

Continuous Transportation Processes in Filling Plants

The PMI360D-F130 Positioning System Provides Exact Angle Measurement

At a Glance

- The PMI360D-F130 positioning system ensures reliable transportation processes in the beverage industry
- Noncontact, wear-free angle measuring system with a measuring range from 0° to 360°
- Efficient angle position feedback—measuring and switching in a single device
- Rugged, fully encapsulated sensors up to IP67 degree of protection for the toughest operational conditions



The Application

Filling plants in the beverage industry work with a high throughput and are therefore highly automated. The filled bottles pass through bottle lanes to the packaging station, where they are packed in boxes. The beverage boxes are moved from belt A to belt B for further transport by a top loader. Moving the boxes requires determining the position from 0° to 360°, where band A position means 0° (4 mA), and band B means the target position 360° (20 mA).

The Goal

The goal is to guarantee maintenance-free operation within the filling plant. The sensors used must therefore always ensure reliable position measurement—even chain drive inaccuracies must not interfere with the transportation processes of the beverage crates.

The Solution

The PMI360D-F130-IE8-V15 analog measuring system provides the optimal conditions for reliably determining the position from 0° to 360°. To achieve this, the system is mounted directly on the shaft of the chain drive. By programming the required distance to be between 4 mA and 20 mA, the positions up to 360° are recorded without any interference. The starting position (4 mA or 0°) can be set precisely for the application in question—no complex installation is required.

The Benefits

The PMI360D-F130-IE8-V15 analog measuring system is very reliable and guarantees trouble-free production processes. The device can be operated with its own steel activator or special standard activator. The analog output displays the entire angular range. Furthermore, it is possible to teach in two switching outputs. In addition to process control and monitoring, this enables other functions to be implemented immediately.

Technical Features

- Measuring range: 0° ... 360°
- Scalable analog output
- Output type: 2 PNP switching outputs, normally open, reverse polarity protected, short-circuit proof
- Degree of protection: IP67
- Adjustable switch points
- Not sensitive to vibrations or shocks from the shaft

