



Automated measurement of concrete blocks

The demands made on manufacturing processes have grown rapidly, even in the latest production techniques for concrete blocks. Alongside quality, the reduction of both production times and manufacturing costs are equally important.

The height measurement system for concrete blocks from R & W Industriautomation records the height of concrete blocks during the production process. All components are integrated within the system itself; no additional hardware is needed. All that is required are a network interface and a power supply. The sensor can be operated within the entire network or can communicate with other systems. The user interface can be taught intuitively - no special skills are required to use it.

R & W utilises Micro-Epsilon's precision sensors in its systems. The measurement system is placed as close as possible behind the block making machine, above the transport conveyor for the base boards. The concrete blocks running below the device are scanned by a laser - without any contact being made - and measured to an accuracy of $\pm 0.5\text{mm}$. At the same time, the blocks' base boards represent the reference distance.

The sensor is manufactured in a double-width enclosure. R & W integrates a powerful microcontroller with an Ethernet interface in the sensor, as well as digital I/O capabilities.

This all enables complex evaluations of sensor data, communication with master control devices, as well as graphical data visualisation via web servers. This flexible, modular system enables cost-effective customer-specific applications.

Requirements for the measurement system

- Measuring range up to 500mm
- Resolution of $30\mu\text{m}$
- Robust sensor design
- Very good suppression of ambient light

System design

- optoNCDT 1700-500

