

# WACHENDORFF

The Encoder Experts



## Encoder and Systems

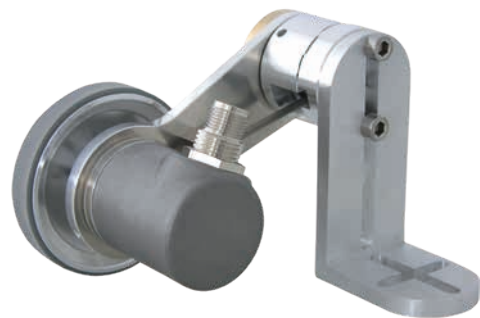
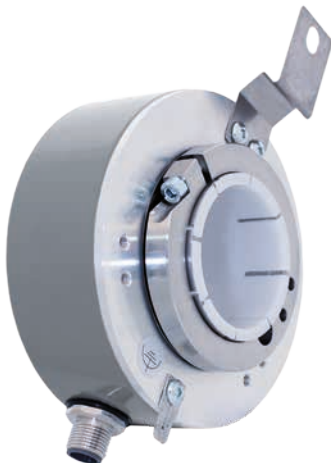
DEVELOPED AND  
MADE IN GERMANY  
5 YEARS WARRANTY

Incremental and absolute encoders  
Length measurement systems and draw-wire systems

Digital shaft copying

Made in Germany

NFC



Industrie**ROBUST**



**We are one of the world's most innovative medium-sized manufacturers of encoders**

Take advantage of our more than 45 years of experience and the robust technologies of our intelligent sensors to find efficient solutions for your applications.

As your partner, we want to ensure your long-term success.

**Innovative**

- Joint successful construction
- Key technologies

**Quality**

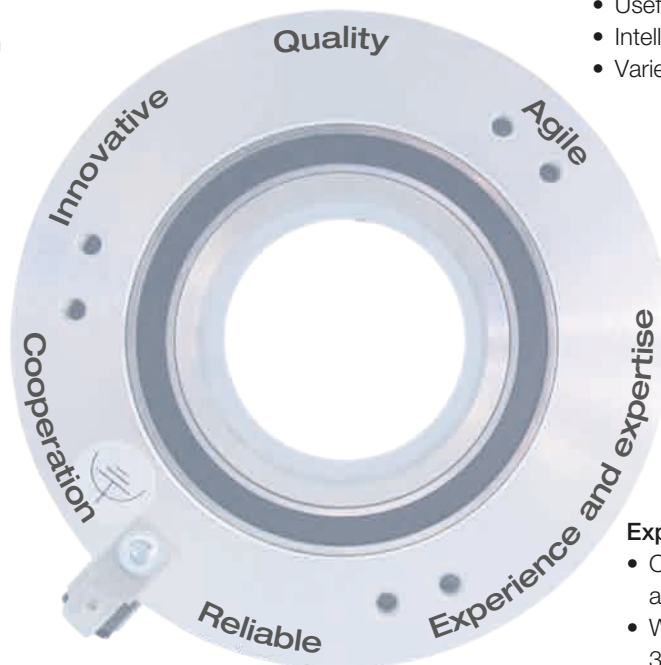
- 5-year warranty
- DIN/ISO 9001:2015
- UL certification

**Agile**

- Modular system
- Useful accessories
- Intelligent systems
- Varieties for your application

**Cooperation**

- Intensive partnership
- 24-hour delivery
- Worldwide access



**Experience and expertise**

- Over 45 years of development and manufacturing
- Worldwide more than 3,000 customer solutions

**Reliable**

- Selective component choice
- Long service life
- Seamless traceability



# From person to person

- o Competent and experienced advice
- o Individual solutions for your application
- o Extending your lead together

## We would like to inspire you

As a medium-sized family business, we live and work for optimum customer satisfaction and want to grow sustainably, together with you. Our high-performance sensors ensure that you obtain a technological advantage worldwide. The internal sales force and technical support for Germany and Europe are located in Geisenheim; the field sales force, on the other hand, is organized on a decentralized basis: The direct sales in Germany is divided into 5 areas. Wachendorff sales engineers are employed here. In Europe, Africa and Asia, our channel managers are the important link to our technical distributors. In the USA/Chicago and China/Suzhou, Wachendorff sister companies act as sales offices, ensuring short distances to partners, customers and interested parties. Contact us, we will find a solution together.



