



Contactless Measurement of Spreader Height

For All Types of Terminal Cranes and Vehicles



LPR®-1DHP-R

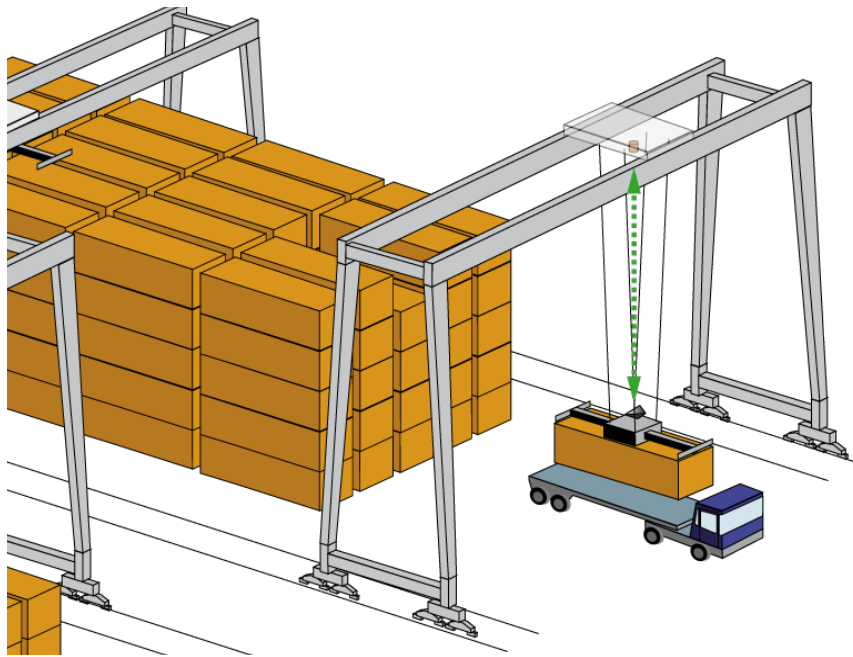
Metal reflector

- Contactless measurement of the spreader height
- Cost-effective, passive solution using only a single sensor
- Range of up to 30 meters
- Wear- and maintenance-free
- Requires no electronics or supply voltage on the spreader, thus eliminating shock hazard when dropping-off the container
- Weather-independent (wind, rain, snow, fog and direct sunlight)
- Easy to install and retrofit

To precisely determine the pick-up and drop-off position of terminal containers, the LPR®-1DHP-R passive radar sensor from Symeo measures the height of the spreader with contactless technology. The robust wireless sensor is fixed at the same height at which the spreader is suspended: on a mast, a crane trolley or on the boom of the vehicle. A simple metal reflector installed on the spreader itself serves as a counterpart station.

The distance between the sensor and the metal reflector changes as the spreader moves up or down, allowing the absolute position of the spreader, and thus the pick-up or drop-off height of the container, to be accurately determined. Terminal operators can use the acquired data to identify and avoid erroneous container positioning information and adjust spreader landing speed to avoid spreader and container damages.

The passive radar sensor can be deployed with all types of cranes and terminal vehicles. LPR®-1DHP-R, which measures in the 61 GHz range, can detect heights of up to 30 meters. The maintenance-free wireless sensor is reliable and precise even under conditions in which conventional sensor technology, such as lasers, no longer provides adequate results, be it rain, fog or snow.



LPR®-1DHP-R



Metal reflector

Symeo GmbH

Symeo GmbH develops and markets systems for precise, contact-free and maintenance-free distance measurement, position detection and collision avoidance for cranes, industrial vehicles and fixed objects. Furthermore, Symeo develops certified, customer-specific telemetry solutions.

Symeo products are robustly designed and well-suited for applications in harsh industrial environments indoors and outdoors. The products are easy to retrofit and can be used regardless of vehicle or crane type. The LPR®-sensors with unique patented radio technology are equipped with industry standard interfaces.

The company also provides industrial GNSS (Global Navigation Satellite Systems GPS, Glonass and Galileo) receivers that can be combined with LPR® and other movement sensors like encoders and inertial measurement units (IMU). This combination enables highly available and precise positioning, even under the most adverse conditions and in areas with limited satellite availability.

An international network of Symeo affiliates and partners ensures local support for customers worldwide. Symeo offers a 24/7/365 technical support hotline for subscribers to avoid any downtimes.



Position Detection



Collision Avoidance



Distance Measurement



Telemetry/Data Transmission