

LPR®-1DHP-R

Transport Conveyor Material Detection

Open Pit Mining, Mine, Coking, Garbage Incineration Plants

- Contactless material detection using wireless technology
- Cost-effective, passive solution requiring only one sensor
- Operation range of 2 to 5 meters
- Maintenance- and wear-free
- Impervious to dirt, dust and vibrations
- Reliable even in heavy winds or direct sunlight
- WiFi-independent
- Simple installation

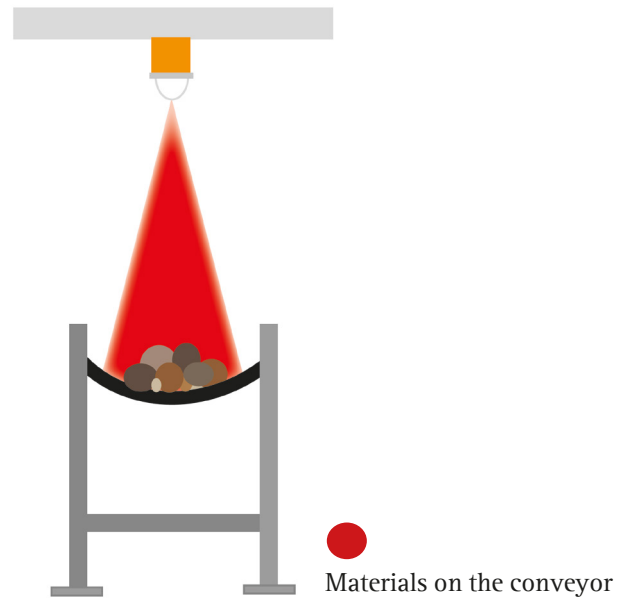
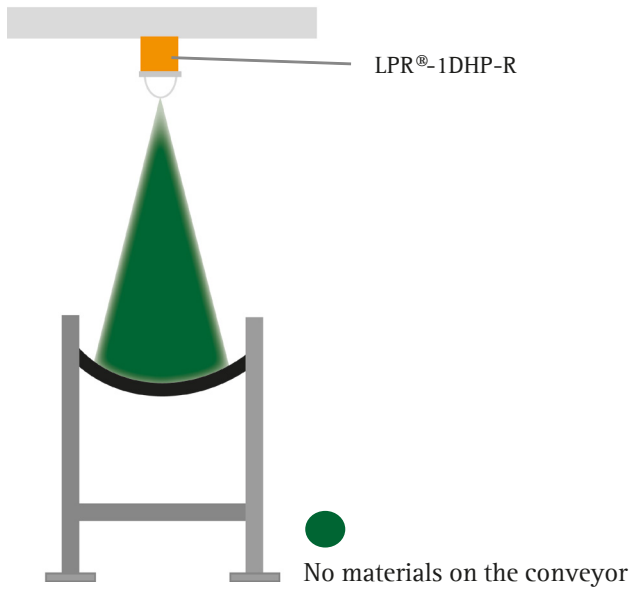
In order to detect the existence or non-existence of bulk materials such as coal on the transport conveyor, the LPR®-1DHP-R passive radar sensor from Symeo is mounted above the conveyor. The system requires only one sensor to determine the presence or absence of materials, because an empty conveyor belt reflects radar signals differently than a loaded one.

The passive radar sensor can be utilized for instance for bulk material handling, in the metals industry and in garbage incineration plants. LPR®-1DHP-R, which operates in the 61 GHz range, is mounted 2 to 5 meters from the conveyor.

This robust wireless sensor is reliable and precise even where conventional sensors like laser or ultrasound technologies are insufficient, such as in environments where dirt, dust, wind and vibrations are common. The measurements are also unaffected by direct sunlight.

The device is maintenance-free and not subject to wear and tear.

Since LPR®-1DHP-R utilizes the 61 GHz frequency range, adjacent wireless data networks (WiFi) can be operated simultaneously without the risk of interference.



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