## Developed in Germany

- o Large standard range in modular design
- o Variants for your application, OEM prototyping
- o Compact designs, innovative technologies

### **Design innovation together**

We develop customised solutions alongside our extensive standard range. If you have mechanical or electrical requirements specific to your systems or machines, then you've come to the right place. Many clever solutions have already been found in partnership with our customers.

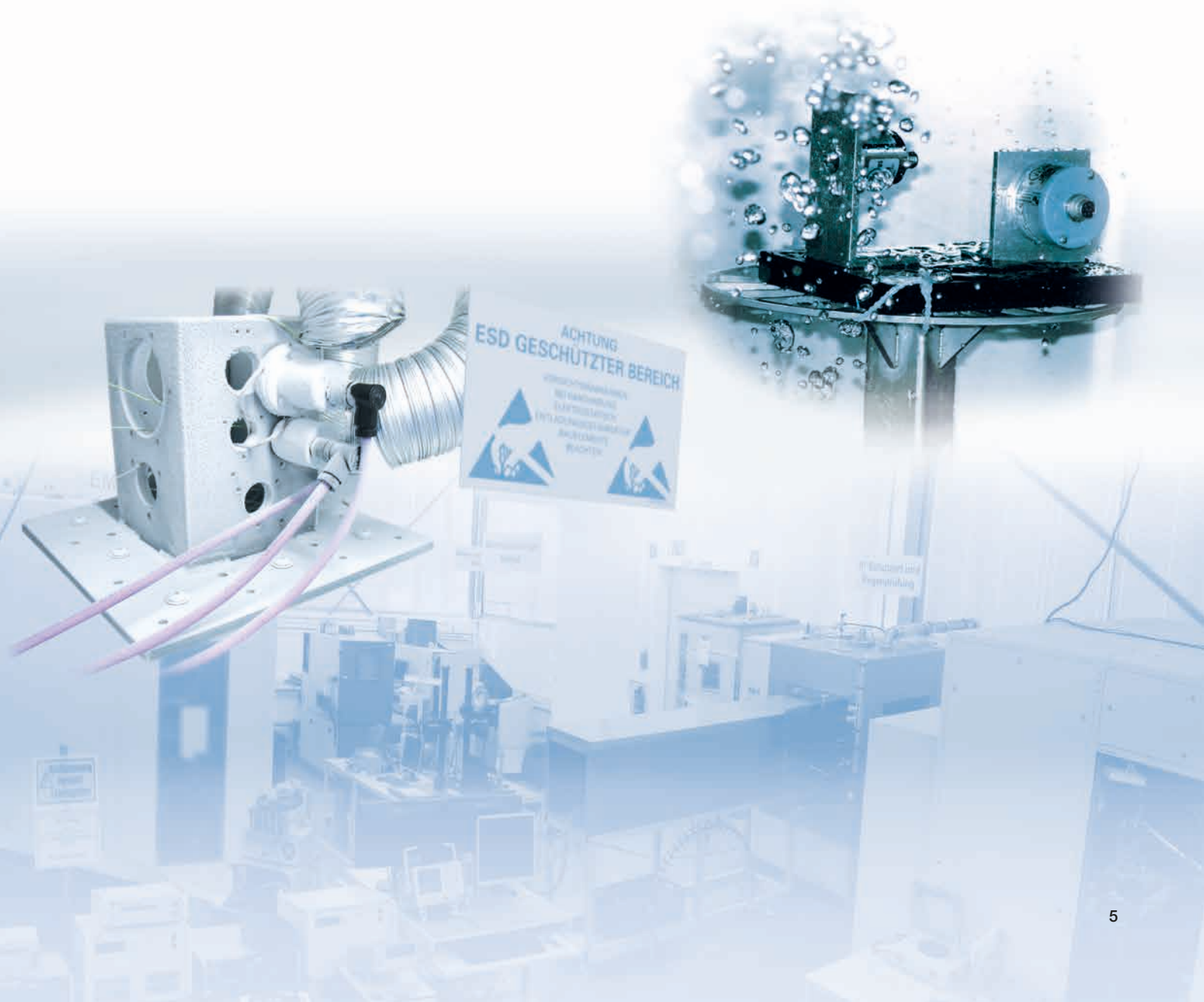


## Qualified in Germany

- o Intensive qualification and verification with environmental simulations
- o Detailed tests during development
- o Long-term reliability in harsh environments

### **In-house qualification for harsh applications with 5-year warranty**

When developing new products, we take into account more than 400 global standards and guidelines and conduct more than 100 design tests, including HALT. We have also added 25 factory standards for the qualification and verification of our products. You get a robust and precise sensor solution for your application.



