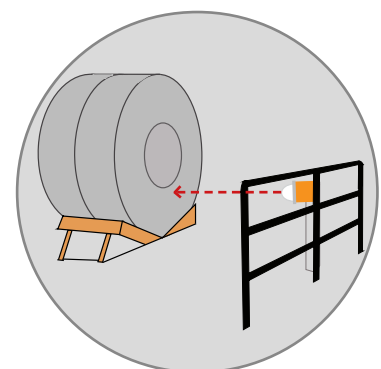
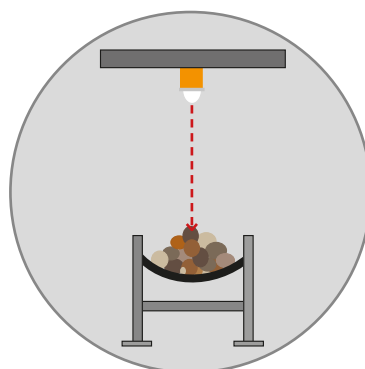
The LPR<sup>®</sup>-1DHP-220-R primary radar system performs high-precision 1D distance measurements for short ranges. By measurements directly on an object or on a reflector, only one sensor is sufficient to detect the position - e.g. of a crane - in real-time and make the data available via the device interfaces. The sensor is simple to install and easy to put into operation with the aid of a web interface. A directional antenna is integrated into the robust housing.

The LPR<sup>®</sup>-1DHP-220-R radar system is the successor to the LPR<sup>®</sup>-1DHP-R and features an even higher accuracy and measurement rate in a more compact design. The device furthermore supports the latest ultra-wideband technology, allowing it to achieve highly-precise measurements in the millimeter range. The sensor can be optimally configured for the required accuracy and range by selecting individual measurement modes.

Even under the harshest conditions and weather environments such as rain, fog, snow, dust, smoke or vibrations, the maintenance- and wear-and-tear-free wireless technology operates reliably and with a high degree of availability - indoors and outdoors.

#### Typical Applications

- Crane Positioning
- Collision Avoidance
- Presence / Absence Check
- Profile / Volume Measurement
- Process Monitoring
- Process Control
- Process Automation



# PRODUCT DATA SHEET

## Technical Data

LPR <sup>®</sup> -1DHP-220-R	
Radar measuring mode	Primary radar
Frequency range	57,0-64,0 GHz
Measuring range <sup>1)</sup>	1 m to 50 m
Measurement accuracy <sup>1)2)</sup>	up to $\pm 5$ mm
Repeatability <sup>1)2)</sup>	up to $\pm 3$ mm
Measurement rate	up to 350 Hz
Supply voltage	11-36 V DC
Power consumption	7 W
Ambient temperature	-40 °C to +70 °C
Protection class housing	IP65
Housing dimensions (LxWxH); weight	95 x 95 x 155 mm; 800 g
Interfaces	Ethernet (TCP / IP, Profinet)
External connector	Ethernet (M12), supply voltage (M12)
Antenna	integrated, beam width = $\pm 2,5^\circ$
Compliance	CE, FCC, IC (others on request)

## Bandwidth Modes<sup>3)</sup>: Primary Radar

Bandwidth	0,5 GHz	2 GHz
Measurement accuracy <sup>2)</sup>	up to $\pm 10$ mm	up to $\pm 5$ mm
Repeatability <sup>2)</sup>	up to $\pm 6$ mm	up to $\pm 3$ mm
Measurement rate	up to 350 Hz	up to 350 Hz
Measuring range ETSI <sup>1)</sup>	2 m to 50 m	1 m to 50 m
Measuring range FCC <sup>1)</sup>	2 m to 50 m	1 m to 20 m

<sup>1)</sup> Depending on the environment, the selected bandwidth mode and the backscatter quality of the target.

<sup>2)</sup> Error under consistent ambient conditions. Depending on the measurement distance.

<sup>3)</sup> Multiple bandwidth modes can be selected in the device settings. The selection is limited by regional radio regulations.