

LPR[®]-1D24

High-Precision Distance Measurement and Reliable Collision Avoidance

- Easy commissioning
- Exact position detection
- Contactless measurement by means of radio waves
- Unaffected by contamination, weather and vibration
- Usable indoors and outdoors
- Ideal for semi- and full-automatic machine movement control
- Maintenance-free, even in harsh environments

LPR[®]-1D24 is a highly precise radio sensor for distance measurement. One pair of sensors enables long range measurements with high accuracy. At the same time, further measurement data such as the crane hook height or the load status can be transferred via the wireless LPR[®] channel²⁾. In addition, the relative approach speed of the LPR[®] sensors is also available.

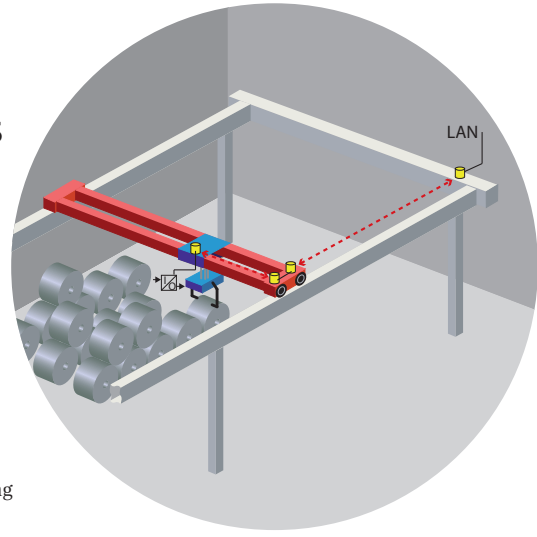
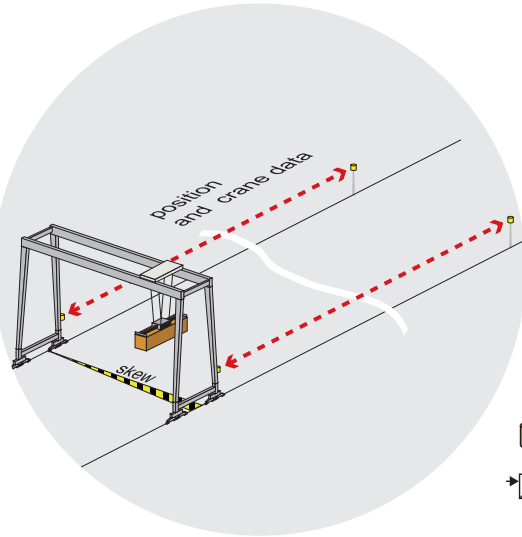
Distance and speed can be used for internal collision avoidance decisions at predetermined distance thresholds. Optional on-board relays will be activated. All data is made available at standard interfaces of each unit in real-time.

The multi-channel radio antenna is integrated in the robust housing. Thus, the devices are easy to install and operate. Rough alignment between the facing units is sufficient for precise measurements, even for very long distances. Via a user-friendly HTML interface, the units can be easily configured and put into operation. Installing special software is not necessary.

Symeo LPR[®] radio works highly reliable even under adverse environmental conditions. Interference with any WiFi equipment operating in parallel can be excluded at all times. LPR[®]-1D24 sensors are maintenance-free.

Paired sensors can be interconnected with other pairs, providing crane xy position with simultaneous measurement data transmission. All measurement data is available at each unit for further processing.

Typical LPR[®]-1D24 applications



 LPR[®]-1D24

 I/O Signal Handling

Dimensions:
(in mm)



Connectors:

- Power supply
- Ethernet
- Relay contacts²⁾
- Profibus²⁾
- Waterproof connection for external USB stick for logging and monitoring

LED indicators:

- Power / active measurement
- Network
- Application

Technical Data: LPR[®]-1D24

Frequency range	24-24.25 GHz
Transmit Power (EIRP)	up to 20 dBm
Measuring range	up to 1.000 m ^{1), 2)}
Accuracy	up to ± 2.5 cm ^{1), 2)}
Measurement rate	30 Hz
Supply voltage	10-36 V DC
Power consumption	18 W
Ambient temperature	-40 °C to +75 °C
Protection class	IP65
Weight	3.8 kg
Interfaces	Ethernet (TCP/IP, UDP, Profinet ²⁾), Profibus ²⁾
Status indication	LED
Data transmission	position data, user data ²⁾ , relay data ²⁾
User data transfer rate	100 bytes/cycle, up to 3 Kbyte/s
MTBF ²⁾	19.6 a (sp), 21.0 a (sr) or 21.7 a (s)
External connectors	Ethernet (M12), power supply (M12), USB
Antenna	integrated, multi-channel antenna diversity

1) Depending on application conditions.

2) Optional, depending on purchased product version. For more information please see the product documentation.