# Manufactured in Germany

- o Everything is possible: from the individual item to large-scale production
- o Complete traceability
- o Quality assurance and CIP
- o GANT production planning ensures high delivery reliability

**Our LeanQ philosophy:  
Digital manufacturing for your advantage**

In the computer-guided assembly of our encoders and systems, we put great emphasis on efficiency, traceability and zero-defect tolerance. With a further developed one piece flow method, LeanQ is designed for both individual items and large production runs.



# Industry solutions

- o Proven in many industries worldwide
- o Modular solutions for your application
- o Robustness opens up many possibilities
- o Special properties for specific industries

## Benefit from our extensive industry knowledge

Because of our extensive experience in the most diverse applications we have developed specific industry solutions over time. Here are a few examples: Food-grade devices for food production, salt spray-resistant housings for onshore/off-shore, small dimensions and high vibration resistance for mobile machinery and AGVs, shaft copy systems with incremental or absolute CANopen Lift interface, length measuring systems for inline markers and quality assurance systems, encoders for speed measurement and pitch control on wind turbines and many details that are helpful for other industries. We are sure to have a solution for your application. Give us a call.



## Switching made easy

- o Compatible with all common encoder types
- o Modular system for 1:1 replacement
- o Our experience for your better alternative

### **Are you looking for an alternative?**

Our experienced team will be happy to advise you on which of our products is compatible with the competitor. We will quickly find a substitute with our clever modular system. We often also give our customers a recommendation for an improvement, such as for assembly or handling. Ask us, we look forward to hearing from you.



# Online configurator

- All information in one place
- Your questions answered with just a few clicks
- In just a few minutes you find your encoder with our online configuration tool

## It couldn't be easier

On our homepage you will quickly and clearly find all the information you need to make a decision about our products and solutions. Are you looking for an incremental or absolute encoder, but don't know which one really fits your application? Then simply go to:

[www.wachendorff-automation.com/configurator](http://www.wachendorff-automation.com/configurator)

You can put together your configuration in any order and receive a data sheet as a PDF with all the specifications and drawings of exactly the device you have configured, just in time.

Of course, you will also find your contact person here, who is looking forward to hearing from you. Let us advise you and configure together with our application consultants.

WACHENDORFF  
Automation GmbH & Co. KG

Wachendorff industries Products Configurator Service

Encoder configurator for incremental and absolute encoders

Wachendorff Automation Encoders and Systems

Incremental encoders configurable via IFC Encoder configurator Encoders incremental Encoders absolute Motor feedback Digital shaft copying Mounting systems Accessories

Service: Custom, Dimensioning conditions and services, Change requests, Performance, Spare parts and repair, Questions

Products: Encoder configurator, Encoder incremental, Encoder absolute, Motor feedback, Digital shaft copying, Mounting systems, Accessories

Company: Mechanical Dept., Mechanical Automation, Innovation, Top quality, Environment, Customer, Basic commitment, Representative / Organizational

Contact: Contact partners in Germany, Distributors worldwide, Catalogue Distribution, Competence & Choice

Label information: Name, Price, Item list

Legal notice, Privacy policy, General Terms, Data of Contact, Storage, Imprint

WDGI 58H Thru-Bore Encoder incremental quadrature, optical, WDCI 58H: Ø 58 mm

Bore size: Ø 8, 10, 12, 1/2" (12.7 mm), 14 mm, H7, Protection rating: IP65, Resolution: up to 25000 ppr, Signal shape: square-wave or sine/cosine

Data sheet, General technical data incremental encoders (PDF 0.9 MB)

Product data Drawings and STEP-Data Output circuits Options Accessories Configurator

Generally encoder specifications

Basic principle: Incremental, Housing diameter: Ø 58 mm, Flange type: hollow shaft through-bored

Shaft/hollow shaft: hollow bore, Shaft diameter: Ø 12 mm

Incremental encoder specifications

PPR: 1024, Channels: ABN, Power supply: 4.75 - 5.5 VDC, Output circuit: TTL, RS422 comp., inverted, Light reserve warning: yes, Order code/output: 105 / push-pull / max. 200 kHz

