

Capacitive und inductive sensors

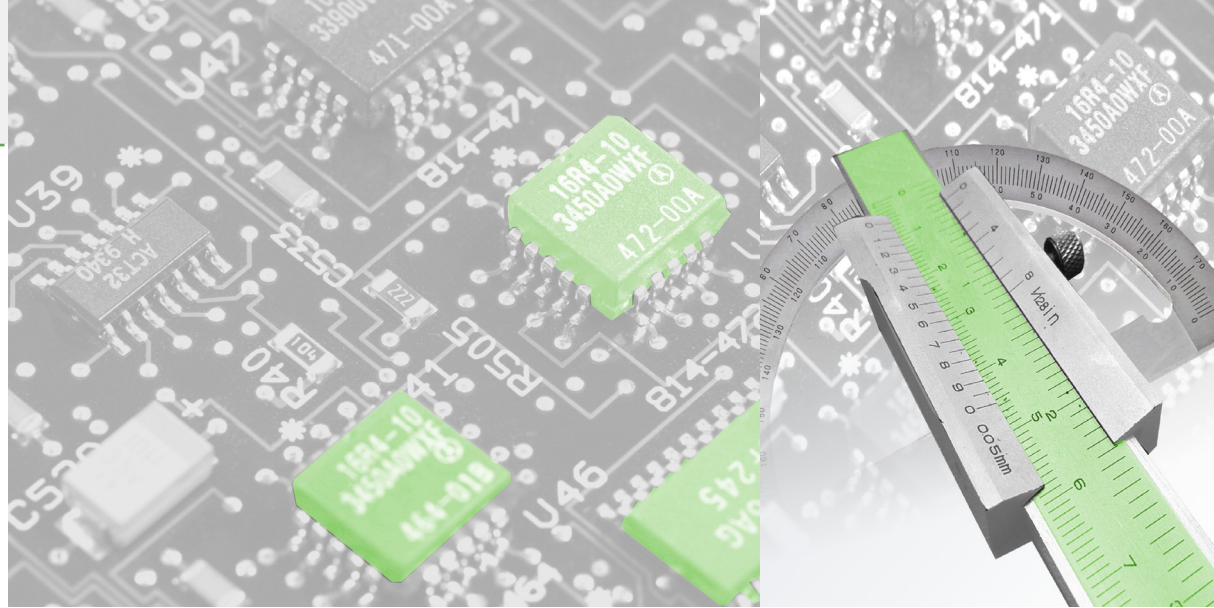
With **indutec**® and **capaTEC**® EBE offers two basic technologies for the measurement of position and angle, ideal for integration into customer systems.

Both technologies operate contactless and wear-free. By using special structures on the PCB as sensor elements a high-precision measuring system is created for price-sensitive applications.

Particularly in target-markets such as „Automotive“ or „White Goods“ it is possible to conveniently apply the sensor structures to the existing PCB. The high level of integration in your application enables sensor applications in systems, previously considered to be infeasible due to cost reasons.

Characteristics of our sensor systems: virtually unlimited life cycles, extremely robust, outstanding precision and reliability.

While the capacitive measuring system provides a slightly higher resolution, the inductive system is particularly suitable for applications in humid environments.



Our enthusiasm for engineering and our constant strive to improve our technologies have helped us to develop product solutions for our customers and maintain a competitive edge. We also have the right sensor for your application and we are glad to give you our expert advice.

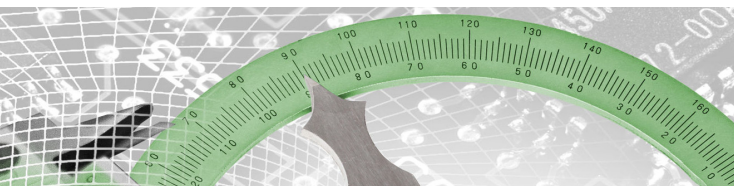
EBE
sensors and motion

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Capacitive and
inductive sensors for
position and angle

Distance - Position - Angle



induTEC and capaTEC

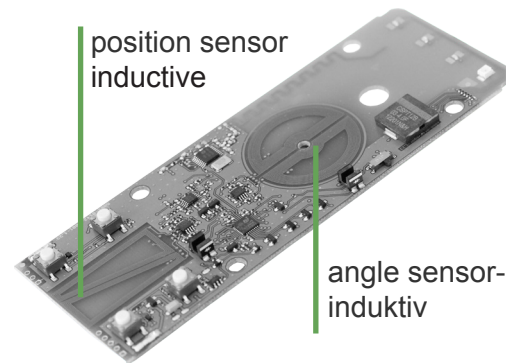
2 base technologies for the measurement of position and angle

properties:

- contactless position measurement
- absolute position measurement
- accuracy appr. 1 % of the end value
- ratio measuring/assembly length > 90 %
- very robust and immune to interference
- temperature range - 40 °C to 125 °C
- immune to electromagnetic interference
- wear-free
- precise
- low cost
- interfaces:
PWM, 4-20 mA, 0-5 V,
RS485, CAN...

Inductive sensors based on the **induTEC**-principle use PCB inductors. The magnetic field generated by the coil system induces eddy currents in the target which in turn interact with the coil system. This interaction creates a measuring signal.

The capacitive measuring principle **capaTEC** for measuring position and angle functions on the basis of changes of the capacitor plates in the engagement area. As a result, the total capacity changes and this information is used to calculate the position or angle respectively.



... from μm up to cm
inductive or capacitive

induTEC and capaTEC

... integrated in your application



Pneumatic Cylinder with Integrated Position Sensor

- fully integrated system without any external attachment parts
- integration of capaTEC system and the associated electronics in the cylinder base of a pneumatic cylinder
- target is the hollow-drilled piston
- easy adaption of measurement length
- applications in harsh environments possible
- customized output-signal (PWM, CAN, 0-10 V...)
- accuracy appr. 1 % of end value
- temperature range up to 125°C
- contactless, wear-free signal generation

