



1D Symeo Position Detection Systems

Rail Mounted Gantry Cranes (RMG),
Automated Stacking Cranes (ASC),
Ship-to-Shore Cranes (STS)

- Precise detection of 1D crane position up to 1 centimeter
- Secure distance measurement over long distances up to 1.000 meters
- Precise detection of crane speed
- Usable for all types of cranes
- Easily retrofitted
- Crane to crane communication
- Options: detection of load status (twist locks engaged) and spreader lift height, relay for crane anti-collision applications

Radar-based Symeo 1D sensors enable exact distance measurement between cranes, the detection of spreader lift height and the measurement of crane speed. In contrast to conventional optical 1D sensors, the Symeo 1D radar-based sensors are maintenance-free and work reliably even under difficult weather and environment conditions like rain, dirt and dust.

Typical application fields of 1D sensors are the synchronization control of gantry cranes, the collision avoidance between ship-to-shore cranes, the optimization of inventory management and the position of ASCs along the rail. The sensors enable precise distance measurement and data transmission from crane to crane even over long distances.

Symeo Position Detection Systems are suitable for all types of cranes. The simultaneous, interference-free operation of a WiFi network at the terminal is possible.

Application Fields:

- Inventory Management
- Collision Avoidance
- Process Automation
- Crane Automation

Symeo GmbH

Symeo GmbH develops and markets systems for precise and contact-free distance and position measurement, as well as anti-collision solutions for cranes, industrial vehicles and fixed objects. Furthermore, the company develops certified, customer-specific telemetry solutions with mobile data transmission.

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