Electrical connection

Cable outlet

Connector: 12-pin, Type of connector: M12x1, axial/radial, Order code: SC12

Options: If selected option "cable length" (in decimeter)

Encoder type: WDGI 58H

Your configured order code

Encoder type	Shaft	PPR	Channels	Output	Connection	Option
WDGI 58H	12	1024	ABN	105	SC12	

Reset Generate configured datasheet

You want to get an offer or want a recall. Request

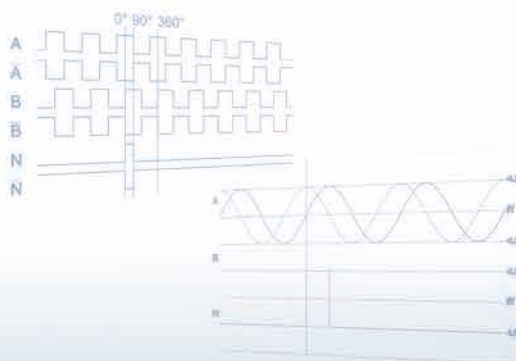


# Incremental encoders WDGI

- Up to 25,000 ppr, TTL, HTL, sin/cos
- Optical or magnetic
- High shaft load up to 500 N
- Preventive maintenance with early warning output
- Copes with tough industry and automotive conditions

## The right technology for every application

With the large selection of pulse numbers, output circuits, connector and cable varieties, protection classes and temperature ranges, you will find precisely the right incremental encoder from our extensive range.

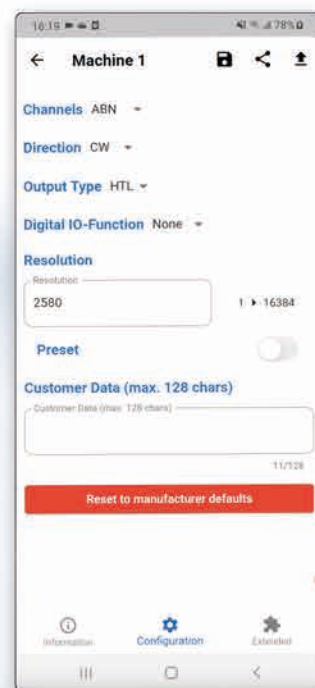


# Incremental encoders WDGN

- o Any number of pulses up to 16,384 ppr
- o Configurable via smartphone
- o HTL/TTL and other parameters
- o Protection class up to IP67/IP69K
- o High output frequency up to 1 MHz
- o Reverse polarity and short circuit protection at 4.75 VDC to 32 VDC

## Always the right incremental encoder at hand

Using your smartphone, you can configure the number of pulses from 1 ppr to 16,384 ppr, ABN and inverted, HTL or TTL via our app and then load them onto the WDGN encoder without contact or voltage. Load an existing configuration or share a configuration to use on another WDGN encoder. With the Advanced version, you can also configure a fourth channel and set the number of pulses, the pulse width and the pulse position separately for all 4 outputs. The zero pulse can be set via the smartphone or a signal line.



# Absolute encoders WDGA

- EnDra® multi-turn technology: wear- and maintenance-free
- QuattroMag® single-turn technology: up to 16 bit, dynamics of 50 µs
- High shaft load up to 500 N
- Protection class up to IP67/IP69K

## Single- or multi-turn: latest technologies

Whether you realise your application with a single-turn or multi-turn, you can expect practical innovations in either case.

### QuattroMag®

The single-turn field with QuattroMag® technology provides a high resolution of up to 16 bit, precision of  $\pm 0.0878^\circ$  (12 bit) and dynamics of 50 µs.

### EnDra® Technologie

The unique and distinguished EnDra® multi-turn technology reduces construction space and is extremely environmentally friendly; it operates without batteries or gear boxes.

Robust and long-lasting magnetic technology from Wachendorff can now be used in many areas that once required highly precise and sensitive optical measuring equipment.

**CANopen** LIFT

**SAE J1939**

**RS485**

**CANopen**

**SSI**  
Synchronous Serial Interface

**PROFIBUS**



# WDGA Industrial Ethernet

- o Industrial Ethernet: PROFINET, EtherCAT, EtherNet/IP
- o Integrated web server
- o Universal IE: 3 protocols in one unit
- o Robust with IP67 and up to 500 N bearing load

## Comprehensive series for Industrial Ethernet applications

The absolute encoder series Industrial Ethernet WDGA IE consists of solid shaft encoders, hollow shaft encoders and the WDGA 58F, the most compact IE encoder in the world. The mechanics are identical for each protocol. The encoder can be configured or updated easily by a web browser. Depending on the protocol, the encoders are simply integrated and configured in the TIA Portal, in TwinCat, in other project planning tools or via the integrated web browser.

