

SENSORS
METAL DETECTION
SPECIAL MACHINES
AUTOMOTIVE MEASUREMENT TECHNOLOGY

PRODUCT RANGE



CUSTOMIZED SOLUTIONS
FOR AUTOMATION
AND AUTOMOTIVE

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we design your automation



EVERYTHING FROM ONE SOURCE - TO YOUR ADVANTAGE.

PULSOTRONIC - THIS IS THE SOLUTION!



PULSOTRONIC GMBH & CO. KG - THE COMPANY

AUTOMOTIVE MEASUREMENT TECHNOLOGY TOUCH SENSORS INSTALLATION BUS SYSTEMS



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 aspiring industry region Chemnitz-Zwickau we develop and manufacture

- Inductive and capacitive sensors
- Devices for metal detection and metal separation
- Automotive measurement technology
- Magnetoresistive sensors
- Optical sensors and laser measurement systems
- Colour detection systems
- Strain Transducer sensors
- Ultrasonic and acoustic sensors
- Sensors for inclination and acceleration
- Customized sensor systems

The needs of our build the focus of our company's efforts. 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 where it's 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

SPEED Automotive Measurement Technology

Exceptional design combined with high quality standards - with this philosophy Pulsotronic develops and manufactures automotive measurement devices like speedometers and tachometers with brand **MMB**. But also indicating instruments for oil, temperature or level control for each kind of vehicle focussed on custom and classic market are available. We provide also original replica as unique as well as small or medium batches with brandlabel. As one of the few manufacturers on the market, Pulsotronic is specialised on the small 48mm housings. Of course diameter 60mm and 80mm we offer by catalogue, too.

Available from 01.03.2013 on: MMB Generation II. 2-line display, transmitted light faces, housing only 35mm high and the possibility of individual face designs are only a few highlights.



LEVEL HIGH SWITCHING



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.

ACCURACY

Peripheral installation / bus systems

Pulsotronic provides a large program of components for peripheral installation of machines and facilities. Sensor actuator interface modules as well as passive ASI modules are part of our program. 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.



CONNECTION



OBJECT-



Capacitive sensors

Capacitive sensors detect metallic and non-metallic, solid and fluid materials. The principle of function is based on the capacity change at the active area of the sensors when a target with corresponding dielectric characteristics approaches. This active surface is created by two electrodes. The shape of the electrode is adaptable to the type of sensor.

Capacitive proximity switches of Pulsotronic are available as N or P switching and as normally open or normally closed versions. The sensors control the fuel level of fluids, detect solid and fluid media like metal, glass, wood, water and oil, detect and count objects and positions and are scanning the height of paper stacks.

DETECTION



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°C to +125°C. The maximum switching frequency of our sensors is at 20kHz. We manufacture cylindrical sensors in dimension M12 to M18. Custom-made housings according to your requirements are also part of our product range. Magneto-resistive sensors measure revolutions per minute, detect directions and distances on plungers.

MAX 20kHz



SURFACE



Ultrasonic sensors

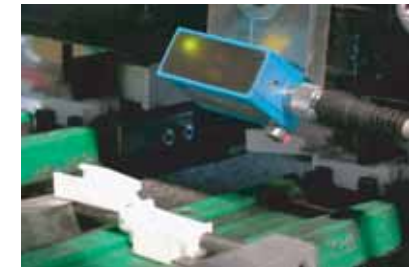
Ultrasonic sensors detect solid and fluid materials on great distances - without any dependency on the characteristics of the surface. The sensors are equipped with teach-in functions and different interfaces. Pulsotronics ultrasonic sensors are characterised by their high resolution of maximum 0,2mm,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

INDEPENDENT



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.

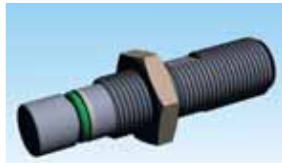


Control of seeds and fertilisers

Producers of agricultural machineries are focused by our activities. Specially adapted sensors are controlling the process, detecting the current level or counting the seed flows.



NEWS



Pulsotronic increases the "performance" of its pressure resistant sensors. All devices will be delivered with a higher switching range of up to 2 mm and temperature resistance of up to 100 °C. Except for ultra short housings of 50mm, their maximal operating temperature remains 90 °C. Because of these modifications, the sensors will be more suitable for the following usages: Position surveillance in hydraulic cylinders, Aggregate control at fluid media and valve surveillance in motors and machines.



For more than 20 years, our sensors are successfully used in wind power stations. Because of standard temperature ranges from - 40 °C up to +100 °C as well as an extended protection circuit for electromagnetic interruptions, our sensors meet these special demands. Beside technical standards, Pulsotronic uses the possibility to customize its solutions to the given conditions at the place of installation – independent of the principles of sensor technology. This also includes extended limiting values of current and circuit to ensure a secured operation at decentralized control systems.



In many cases photoelectric standard sensors are too big if objects should be detected within constricted room.

With sensor heads not much thicker than the cable and a separated control unit it is possible to detect machine and construction parts almost everywhere. There are no problems with close bending radius and permanent movement compared with fibre optics. The use of high quality optical parts enables accuracy nearly like laser sensors.

HIGH RELIABILITY



Inductive sensors

Pulsotronic provides an extensive assortment of inductive proximity switches. This sensor type is used principally 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 metal, plastic or special housings.

WELD FIELD IMMUNE

Specials

Our offer in the field "Specials" contains 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!



STRAIN

Specials

With the new strain gauges sensors Pulsotronic presents a new technology for the industrial measurement of strain and length variations. The nominal measuring distance of the actual sensors is at maximum 1000µm/m and can be adapted according to the requirements of the application. Due to the adjustable sensibility of max. 1,5mV/V and the minimum zero point deviation of +/- 1% the strain gauge sensors provide high-capacity measurement of static and dynamic strain on bridges, wind energy plants and other steel constructions. The operating temperature of our sensors ranges from -40°C to 120°C. The zero point deviation and the temperature coefficients are adapted individually to the material of the measuring object. Each of our strain gauge sensors is a custom-specific solution. We develop these sensors according to your requirements and the challenges of your application.



HIGH SENSITIVITY

Metal detection / -separation



Our activities in the field metal detection reach 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 production stream. Various possibilities of integration in existing lines and a very high sensitivity are the advantages of our products.

255 COLOURS

Optical sensors / laser sensor

Optoelectronic sensors respond on reflexion or break of light beams by the target object. We provide a large range of optoelectronic sensors containing 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 a high-precision detection with accuracies in µm range. An important field of application is the detection of distances and positions. Pulsotronic colour sensors are able to learn to recognize 255 colours. They are used for the detection of print markings or colour codes as well as for colour detection.

