

Solutions for mobile equipment

Combines

Distributing signals

- Customized extension **cables** transmit data securely, even under extreme application conditions
- The ready-made and overmoulded cables are highly tight, resistant to mechanical load and chemicals and thereby ensure failsafe operation of the entire network

Monitoring inclination

- **Biaxial inclinometers** monitor the inclination of harvesters and automatically level the driver cabin, threshing system and grain tank
- The sensors fulfill the highest demands on electronics and mechanics

Monitoring rotation speeds

- Rectangular **inductive sensors** monitor the rotation speed of the threshing drum and the blower
- Thanks to the flat rectangular design, they fit almost anywhere. Mechanics and electronics are ruggedly designed, thus ensuring safe operation of all functions, including diagnostics of wire-break and short-circuit

Harvesters

Determining the trunk diameter

- **Inductive angle sensors** located at the delimiting knives measure the trunk diameter in order to bring the saw in the right position for cutting
- Thanks to the contactless operating principle, wear-out failures belong to the past and costly maintenance measures are reduced

Monitoring the inclination of the driver's cabin

- **Biaxial inclinometers** monitor and automatically level the inclination of the cabin for more ease of use
- Individual setup of parameters for reliable levelling

Monitoring the steps outside the driver's cabin

- Rectangular **inductive proximity switches** enhance the operational safety through monitoring the steps outside the driver cabin
- The sensors are easily and securely mounted – risk of mechanical damage is reduced thanks to the compact design and the large switching distance

Mobile crane

Determining the boom inclination

- **Uniaxial inclinometers** with CANopen interface or analog output determine the boom position for optimal control of the vehicle
- The sensors are optimally adjusted to the crane's individual limit states and parameters thanks to various setup options

Determining the stabilizers' positions

- **Draw-wire sensors** with CANopen interface or analog output capture the position of the stabilizers to determine the maximum load torque
- Rugged encoder and draw-wire mechanics for high operational safety

Determining the boom angle position

- **Inductive angle sensors** with analog output capture the boom position to determine the limit states
- Thanks to the compact design and the wear and magnet-free operating principle, the sensors are easily and quickly mounted and thereby made for longterm reliable operation

Monitoring the crane's inclination

- **Biaxial inclinometers** with CANopen interface or analog output monitor and automatically level the crane's inclination
- The compact design and rugged construction according to the e1 type approval, ensure safe operation at all times

Your Global Automation Partner

Solutions for Mobile Equipment



28 subsidiaries and over 60 representations worldwide!



Collect Precisely

Inductive sensors

- e1- type approval of the KBA (German Federal Transport Motor Authority)
- High protection rating (IP69K) and highly thermostable
- Load-dump protection and improved EMC properties
- Many different designs, optionally available with vehicle-specific connectivity



Radar sensors

- A frequency modulated continuous wave radar (FMCW) detects mobile and stationary objects at a distance of 40 meters
- Rugged design, highly shock and vibration proof, for use in extremely harsh environments
- Adjustable operating range



Indication lights

- Longlife LED technology, low-power consumption
- Excellent luminosity, good visible at greater distances and daylight
- Insensitive to impact, shock and vibration
- Flexibly and easily mounted with a broad range of accessories



Capacitive sensors

- High protection rating (IP69K) and improved EMC properties
- Fixed customized settings or adjustable sensitivity
- Adjustable foreground suppression
- Many different designs, optionally available with vehicle-specific connectivity



Ultrasonic sensors

- V4A metal-encased sensors for extremely harsh application conditions
- Compact sensors with teach function
- Measuring range up to 8 m



Inclinometers

- Available with analog and switching output or CANopen interface
- Rugged IP69K rated design, improved thermostability
- Fulfill the requirements of the e1 specification
- Individual filter settings for suppression of vibration and shock



Encoders and draw-wire sensors

- Highly shock and vibration proof
- IP69K rated and immune to interferences at high speed rotation
- Optionally available with SIL or e1 type approval



Linear position and angle sensors

- Magnet-free resonator principle, works contactless and wear-free, failsafe detection of signals
- High shock and vibration resistance
- Fulfill the requirements of the e1 type approval



Pressure sensors

- Rugged measuring cell, highly resistant to sudden pressure shocks
- High operational safety thanks to rugged mechanical and electronic design
- Broad medium temperature range



Connect Reliably



Cables and connectors

- High protection rating (Nema 6P, IP68), shock and vibration proof
- Thermostable, oil and chemical-resistant materials
- Many different connector types, ready-made and injection-moulded

Passive junctions and T-pieces

- Signal transfer and voltage distribution
- Different designs and wirings available
- Rugged construction (fully encapsulated), IP67 rated



Interface modules and power supply units

- Modules to isolate, convert, process and condition analog and digital signals
- Different standard designs and widths



Communicate Effectively

Compact I/O modules in IP67

- Different designs with up to 16 I/O channels
- Fully encapsulated (IP67), vibration and shock resistant
- Stainless steel flange for harsh environments



Modular I/O system in IP67

- Gateways for many different fieldbuses and Ethernet, also available as programmable versions
- I/O modules available as: digital, analog, temperature, RS232/485/422, SSI, CANopen, RFID, valve manifolds
- Connectivity: M8, M12, M23 and 7/8"



I/O-ASSISTANT with FDT/DTM

- Easy system configuration, parametrization and diagnostics via GUI
- DTMs can be integrated in any FDT frame application
- Comprehensive documentation



Automate Efficiently

Peripheral control in IP67

- CODESYS programmable gateways for I/O systems in IP67
- Further extendable with I/O modules
- Also usable as fieldbus or Ethernet slave



RFID-System BL ident® in IP67

- Turck modular I/O systems for flexible integration in systems
- Highly shock and vibration proof, improved thermostability
- Application-optimized and IP69K rated data carriers and read/write heads, rugged design

