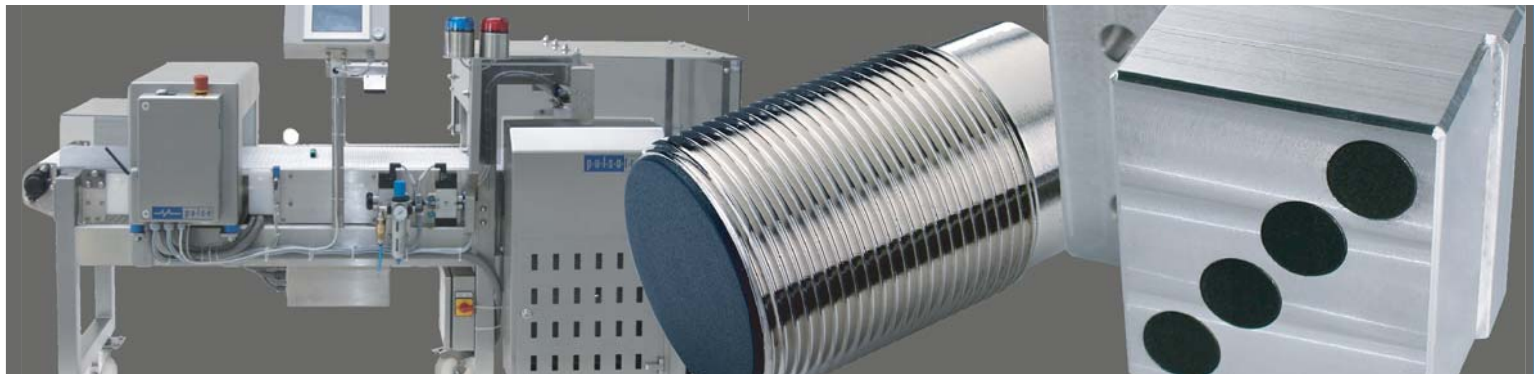


**PRODUCT RANGE**

**CUSTOMIZED SOLUTIONS  
FOR AUTOMATION  
AND AUTOMOTIVE**

**SENSORS  
IMAGE PROCESSING**



**METAL DETECTION  
SPECIAL MACHINE CONSTRUCTION**

**p·u·l·s·o·t·r·o·n·i·c**



EVERYTHING FROM ONE SOURCE - TO YOUR ADVANTAGE.

PULSOTRONIC GMBH & CO. KG - THE COMPANY



# QUALITY INNOVATION

Pulsotronic, a subsidiary company of SKS Holding GmbH, is a worldwide active supplier of sensor technology and electric components for automation and automotive. According to our motto "Everything from one source - to your advantage." we stand for a broad programme of innovation and modern technology. Situated in the strive industry region Chemnitz-Zwickau we develop and manufacture

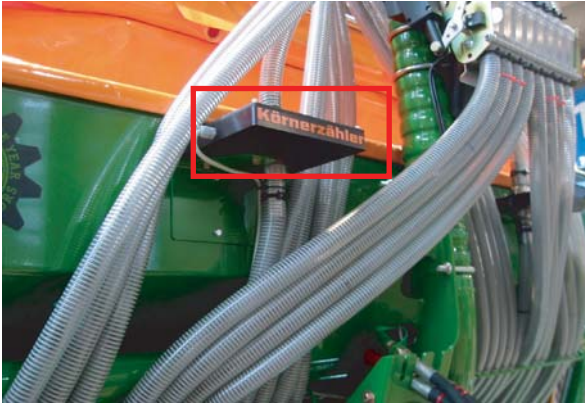
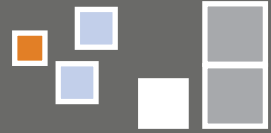
- Inductive and capacitive sensors
- Devices for metal detection and metal separation
- Image processing systems
- Magnetoresistive sensors
- Optical sensors and laser measurement systems
- Colour detection systems
- Ultrasonic and acoustic sensors
- Sensors for inclination and acceleration
- Customized sensor systems

The needs of our customer take center stage in our company. Because of our great capacities in the field customized solutions, flexibility and the know-how of the Pulsotronic-SKS-Group in

- SMD
- Custom cable preparation and assembly
- Plastic moulding
- Tool making
- Mechanical conditioning
- Rapid prototyping
- Development and design of electronics

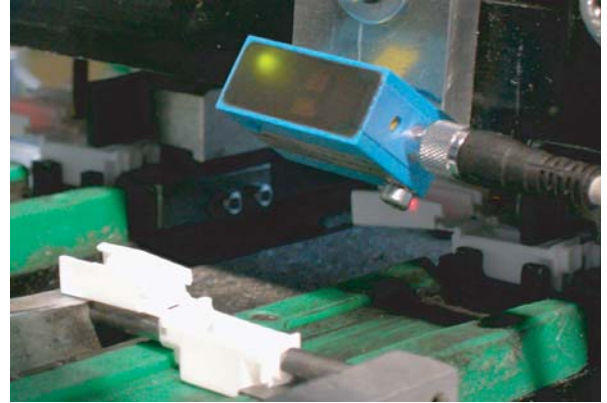
we provide ideal conditions for going along with the customer from the beginning until the end of the manufacturing process. Pulsotronic is everywhere there where it is necessary to set up new standards and to find solutions beyond common technologies. Innovation, commitment and a fast implementing guarantee best results for the realisation of the customers' application.

# CUSTOMER PROXIMITY



### Application seed control - grain counter

CMOS-sensor with line laser and CAN-interface for continuous registration of seed. Grain dimensions from 0,8mm to 10mm are detected at fall speed of maximum 14m/s. The sensor fades out agro-typical contamination and breaks-in the grain dimension automatically.



### Application laser sensor "Midi"

Permanent monitoring of plastic pieces on attendance in a transportation system. As part of a fully automatic assembly line the sensor identifies housing feed previous to the final assembly.

# FROM THE IDEA TO THE FINISHED SYSTEM



### Application tube sensor

The tube sensor detects moving pieces in hoses or ducts. In contrast to conventional ring sensors the hose sensor can be mounted much easier and faster - the customer saves time and space during installation.



### Application Mesep<sup>®</sup> Digital

One of the standard applications for Pulsotronic metal separators is the detection and separation of metallic objects in granulate during injection moulding. The Mesep<sup>®</sup> Digital detects smallest particles with a minimum diameter of 0,5mm and locks them out with a special pneumatic flap.



WHEN YOUR PRODUCTS GET OUT OF LINE...

NEWS INDUCTIVE SENSORS SPECIALS

# NEWS



Sensor actuator interface for heavy applications in industry. Custom-made design, adapted to existing connector-schemes in rough environment.



Video multiplexer for camera commutation on agricultural machines.



The acoustic sensor detects defined static noise or switch-sounds on machines, devices and plants. Due to protection class IP67, an enlarged operating temperature up to 85°C and an adjustable switching threshold this sensor even is proper for external applications.

# HIGH RELIABILITY Inductive sensors



Pulsotronic provides an extensive assortment of inductive proximity switches. This sensor type principally is used for applications demanding great reliability, high switching speed as well as high switching frequencies and longevity. Our product range includes cylindrical sensors from G3 to M40 and square sensors in dimensions 5x5mm to 80x80mm. According to your requirements we also design in metal, plastic or special housings.



# WELD FIELD IMMUNE Specials

Our range in the field Specials comprehends products that are developed according to the specific requirements of our customers. Due to their special characteristics these sensors are adapted to applications making high demands on the sensor. Acceleration sensors, inclination sensors and speed monitors as well as high temperature sensors, weld field immune and pressure-resistant sensors are only an extract of our specials. Whatever your application requires, we develop and manufacture the appropriate product for you!



... WE DEVELOP THE APPROPRIATE SYSTEM FOR YOU!



METAL DETECTION SPECIAL MACHINE CONSTRUCTION OPTO-ELECTRONIC SENSORS LASER SENSORS

## Metal detection / -separation

# HIGH

Our activities in the field metal detection range from professional consultation via creative development and manufacturing to a competent service. High-capacity electronics and practice oriented operating controls are the elements of high-quality products, that are proper for everyday-use by an easy handling. Our metal detectors guarantee a safe detection and separation of magnetic and non-magnetic metal pieces in the product stream. Various possibilities of integration in existing lines and a very high sensitivity are the advantages of our products.



