

ON THE BLOG



EOS and MICRON for Modula Vertical Warehouses

The Perfect Solution for Safety and Measurement in Modula Vertical Warehouses



The operation is simple and straightforward: metal trays are retrieved from the warehouse and deposited in picking bays by an automatic elevator equipped with powerful visual aids and an intuitive interface, reducing picking errors and increasing the efficiency of operational processes. To ensure this, it is essential that the system incorporates machine safety and material measurement functions.

We have developed a specific solution for the next-generation drawer vertical warehouse, Modula Lift, by Modula Spa, one of the world's leading manufacturers of automated warehouses. Designed to save up to 90% of floor space by maximizing height usage compared to surface area, these vertical automated warehouses are suitable for any type of product and industry, minimizing operator intervention, preventing material damage, and improving inventory management.



The applicable regulations highlight specific requirements, both structural, regarding safety light curtains, such as:

- reduced section dimensions to embed the barriers into the machine structure;
- vertical and horizontal protection with the installation of “L” shaped light curtains in machines with an external bay;

As well as functional requirements concerning measurement barriers, such as:

- ensuring consistent reading at any position of the drawer: left side, right side, and center;
- the ability to measure small objects (even less than 4 mm) as the trays pass at high speed in front of the measurement light curtain;
- immunity to optical reflections;
- serial output.

Safety

To meet safety requirements, we chose the EOS2 safety light curtain with a 30 mm resolution, which, thanks to its dimensions, can be perfectly embedded into the machine's structure, specifically into the lateral protection.

The “L” shaped position of the barriers, following the Master and Slave logic, ensures maximum automated protection both horizontally and vertically, stopping the entire storage system when an external body is detected.

The Master and Slave logic eliminates the possibility of ray intersections between emitters and receivers, ensuring high safety standards for both operators and goods.



Reer Solution

EOS2 Safety light curtains

EOS2 is a compact safety light curtain range with competitive performance and innovative features. Includes models with integrated safety functions such as self-monitoring static outputs, control of external contactors (EDM), and selectable automatic or manual restart.

2 safety PNP static outputs. Easy connection and installation thanks to the M12 connectors and the use of unshielded cables up to 100 meters.





EOS2

- Automatic Start/Restart
- 30 mm resolution
- Connections and configurations through M12 5-pole connectors. Unshielded cables up to 100 meters long can be used to connect the light curtain.
- Protected heights: 160 mm ... 2260 mm.

Measurement

The functional requirement for measuring the maximum height of objects placed in the tray has found its natural solution in the MICRON measurement light curtain: this high-performance measurement system was chosen by Modula Spa for its ability to ensure consistent detection of the maximum object height across the entire surface of the trays (whether on the left, center, or right). Whether dealing with small objects, even less than 4 mm, or high-speed drawer movement reaching up to 575 mm/sec, the dedicated MICRON optics from Reer Spa allows for precise detection.

Additionally, thanks to its optical reflection immunity, the MICRON measurement light curtain eliminates any risk of reading errors caused by interference from reflective surfaces, ensuring high measurement reliability. The customizable serial output allows the MICRON measurement barrier to be programmed to collect and store essential information, such as the last occupied beam.



Reer Solution

Micron measurement and automation light curtains

Light curtains for industrial and civil applications where it is necessary to detect, measure, and recognise objects.

Micron B

Models MI B equipped with an RS 485 serial interface with programmable functions and two programmable digital outputs. Ideal for dimensional measurement, detection of object profile and position.

- Controlled heights: 150 ... 3000 mm.
- Programming interface: USB interface on M5 4-pole connector.
- Possibility of connection of up to 3 Micron B light curtains as nodes of an RS 485 serial line for simultaneous detection of multiple dimensions and complex measurements.
- Max. Range 10 m
- All micron range: 5 mm , 25 mm, 50 mm and 75 mm beam spacing



Reer Spa is the ideal partner for those who want to increase safety and efficiency in automated warehouses. Our solutions, chosen by Modula for its VLMs, are synonymous with quality, innovation and reliability. In addition to providing high-tech products, we offer personalized support to tailor our solutions to your specific needs.

Choosing Reer Spa means investing in safety and precision, ensuring the success of your logistics processes.

[Contact us](#) today to discover how our solutions can make a difference in your automated warehouses!

Reer, your future's safe!

