

# WACHENDORFF

The Encoder Experts



## Magnetic Absolute Encoder WDGA

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

**CANopen**

**CANopen LIFT**

**SSI**

Synchronous Serial Interface

**SAE J1939**

**RS-485**

**PROFI BUS**

**PROFI NET**

**EtherCAT**

**Universal-IE**

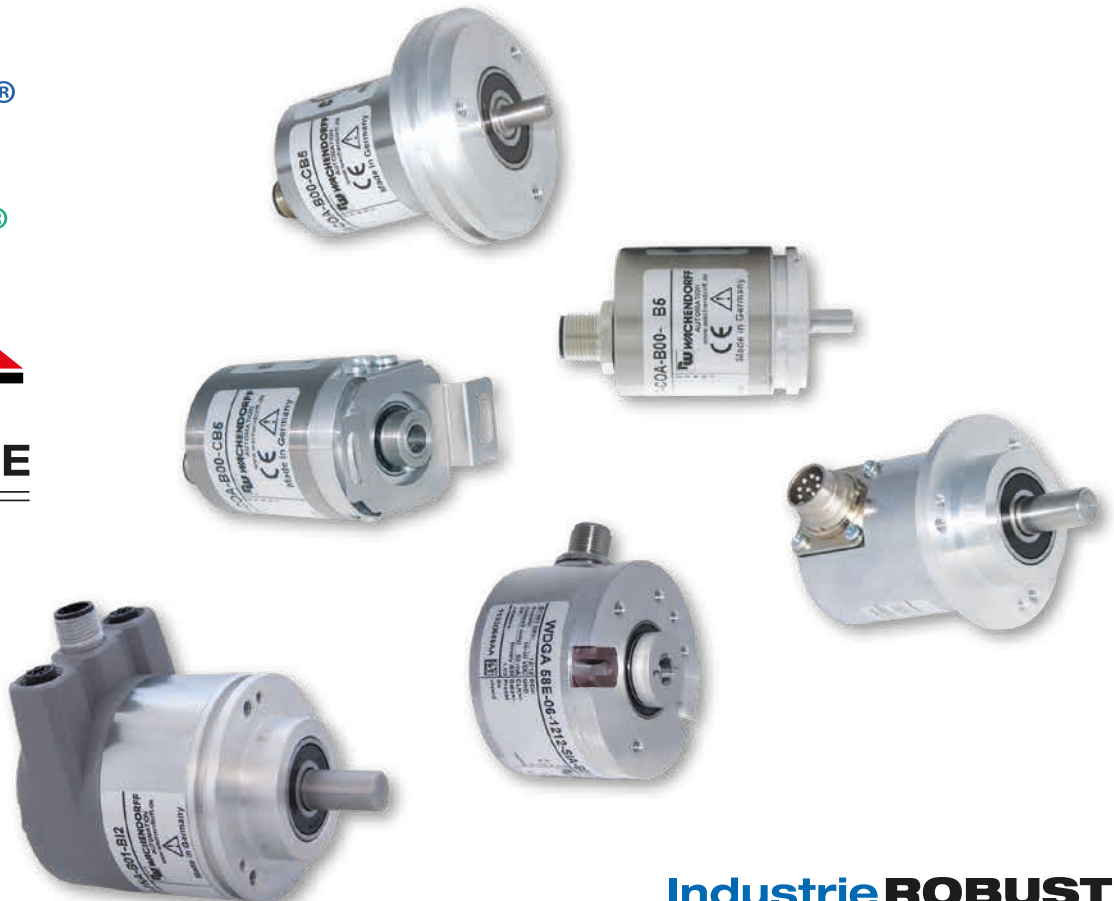
Industrial Ethernet

Absolute encoders with QuattroMag® & EnDra®  
Single-/Multiturn (16/43 bit)

