

# Solutions for mobile machines

- Sensors for angle, route, engine speed, length, position
- Tested resistance against environmental influences
- CANopen, SAE J1939, RS485
- Individual solutions for your series production



## Many applications, numerous solutions ... intelligent and automotive-grade



### Speed and length measurement directly in the tool

- 24 mm diameter: very small and particularly light
- High protection class: IP 67 all around
- Broad temperature range: -40 °C up to +80 °C
- High bearing load: radial 80 N, axial 50 N

### Reliable control of swivelling and telescopic outriggers

- Safety through redundant signals
- Speed, incline and angle of rotation monitoring
- Reliable communication with CANopen
- EnDra® multiturn technology: maintenance-free and non-wearing
- High protection-class



### Precise angular measurement in the cam controller

- Direct integration into the housing
- Optimisation of assembly and logistics
- Particularly malfunction resistant





**Position measurement of the antenna for live television in the airplane**

- Precise adjusting of the antenna to the satellite signal during flight
- Particularly broad temperature range: -55 °C up to +75 °C
- Developed under the MIL specification
- Direct installation into engines
- Customer-specific testing method in the climatic test cabinet for simulation of flying operation



**Angular measurement for automatic steering**

- Installs in the tightest space
- Highly resilient to magnetic interference
- Resistant to static charge

**Position measurement of the fork over several cross-beams**

- Compact draw wire system design
- Precise position measurement through high degree of resolution
- High degree of flexibility: incremental or absolute
- Various lengths and sizes

**Optimal metering of grit**

- Environmental and traffic protection: precise metering with high resolution
- Suitable for winter conditions thanks to:
  - broad temperature range of -40 °C up to +80 °C
  - resistant to salt through special materials
  - highly impermeably to humidity and splash-water, IP67+IP69k
- Optimised for the most rapid assembly, through design and prefabrication



# The optimal solution and a modular design



## Application-specific know-how

- To various applications adjusted construction and design tests
- High protection class: up to IP67+IP69k according to ISO 20653



## The right communication

- Square, sine/cosine
- CANopen
- SAE J1939
- SSI
- RS485
- PROFIBUS



## Wear-free and intelligent

- Contact-free, optical or magnetic
- Highly integrated electronics



## Long-lasting and reliable

- Broad temperature range: -40 °C up to +85 °C
- Vibration and shock-resistant
- Highest bearing loads of up to 500 N



## Designed for rugged everyday use

- 400 standards and directives
- 100 design tests, including HALT
- 30 years of experience
- 25 factory standards
- 1 solution for your application



## An individual, but serial product

- Many plug/cable variants to M12, M23 standard etc.
- Easily customised for your application
- Mechanics, logistics and assembly
- Certified according to ISO 9001/14001

## Your success: being innovative together

- Many years of expert application consultancy
- Sustainable and systematic, ISO certified
- „Made in Germany“, 5-years warranty

Wachendorff Automation, a member of the Wachendorff Group, develops and manufactures industrial-grade and automotive-grade encoders and systems. Developing-accompanying and extensive design tests ensure

the reliable and long-lasting application (as can be proved) in many industrial branches and mobile working machines in the roughest environmental conditions. This guarantees reliable and long-lasting applications under the most exacting on-site conditions. Software-controlled manufacturing ensures the complete traceability of each individual device. More than 1,500 individual serial solutions are in use around the world.

Wachendorff Product Management and our R&D team look forward to meeting your challenges!



**Any Questions?** Just call Dieter Schömel +49 (0) 67 22/9965-10, send him an E-mail at [sco@wachendorff.de](mailto:sco@wachendorff.de) or call your local distributor: [www.wachendorff-automation.com/distri](http://www.wachendorff-automation.com/distri)



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