Reduce your stock, simplify service operations and remain absolutely flexible - the WDGA Universal-IE is the right choice for this. By web server, you can choose between the three most important Industrial Ethernet interfaces.



# Redundant encoders WDGR

- Two independent encoders
- Incremental and/or absolute in one housing
- Security for your machine
- Diversity through 2 measuring principles
- High performance level achievable

## High performance levels and lower costs

For the implementation of a safety function in accordance with e.g. Performance Level d or SIL 3, not all components necessarily have to meet the safety requirements directly. Often the required safety level can be achieved with redundant information and the appropriate control system. In concrete terms, our redundant standard encoders provide diverse (magnetic and optical) signals that are generated completely independently, but can still be correlated with each other. Even the supply voltage is available separately for each sensor unit. Almost all safety-related control or monitoring systems have conventional inputs. This makes it possible to use inexpensive standard components with high-quality redundant encoders from a process-controlled assembly and to achieve the required safety level cost-effectively.

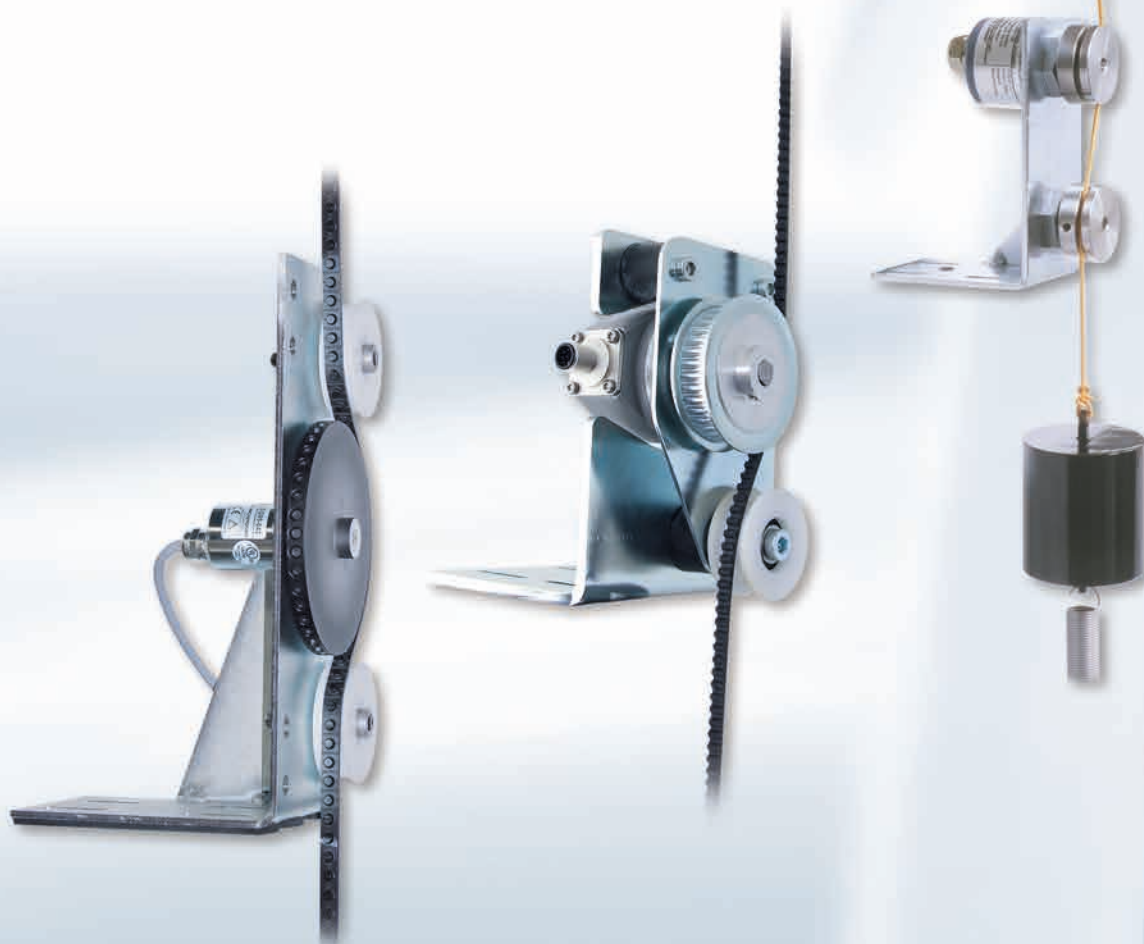


# Digital shaft copying

- o Up to 4 m/s and up to 120 m high
- o Precise measuring of position and speed
- o Very easy assembly
- o Pre-mounted assembly kits for every installation situation
- o Incremental, CANopen, CANopen Lift, SSI

## Silent Move, the world's quietest belt system

Whether hydraulic or motor-driven elevators, we always supply you with the right system. The maintenance-free copying systems are available as circumferential or guided, with the unique nubbed belt or a quality tooth belt, as a complete assembly kit or measuring unit. They leave nothing to be desired.



# Draw-wire systems SZG

- o Robust and compact up to 40 m
- o High-precision mechanics with high linearity
- o Long lifetime in harsh environment
- o Quick assembly
- o Incremental and absolute

## Large measuring range in a compact design

The series of draw-wire systems is equipped with incremental or absolute encoders. The extremely robust and precise mechanics, in combination with a stainless steel cable, have a very long life expectancy. Cable lengths of 1.25 m to 40 m and a wide range of usable resolutions and interfaces give us the opportunity to determine the right draw-wire system for you. Our team will be happy to advise you.



# Length measurement systems LMS

- o Space-saving and robust complete system
- o For position, speed and length
- o Suitable for almost any surface
- o Quickly mounted and adjusted
- o Patented grid for safe adjustment of the pre-tensioning force

