

High throughput prized

Leading Scandinavian retailer uses barcode readers and sensors to ensure high throughput and reliability of material flow control systems

The Scandinavian fashion group Lindex commissioned Swisslog to design and equip its distribution centre at the group's headquarters in Gothenburg, Sweden. The distribution centre, which handles the flow of women's and children's clothes to 350 outlets in northern Europe, is based on a combination of fully automatic and manual processes.

Buchs/Göteborg, the warehouse & distribution solutions division of Swisslog specialises in bespoke logistics solutions for wholesale and retail and carried out the installation.

The centre is serviced by four cranes, an intelligent pick solution, as well as an automatic labelling and palletising system.

A key element in the performance of the automated storage and distribution centres are sensors from Leuze electronic. The high throughput and reliability of the material flow control systems relies on Leuze electronic's optoelectronic sensors, plus a relatively large scale implementation of BCL500i barcode readers.

PRK 25B retro-reflective optoelectronic sensors are used extensively because they are optimised for container and packet detection in real-world applications. The sensor's performance reserve enables them to operate reliably at ranges of up to 10m, while facing challenges such as shrink-wrapping. Swisslog also made use of unique technologies from Leuze electronic such as brightVision and the innovative Ultra-Lock connector system which simplified mounting and commissioning.

KONTURflex measuring light curtains are also used and these work by generating a monitoring field consisting of many light beams. The number of interrupted light beams defines the width of the object being measured.

Fast and reliable identification is key to the logistics system's availability and process reliability and hence prime drivers in Swisslog's choice of BCL 500i barcode readers.

The BCL500i barcode reader range is a flagship product for Leuze electronic, with the manufacturer claiming it offers strong technical performance, including a large depth of field, a choice of integrated communication protocols and built-in configuration software.

For Lindex, Swisslog chose BCL500i scanners with a fully integrated PROFIBUS interface, to enable the readers to be integrated into an existing network. In addition to utilising configuration of the scanner across the network, Lindex also benefits from the high reading reliability provided by the innovative code reconstruction technology built into all BCL500i's.

Leuze electronic's code reconstruction technology, which is widely used across the UK in supermarket and catalogue shopping distribution centres, works by scanning across a barcode at an angle, rather than along the central axis of the code.

As shown in the adjacent diagram, many scans are taken at an angle across the barcode and the BCL500i reconstructs these

numerous slices into one complete barcode. This enables the scanner to overcome problems such as gaps in the barcode, which would typically be due to poor print quality or soiling of the label.

High-performance optics, innovative scanning technology and integrated communication protocols made the

BCL500i barcode suited to the constantly increasing volume and demands of Lindex's distribution centre. Leuze electronic's processes are designed to provide a healthy performance reserve, which ensures reliable operation in real-world applications. The firm also offers features to speed up installation and commissioning.



"Lindex benefits from the high reading reliability provided."

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Optimised for high bay warehouses

Leuze electronic's AMS200 Absolute Measuring System uses laser optics to measure distances of up to 200m within a tolerance of 3mm. Typically used on high bay warehouse applications, transfer stations etc, the AMS200 uses a laser and "time-of-flight" technology to provide a distance measurement.

An additional benefit that differentiates the unit is the built in speed monitoring calculation and output. On a high-bay warehouse system, our customers tell us this extra functionality saves up to 30% of their build cost.

As logistics' warehouses increase in size, large distances are very common on gantry cranes and high-bay stacker crane systems. Therefore the unit has a range of up to 200 metres, with an accuracy of 3mm, or even further with slightly lower accuracy.

The option of integrated heating enables the unit to withstand temperatures as low as -30 deg C, making it suitable for cold store warehouses.