Ground-breaking technology 32 Bit processor  
Very high shaft loading, IP67

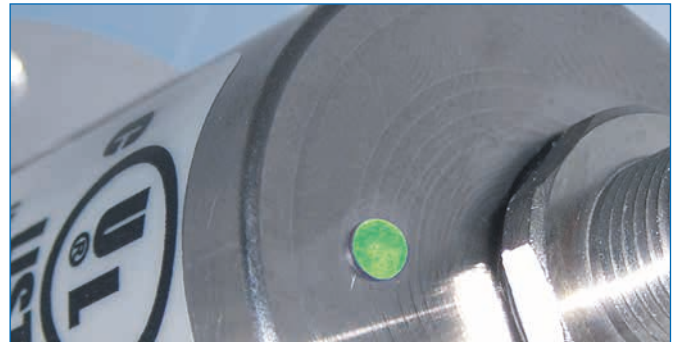
EnDra® Multiturn technology: No gears, no battery

QuattroMag® technology: high accuracy:  $\pm 0.0878^\circ$



**Industrie ROBUST**

# Absolute encoders WDGA, shaft and hollow shaft ... magnetic, accuracy, autonomous with QuattroMag® & EnDra®



The singleturn and multiturn absolute rotary encoders, series WDGA, possess new, outstanding qualities thanks to their patented QuattroMag® and EnDra® technology:

- Free of wear – no gears
- Environmentally friendly – no battery
- High energy efficiency – low power consumption
- Compact design
- High accuracy

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

With their high resolution of up to 16 bit singleturn and up to 43 bit multiturn, they are ideal for those applications, where high measuring accuracy as well as mechanical ruggedness is important. The high dynamic of 50µs allows the use in fast processes.



The interface provides the evaluation electronics with the complete position value, consisting of the combination of the singleturn position with the corresponding multiturn position based on the number of revolutions. The resolution of the singleturn position is up to 16 bit (65.536 steps per revolution). The multiturn can handle up to 43 bits, depending on requirements.

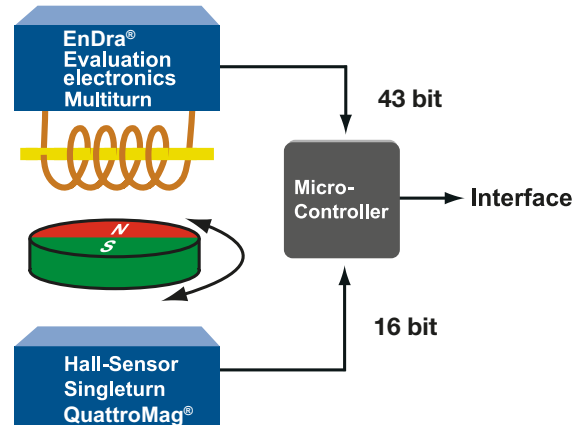
Despite its extremely high resolution, the maintenance-free encoder has need of neither gears nor back-up battery. This guarantees a long service-life for the mechanics as well as helping protect the environment.

## QuattroMag® technology = high precision:

Thanks to the future-proof 32 bit processor used by Wachendorff, we are able to further improve the accuracy of the long-established magnetic singleturn technology. Therefore, we use the latest Technologies for software and Hall sensors.

## Operating principle of the EnDra® technology for the multiturn:

The Wachendorff WDGA encoders do not require mechanical gears to detect the number of revolutions and the direction of rotation. Instead the revolutions are determined by means of an energy wire (EnDra®): a permanent magnet accumulates in the wire so much energy that for a defined position the information "Revolution" and "Direction of Rotation" is transmitted to the evaluation electronics. An external energy feed, for example by means of a battery, is not required for this. The result is that this patented system is able to work fully autonomously.



**Any Questions?** Just call us at +49 (0) 67 22 / 99 65 414, send us an E-Mail to [support-wa@wachendorff.de](mailto:support-wa@wachendorff.de) or call your local distributor: [www.wachendorff-automation.com/distri](http://www.wachendorff-automation.com/distri)

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2024

Your distributor: