

# WACHENDORFF

## The Encoder Experts

MusterdatenExtra1 Mustermann,

in this newsletter, we inform you about our encoders and length measurement systems in applications of heavy industry.

However, we prefer to be there for you on site, in a web conference or on the phone. Talk to us! Because the best ideas and solutions come from personal dialog!

You can find the direct line to us here:

[Contact partners](#)

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### Positioning the bucket wheel excavator with encoders



In iron ore mining, the bucket wheel excavator is essential. This equipment makes it easy to remove loose rock. A continuously rotating wheel uses large buckets to scoop the loose rock onto a conveyor belt, which transports the rock away. Rotary encoders are used to precisely position the bucket

wheel excavator over the iron ore deposit and to control different directions and make lateral movements. These encoders are used to detect the tilt, rotation and lateral positioning of the excavator arm. This ensures efficient and accurate operation of the bucket wheel excavator

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**EnDra®**  
Technologie



**PROFI**  
**NET**

**PIV** CERTIFIED  
PROFIBUS - PROFINET

#### **Features Encoder WDGA 58A PROFINET:**

- EnDra®: maintenance-free and environmentally friendly
- PROFINET-IO, Single-turn/Multi-turn
- Compact design with bus cover
- Single-turn/Multi-turn (max. 16 bit/43 bit)
- Forward-looking technology
- 2 colour-duo LED's as indicator for operating condition and bus status and 2 L/A LED's
- High shaft load up to 220 N radial, 120
- Unit profile: switchable, Class 3, 4

Encoder WDGA58A PROFINET

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**Position and speed detection of bulk goods wagons  
with the length measuring system LMSMA35**



In the remote-controlled mine release railcar, the LMSMA35 length measuring system is used for position detection. Encoders are used in the various raw material feed cars to detect the speed of the car. With the robust length measuring systems, it is possible to ensure reliable speed and length measurement even in narrow areas and dirty environments. In order to be applicable for different areas, the measuring wheel has a special surface that is suitable for the material to be measured in each case. With an adjustable preload and a patented detent, the measuring wheel can be mounted on the rotating shaft without slippage. The encoder, encapsulated with IP67 protection, provides sufficient pulse for precise control of the wagons.

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#### **Features Length measuring system LMSMA35:**

- Excellent measuring results, thanks to a resolution of 0.02 mm/pulse
- Suitable for many surfaces
- Absorbent mounting
- Contact pressure – easily adaptable by intelligent central adjustment
- Easy to dismantle through pre-assembled angle bracket



Length measuring system LMSMA35

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## Precise and controlled tipping movement for wagon tippler



High temperatures are essential in steel melting. The heating furnaces are often coal-fired, the smooth operation of which is essential. The coal required for this is transported to the steel mill in a train. To make unloading of the bulk material as efficient as possible, a special tipping system has been developed. This makes it possible to discharge train loads of bulk material easily and efficiently by tipping.

For a precise and controlled tilting movement of the coal container, encoders are used to feed back speed information and control the positioning. Incremental encoders are used for speed control, while absolute encoders are used for precise positioning.

These technologies are particularly used in ports with high transport volumes and in industrial sectors such as metallurgy, coal and combined heat and power plants.

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### Features Encoder WDGA 58B SSI:

- EnDra multiturn technology: maintenance-free and environmentally friendly
- Compact industrial model
- Interface: SSI (Synchronous-serial Interface)
- Code: Binary- or Gray
- Preset input
- Direction of counting changeable
- Status indicator LED
- EMC: EN 61000-6-2, EN 61000-6-3

**EnDra**<sup>®</sup>  
Technologie



**SSI**  
Synchronous Serial Interface

## Detection of the rotational speed in rolling mills

In rolling mills, steel is processed into flat steel by passing it between two rotating rolls. A distinction is made between hot rolling and cold rolling. In both processes, the WDG 100I incremental hollow shaft encoder can be fitted at the end of the shaft to control the speed of the rolling mill motor. This allows the input and output speeds of successive rolls to be precisely matched to ensure smooth operation.



## Features Encoder WDG 100I:

- Robust and extremely flat hollow shaft encoder for mounting on power motors
- Continuous hollow shaft with max. 42 mm bore
- Balanced stainless steel clamping ring for quiet running
- Insulation sleeve to protect the ball bearings against currents
- Full connection protection at 10 VDC to 30 VDC
- Easy mounting
- High protection class IP54
- Up to 20,480 I/U
- Optional: -40 °C to +80 °C, Protection class IP55 all around



## Industry solutions with Wachendorff encoders and systems:

- Mobile working machines
- Wind energy
- Cranes
- Aerial rescue vehicles
- Automated guided vehicle
- Industrial automation
- Heavy Industry
- Markers and labeling machines

Industry solutions

Further reference projects can be found here.



Further reference projects

If you have any questions - our sales team will be happy to help you.  
Give us a call or send us an e-mail.

Your contact persons

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Best regards  
Your



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