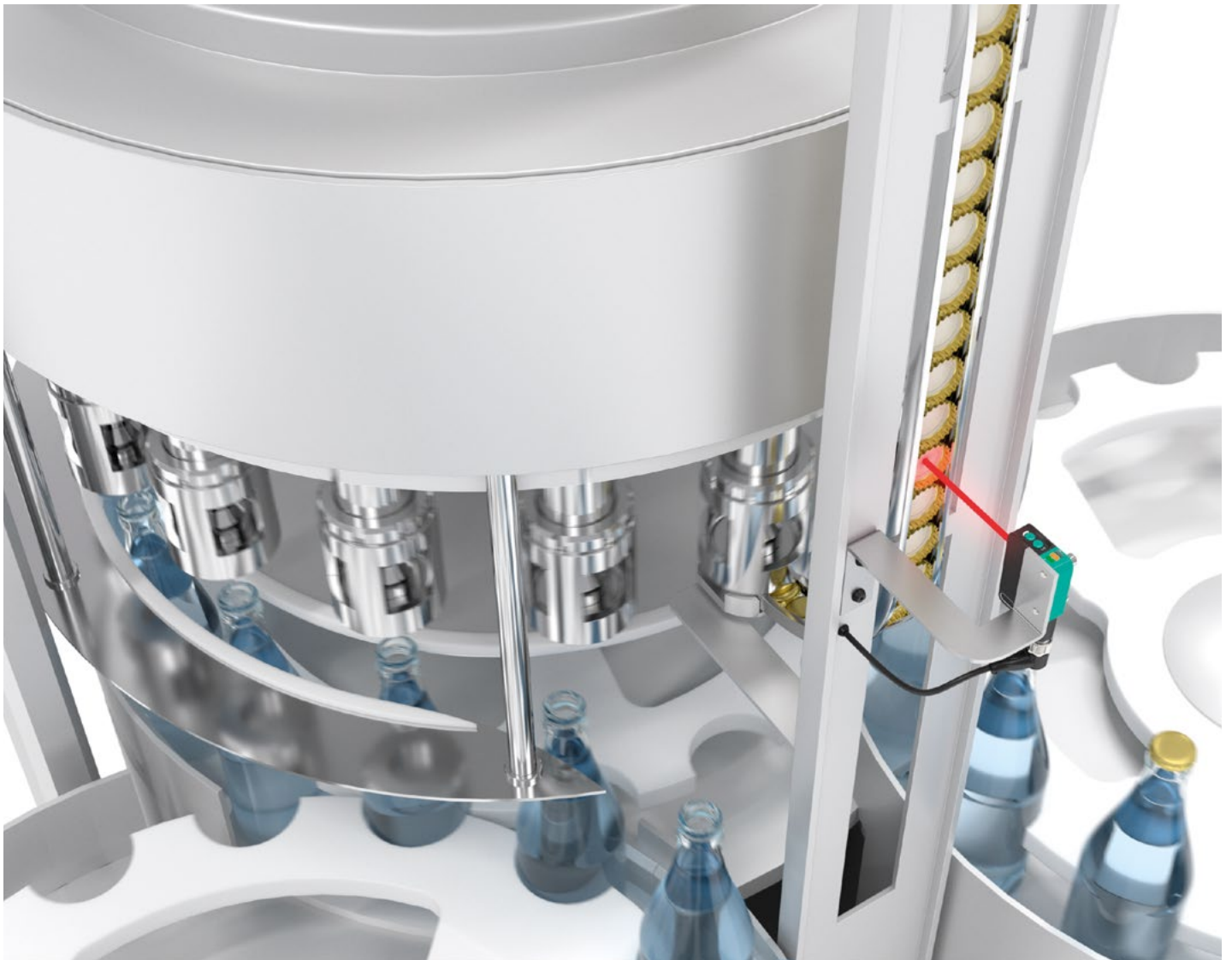


Cap Feeding in High-Output Bottling Plants

R201 Diffuse Mode Sensors with Multiple Switch Points Provide Process Reliability





The Application

Speed, accuracy, and reliability are essential requirements for sensors in the packaging industry. In high-output bottling plants, for example, it is not uncommon for tens of thousands of bottles to be filled every hour. Cycle rates for the automatic infeed of caps are correspondingly high, and the bottles must be sealed immediately after being filled. The caps are supplied via a sorter that separates out the caps from a material hopper, then aligns the caps and feeds them into the top of the capper.

The Goal

Cap infeed problems can lead to process faults, which in turn affect the availability and cost-effectiveness of high-output bottling plants. As a result, the caps must be monitored throughout the automated cap supply process to check that they are present, facing the right way, and undamaged. Even at the maximum infeed rate, the highest level of accuracy is required to reliably detect and report errors in the material infeed area before the caps are fed into the capper.

The Solution

R201 series diffuse mode sensors ensure optimal process reliability for cap supply. The sensors—featuring Multi Pixel Technology (MPT), which is ultra-precise even at close range—detect even the smallest infeed errors, such as misaligned or damaged bottle caps. As a result, incorrect supply of caps can be reliably prevented, ensuring interference-free high-speed capping.

The Benefits

Triangulation measurement with Multi Pixel Technology (MPT) dramatically increases the reliability of processes. Extremely reliable detection results are achieved even in close-range applications. R201 diffuse mode sensors also offer multiple switching points, allowing different supply scenarios to be monitored at the same time with one sensor.

Less complexity, more flexibility, and better usability: Based on a common, future-oriented product architecture, both the medium-sized R200 and R201 series and the smaller R100, R101, and R103 series feature identical sensing modes and one user interface.

At a Glance

- MPT distance measurement for interference-free distance measurement even at close range
- Measuring sensor with multiple switch points
- IO-Link with Smart Sensor Profile for simple configuration, diagnostics, and maintenance
- All photoelectric sensing modes in five standard housings for maximum flexibility and a variety of integration possibilities
- Smooth processes