

Application of Rotary Encoder in Material Handling

Material handling is the movement, protection, storage and control of materials and products throughout manufacturing, warehousing, distribution, consumption and disposal. As a process, material handling incorporates a wide range of manual, semi-automated and automated equipment and systems that support logistics and make the supply chain work.

Actions such as conveying, lifting, pick-and-place, and other automated functions represent one or more axes of rotary motion found in material handling equipment.

Operation : Material handling functions are driven by servo or vector duty motors. These usually have integral encoders for closed-loop motion control feedback. Alternatively, the encoders can be applied to a non-motor axis. **Both incremental and absolute encoders** are widely used in material-handling equipment.

For accurate control, often a **Rotary encoder** is a preferred sensor for motion feedback.

The Material Handling industry typically uses encoders for the following functions:

Motor Feedback – Conveyors, automated guided vehicles, forklifts

Conveying – Drive motors, head roll shafts, belt speed monitoring

Registration Mark Timing – Automated palletizers, shrink wrappers, case packers, pick-and-place robotics

Backstop Gauging – Gantry systems, automated palletizers

X-Y Positioning – Pick-and-place robotics, palletizers, case packers

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Incremental & absolute Rotary Encoder