# SENSITIVITY



# CONVEYING MACHINERY



## Special machine construction

Industrial applications demand flexible solutions from automation technology. Multi-shift manufacturing requires effective production systems including reliable process technology. We guarantee professional consultation and high-quality solutions, for the modernisation of your existing line as well as for the planning of a new line. We project, design and manufacture complete feeding and transport systems as well as special facilities.

## Optical sensors / laser sensor

# 255 COLOURS

Optoelectronic sensors respond on reflexion or break of beams of light by the target. We provide a large range of optoelectronic sensors comprehending amongst others reflex sensors, light barriers, colour sensors and laser line sensors. Special characteristics of these sensors are high sensing ranges up to 100m and switching speeds of maximum 500kHz. Laser sensors provide for high-precision detection with accuracies in  $\mu\text{m}$  range. An important field of application is the detection of distances and positions. Pulsotronic colour sensors are able to learn and to recognize 255 colours. They are used for the detection of print markings or colour codes as well as for colour detection.





INNOVATION FOR MORE EFFICIENCY

IMAGE PROCESSING MAGNETORESISTIVE SENSORS HALL SENSORS ULTRASONIC SENSORS

# QUALITY CONTROL

## Industrial image processing

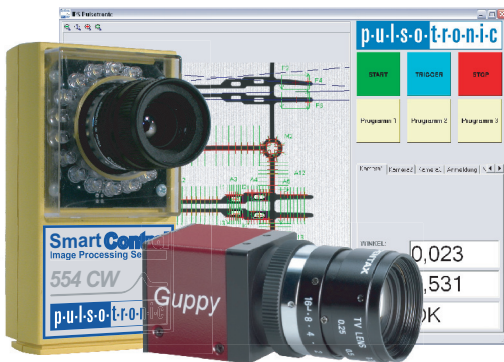


Image processing systems detect variations in quality caused during manufacturing in an early stadium. Thus they contribute to a rise of productivity and the reduction of costs. Fields of application are for example surface inspection tasks, attendance check, defect detection and code reading. In addition to various intelligent and pc-based camera systems we provide their integration in existing applications. We develop and manufacture custom-made equipment. You choose among a great assortment of accessories: lightings, lenses, software, I/O-modules and interface solutions, always adapted to your specific requirements.



## Magneto-resistive and hall sensors

Magneto-resistive sensors detect even smallest variations in magnetic fields. They are gaining more and more importance in the contactless detection of mechanical parameters. One of their assets is their temperature stability - their operating temperature ranges from  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ . The maximum switching frequency of our sensors is at 20kHz. We manufacture cylindrical sensors in dimensions M12 to M18. Custom-made housings according to your requirements are also part of our product range. Magneto-resistive sensors measure revolution, detect directions and distances on plungers.

# MAX 20kHz



# SURFACE



## Ultrasonic sensors

Ultrasonic sensors detect solid or fluid targets on great distances - without any dependency on the characteristics of the surface. The sensors are equipped with teach-in functions and different interfaces. Pulsotronic ultrasonic sensors stand out for their high resolution of maximum 0,2mm, optimum precision and large sensing ranges. We provide digital as well as analog outputs. Fields of application are for instance distance measurements, fill level controls and object counting applications.

# INDEPENDENT



## Capacitive sensors

Capacitive sensors detect conductive and non-conductive, solid and fluid objects. Our programme includes cylindrical capacitive sensors in dimensions M8 to M30, square sensors from 25x50x10mm to 40x40x12mm and customized designs. Capacitive sensors are used for all types of level measuring as well as for detecting, positioning, monitoring and counting objects. Fields of application are the timber industry, the plastic-, the food and the chemicals industry.

FILL LEVEL CONTROL



HIGH

## Touch sensors

Touch sensors are mechanical high-precision switches with an accuracy up to 500nm. Due to their working principle they are not subject to drift caused by deterioration or thermal fluctuation. Touch sensors are resistant to EMC-influences. Our product range comprehends sensors in dimensions from M5 to M14. You choose between mechanical contact or transistor output.

SWITCHING ACCURACY



## Peripheral installation / bus systems

Pulsotronic provides a large programme of components for peripheral installation of machines and facilities. Sensor actuator interface modules as well as passive ASI-modules are part of our programme. If requested we connect your sensor technology directly to existent bus systems (e.g. CAN). A huge assortment of connectors in all standardized designs facilitates the activation of your peripheral components.



CAN



CONNECTION



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