## Measurement of speeds and travel lengths

With the LMS length measuring systems, consisting of a spring arm, a rotary encoder and the appropriate measuring wheel for the corresponding surface (e.g. wood, plastic, foil, cardboard, textiles, rubber, metal), you can precisely measure the speed and position in your application. Ideally suited for e.g. measurements on continuous linear or rotary movements. You can choose between different designs, mounting directions, signal outputs and measuring wheels. We will be happy to advise you on the optimal solution.





## Stay up to date

- New products and functions
- Information on firmware/software updates
- Information on events and trade fairs

### Monthly newsletter and social media

With our monthly newsletter we inform you about new products in our portfolio, innovative device features, firmware/software updates or also about events or online trainings as well as trade fair participations. You can also follow us on our social media channels on YouTube and LinkedIn. This way you are guaranteed not to miss any news; moreover, we often provide information here with a head start.



**Newsletter**

<https://www.wachendorff.com/newsletter/>



**LinkedIn**

<https://de.linkedin.com/company/wachendorff-automation-gmbh-&-co-kg>



**YouTube**

<https://www.youtube.com/channel/UC4SEAQZDNN55scn5WJqgG3Q>

# automation.com

www.wachendorff-



## The Wachendorff Group

- Delighted customers
- Corporate responsibility
- Attractive to good employees
- Outstanding quality
- Technological leader
- Environmental protection
- Profitable growth

We are a medium-sized owner-managed corporate group based in the beautiful Rheingau district, situated to the west of Wiesbaden.

Competent, personal, face-to-face advice and long-term collaboration with our business partners are the cornerstones of our continual growth. We are certified according to DIN ISO 9001:2015.

### Wachendorff Automation GmbH & Co. KG

The development and manufacturing of rotary encoders, engine feedback devices and complete measuring systems for use in a wide range of serial production applications in mechanical and plant engineering. An extensive standard range featuring numerous options and efficient development of customised solutions. Wachendorff Automation has sister companies in the USA and in China: Wachendorff Automation USA, Inc. in Chicago and Wachendorff Automation (Suzhou) Co., Ltd., as well as a worldwide network of competent distributors.

### Wachendorff Prozesstechnik GmbH & Co. KG

A reliable supplier since 1978 of robust, high quality industrial devices for visualising, communicating and processing data in the areas of mechanical, plant and building automation.

### VISUALYS GmbH

VISUALYS focuses on the development, integration and consulting of software around the topics of Industry 4.0, SmartData and IIoT for machine and plant manufacturers and operators. The core competence lies in data VISUALisation and data ANALYSIS.

# WACHENDORFF

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2024

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