

# *Encoders for* **MATERIAL HANDLING**

*Conveying & Warehouse Automation*



## **Conveyor Systems**

*TR1, TR3, 25T, 15T*



## **AGVs & AMRs**

*25T, 260, A36, A58, Draw Wire, Safety Encoders*



## **Automated Storage & Retrieval Systems**

*15T, 260, A36SB/HB*



## **Sortation Equipment**

*TR1, TR3, 702, 25T, A58SE/HE*



## **Packaging & Palletizing Equipment**

*TR1, 15T, A36SB/HB, A58SE/HE*

***ENCODERS BUILT FOR  
DEMANDING ENVIRONMENTS***

# Encoders for Material Handling Systems

Encoders provide the motion intelligence that drives precision in material handling.

## Where Encoders Are Used

### Conveyor Systems

- *Belt and Roller Conveyors: TR1, TR3, and 25T*
- *High-Speed Sortation Conveyors: 15T*
- *Indexing Conveyors*

### Sortation Systems

- *Tilt Tray Sorters*
- *Crossbelt Sorters*

### Automated Storage & Retrieval Systems (AS/AR)

- *Crane Positioning*
- *Rack Positioning*
- *Bin Shuttle Systems*

#### ENCODERS IN ACTION

See our real-world automation case study



## MOTION FEEDBACK FOR MODERN SUPPLY CHAINS

### RACK POSITIONING

15S, 15H/T, TR1

### BIN SHUTTLE SYSTEMS

260, A36S/H

### CRANE POSITIONING

260, A36S/H

### CONVEYOR SYSTEMS

TR3, 25T, 702

# Encoders for Material Handling Equipment

Modern warehouses increasingly rely on autonomous equipment to move materials efficiently. Encoders provide the motion feedback required for accurate navigation, positioning, and load handling.

## Where Encoders Are Used

### Autonomous Mobile Robots (AMRs)

- *Drive Motor Feedback: 25T and 260*
- *Steering Position Feedback: A36 and A58*
- *Fork Height: Draw Wire Encoder*

### Automated Guided Vehicles (AGVs)

- *Drive Wheel Feedback: Absolute Encoder*
- *Steering Position Feedback: CANopen Safety Encoders that meet SIL2 Safety Requirements*
- *Fork Lift and Tilt Extension: Draw Wire Encoder*
- *Redundant Encoder Outputs for Reliability*

**SIL2** **SIL3**

**PLd**

**PLe**

**CAT3**

Safety Certifications



# Why Engineers Choose BEPC



Fast Lead Times



Custom Engineering



Responsive Engineering Support

## ENCODERS BUILT FOR DEMANDING ENVIRONMENTS

Like other machinery, encoders used in harsh industrial environments can be exposed to contaminants such as high volumes of dust, an abundance of moisture, caustic chemicals, and physical damage.

### 4 Tactics for Surviving Harsh Environments

1. **Corrosion-Resistant Housings:** Use aluminum with powder-coated finish for general use, or stainless steel for corrosive or salt-rich environments.
2. **Encoder Isolation via Flexible Shafts:** Remote-mount encoders using flexible shafts to keep sensitive electronics clear of washdowns, sprays, and chemical exposure.
3. **Design Against Torsional Wind-Up & Liquid Migration:** Ensure proper cable layout, bend radius, and elevation to prevent moisture ingress and improve encoder lifespan.
4. **Remote Linear Feedback with Draw-Wire Assemblies:** Deploy draw-wire mechanisms paired with encoders to capture accurate linear motion from a protected distance.

### Supported Communication Interfaces:

Industrial Ethernet Communication Protocols

EtherCAT®

EtherNet/IP®

PROFINET®

Serial and Bus Communication Protocols

CANopen®

SSI  
Synchronous Serial Interface

BiSS  
INTERFACE

IO-Link

SAE J1939

Functional Communication Interfaces

for Safety Applications in Sensitive and Hazardous Areas

CANopen®  
safety easy to use



Safety over  
EtherCAT®

### Need Help Finding the Right Encoder?

BEPC helps match the right encoder technology to your material handling application.



EPC's North American manufacturing facility and world headquarters in Sagle, Idaho, USA. Est. 1969

