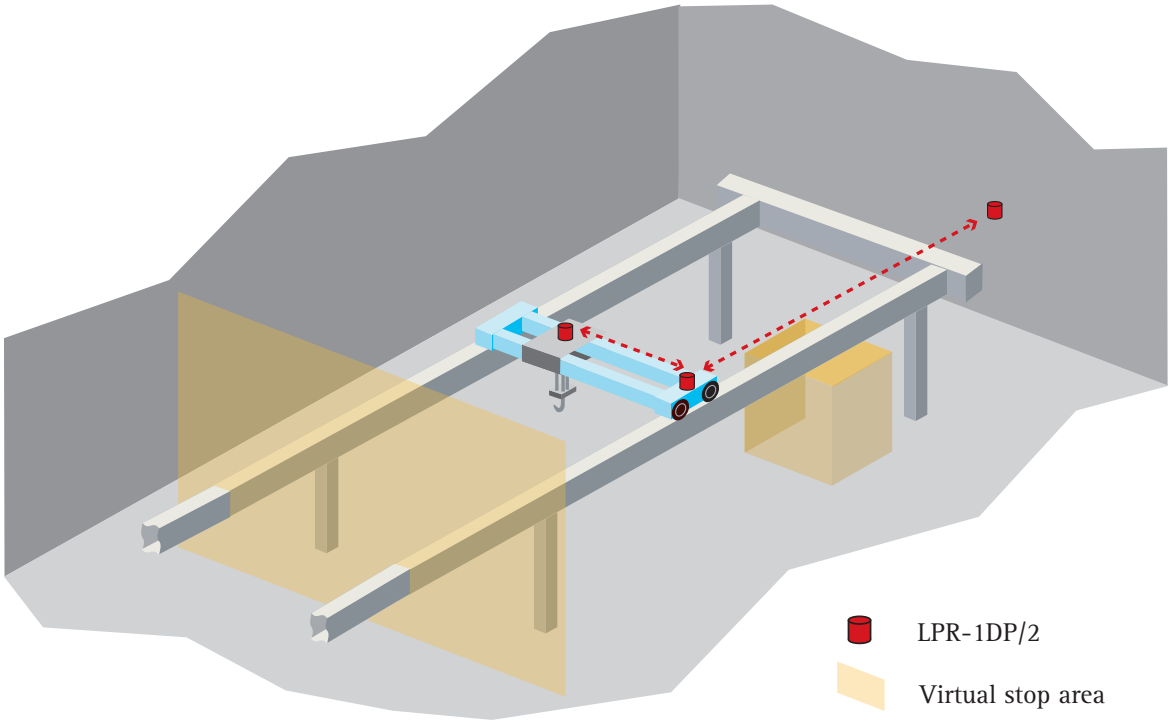
Position Detection and Anticollision

SYMEO
ABSOLUTE POSITIONING

Data Sheet



LPR-1DP/2

Crane bridge and trolley position detection

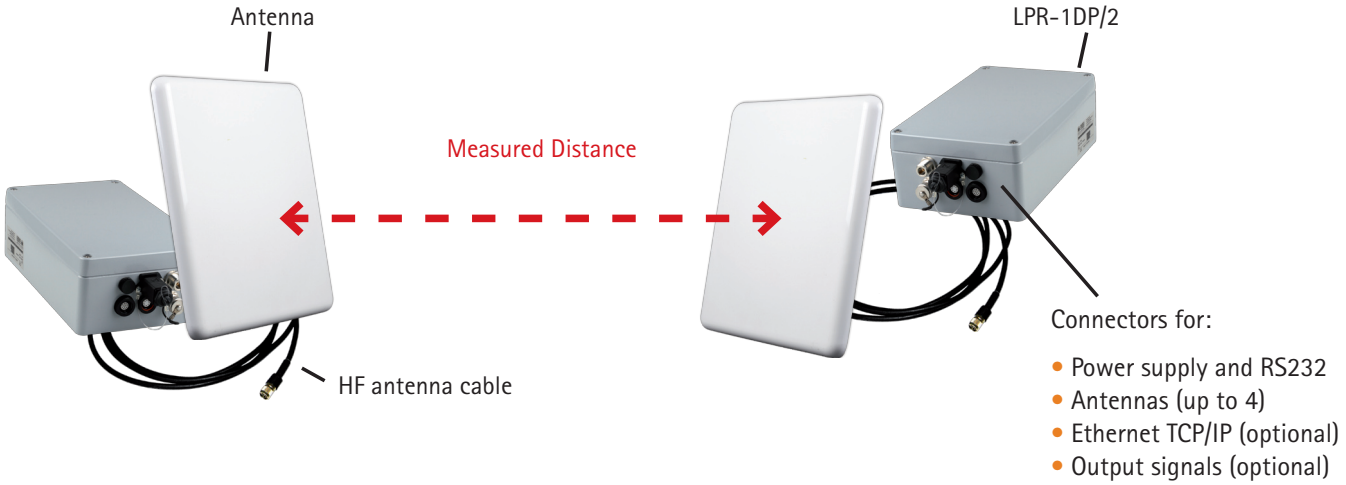
- Easy-to-implement position detection
- Contact-less measurement by means of radio waves
- Unaffected by contamination, weather and vibration
- Usable indoors and outdoors
- No precise alignment necessary
- Easy to configure
- Redundant system set-up for high-security applications
- No additional operating or maintenance costs

By measuring the 1-D distances along the crane track and on the crane bridge, the trolley's 2-D position can be determined in order to prevent collisions between moving objects as well as entries into restricted areas. The crane travel paths are detected in real time.

LPR-1DP/2 can also transmit additional data via its own signal channel. The current reading of a load cell on the crane hook could for example be acquired by the LPR unit on the crane trolley. All LPR-1DP/2 devices continuously communicate distance measurements and other acquired data to make sure that this information is available on every linked unit at the respective interfaces.

With the integrated SymeoBasic parameterization software, switching points or virtual blocked-off areas can be easily determined based on position and speed. When the freely configurable switching criteria are reached, potential-free contacts can be opened via the optionally built-in switching relays based on the traveling direction.

With the parameterization software SymeoWizard, switching thresholds based on the actual position can easily be determined. When the freely configurable switching criteria are reached, dry contacts of the optionally built-in relays can be opened to warn or stop travelling in a selected direction.



Technical Data: LPR-1DP/2	
Frequency range	5.725-5.875 GHz, ISM-band
Output power	Max. 0.025 W EIRP
Measuring distance	Up to 1,800 m *
Typical accuracy	Up to ± 5 cm *
Repeat rate	Max. 30 Hz
Voltage	10-36 V DC
Power consumption	4-8 W at max. update rate
Ambient temperature	-40 °C to +75 °C
Protection class	Up to IP65
Housing dimensions (LxWxH); weight	260 x 160 x 91 mm; 2.5 kg
Hardware interface	Serial RS232, TCP/IP (optional),Profibus (optional), 7x dry contacts (optional, max. 60 VDC, max. 2 A)
Data interface	Symeo binary protocol, ASCII protocol optional with TCP/IP
User data transfer rate	8 bytes/cycle, up to 800 byte/s
Connector type	cable gland, internal termination
Antenna(s)	Up to 4 antennas, N-Connector
Compliance	CE, FCC

** depending on the type of antenna and application conditions*

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