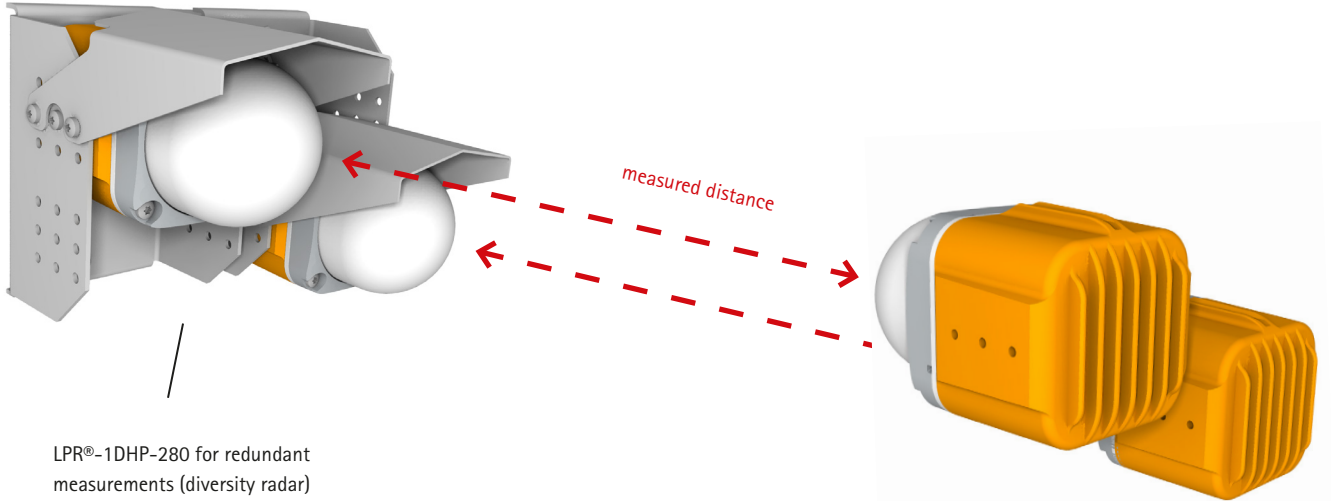


## PRODUCT DATA SHEET



LPR<sup>®</sup>-1DHP-280 for redundant measurements (diversity radar)

### LPR<sup>®</sup>-1DHP-280

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

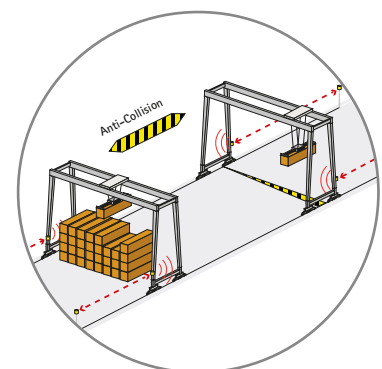
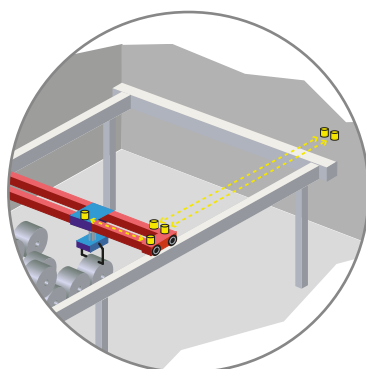
- Redundantly designed diversity radar for highly reliable distance measurements
- Latest ultra-wideband technology for measurements in the millimeter range
- Compact and robust housing
- Impervious to dirt, harsh weather and vibrations
- Maintenance- and wear-free wireless technology, ideal for crane automation processes

The LPR<sup>®</sup>-1DHP-280 secondary radar system performs 1D distance measurements for short, medium and long ranges with highest accuracy. By combining two redundant measuring paths, the LPR<sup>®</sup>-1DHP-280 can detect the position and speed - for example of cranes and railbound transport systems - in real-time and make the data available via the device interfaces. The sensors are 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-280 radar system is a successor to the LPR<sup>®</sup>-1DHP 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
- Goods Tracking
- Process Monitoring
- Process Control
- Process Automation



# PRODUCT DATA SHEET

## Technical Data

LPR <sup>®</sup> -1 DHP-280	
Radar measuring mode	Diversity radar
Frequency range	57,0-64,0 GHz
Measuring range <sup>1)</sup>	0,5 m to 500 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 110 Hz
Supply voltage	11-36 V DC
Power consumption	2x 7 W
Ambient temperature	-40 °C bis +70 °C
Protection class housing	IP65
Housing dimensions (LxWxH); weight	160 x 230 x 220 mm; 4 kg
Interfaces	Ethernet (TCP / IP, Profinet)
External connector	2x Ethernet (M12), 2x supply voltage (M12)
Antenna	integrated, beam width = $\pm 2,5^\circ$
Compliance	CE, FCC, IC (others on request)

## Bandwidth Modes<sup>3)</sup>: Diversity 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 110 Hz	up to 110 Hz
Measuring range ETSI <sup>1)</sup>	2 m to 500 m	0,5 m to 500 m
Measuring range FCC <sup>1)</sup>	2 m to 500 m	0,5 m to 225 m

<sup>1)</sup> Depending on the environment and the selected bandwidth mode.

<sup>2)</sup> Error under consistent ambient conditions.

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