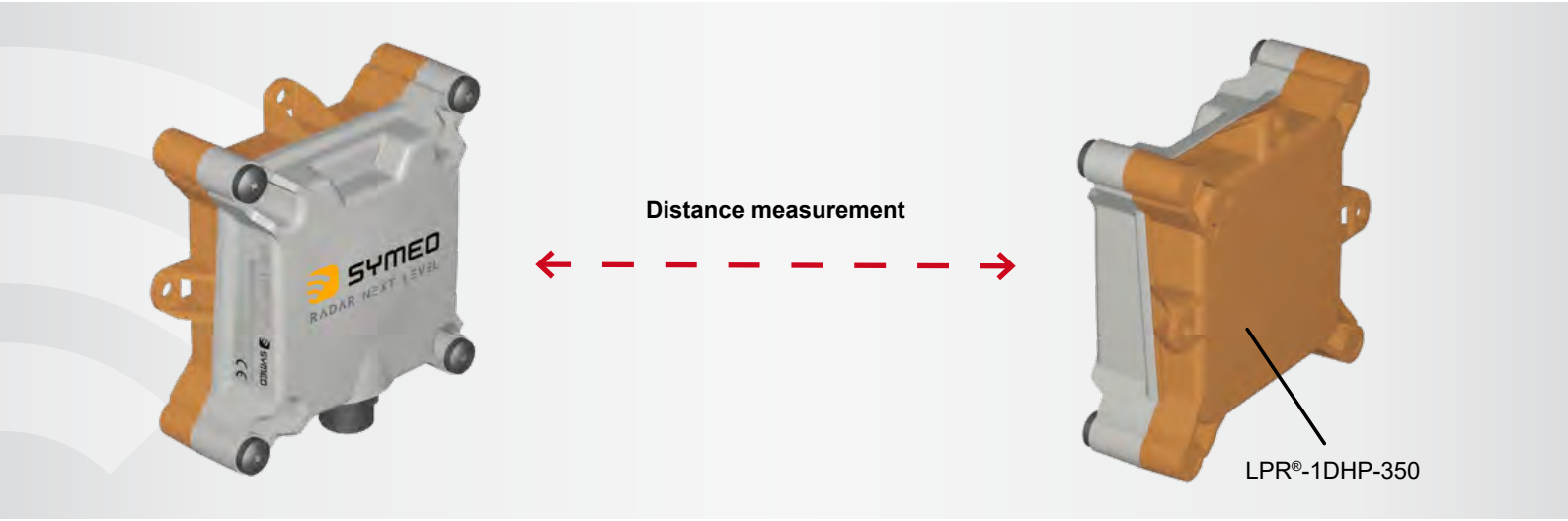
SYMEO
RADAR NEXT LEVEL



122 GHz Primary and Secondary Radar Sensor

LPR®-1DHP-350

The LPR®-1DHP-350 radar system performs 1D distance measurements for short and medium ranges with high accuracy. Based on primary or secondary radar measurements, the LPR®-1DHP-350 can detect the position and speed of objects such as cranes or rail-based transport systems in real time and make the data available via the device interfaces.

The sensors are easy to install and put into operation with the aid of a web-based interface. A directional antenna is integrated into the housing. The device features the latest millimeter-wave technology for highly precise measurements. Even under the harshest weather and environmental conditions such as rain, fog, snow, dust, smoke or vibrations, the maintenance- and wear-and-tear-free wireless technology operates reliably with a high degree of availability – indoors and outdoors.

- **Contactless distance measurements via radio waves**
- **Small form factor**
- **Easy installation**
- **Impervious to dirt and harsh conditions**
- **Maintenance-free**

Typical Applications:

- **Laser and ultrasonic sensor replacement**
- **Crane and hoist positioning**
- **Forklifts**

PRELIMINARY

Technical Data: LPR®-1DHP-350	
Model number	BSX300350
Radar measurement mode	Primary radar, secondary radar
Frequency range	121 - 123 GHz
Supply voltage	Power over Ethernet IEEE 802.3af Class 0
Power consumption	< 5W
Ambient temperature	-40°C to +60°C (-40°F to +140°F)
Protection class housing	IP67
Vibration	20 cycles, each 4:25 h, x-y-z, 5 g, 5 Hz - 500 Hz, 15 mm (acc. to DIN EN 60068-2-6:2008)
Shock	200 cycles, x-y-z, 40 g, 6 ms (acc. to DIN EN 60068-2-27:2010)
Housing dimensions (L x W x H); weight	90 x 90 x 35 mm; 190 g
Transmission power (EIRP)	Up to 20 dBm EIRP
Bandwidth	ETSI: up to 750 MHz[1)] FCC: up to 2 GHz[1)]
Interfaces	100 Mbps Fast Ethernet IEEE 802.3 100BASE-TX Ethernet (TCP/IP, Profinet)
Response time	< 100 ms
MTBF	428 697 h / 48.9 a
External connector	1 x M12 x-coded
Antenna	Integrated, field of view = ± 2.5°
Compliance	ETSI FCC KCC

1) Depending on settings

	Primary radar mode	Secondary radar mode
Measurement rate[1)]	Up to 350 Hz	Up to 110 Hz
Range[2)]	Up to 40 m	Up to 100 m
Measurement accuracy[3)]	Up to ±9 mm	Up to ±9 mm
Repeatability[3)]	Up to ±5 mm	Up to ±5 mm

1) Depending on measurement mode and target.
2) Depending on the environment and on RCS of target reflector.
3) Error under consistent ambient conditions. Depending on the measurement distance and measurement mode.

PRELIMINARY

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