

LPR[®]-1D24

Radio Based High Precision Distance Measurement and Collision Avoidance

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

LPR[®]-1D24 is a highly precise radio sensor for distance measurement. Two paired units allow for long range applications and enable additional data transfer at the same time. The exact position of a moving machine component, e.g. a crane or crane trolley, can thus be dynamically determined in real-time, while data collected at one end (e.g. a load cell input) is available at the paired unit simultaneously.

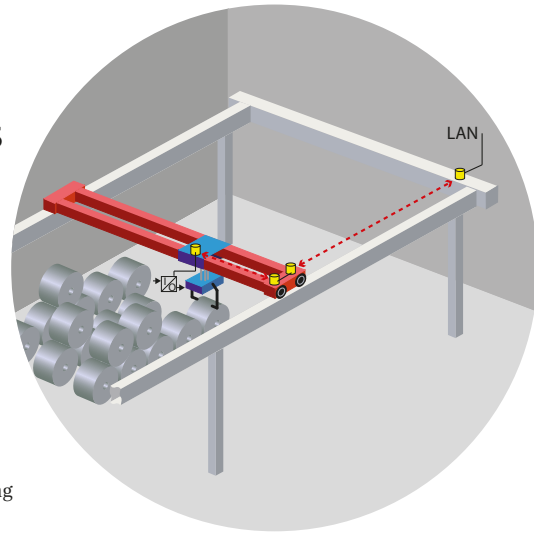
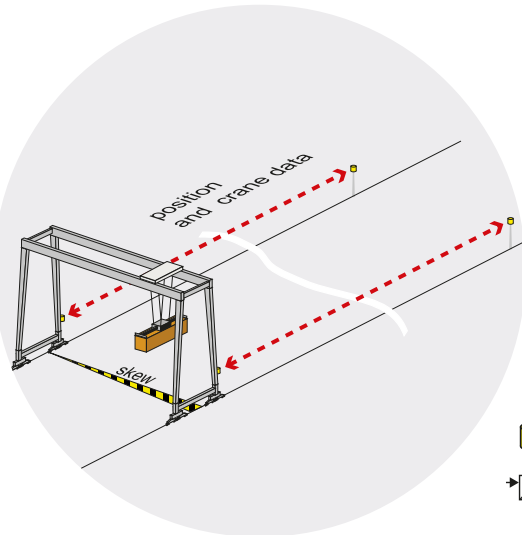
In addition to the distance reading, the relative approach speed of the LPR[®] sensors is available. Distance and speed can be used for internal collision avoidance decisions at predetermined distance thresholds. Optional on-board relays will be activated. All data is made available at standard interfaces.



The devices are easy to install and operate. Rough alignment between the facing units is sufficient, even for very long distances. The multi-channel radio antenna is integrated in the robust housing. A built-in terminal server allows straightforward configuration of the unit ID, the paired unit ID and other parameters in any browser.

Symeo LPR[®] radio works highly reliable under adverse conditions. Interference with any WiFi equipment operating in parallel can be excluded at all times. A unique ID per each unit allows operating multiple pairs in immediate vicinity.

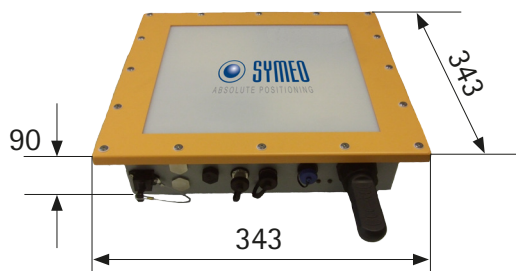
LPR[®]-1D24 sensors are maintenance-free and paired sensors can be interconnected with other pairs, providing several distances at a single interface, e.g. for crane xy position acquired by two sensor pairs.

Typical LPR®-1D24 applications



-  LPR®-1D24
-  I/O Signal Handling

Dimensions:
(in mm)



Connectors:

- power supply
- Ethernet TCP/IP
- USB port
- service interface
- relay contacts (optional)
- Profibus (optional)
- CAN bus (optional)
- waterproof connection for external USB stick for logging and monitoring

LED indicators:

- power
- active measurement
- network

Technical Data: LPR®-1D24

Frequency range	24-24.25 GHz
Measuring distance	up to 1.000 m *
Typical accuracy	up to ± 1 cm *
Repeat rate	30 Hz
Voltage	10-36 V DC
Power consumption	18 W
Ambient temperature	-40 °C to +75 °C
Protection class	IP65
Weight	3.8 kg
Hardware interface	serial RS422/RS485, Ethernet TCP/IP or UDP, Profibus (optional)
Data interface	Syмео LPR®-1D protocol
Status indication	LED
User data transfer rate	8 bytes/cycle, up to 240 byte/s
External connector type	Ethernet housing connector; plug: M12 screw connections, USB, micro USB (for service)
Antenna	integrated, multi-channel antenna diversity
Compliance	CE, FCC, IC

* depending on application conditions