



Position monitoring of aircraft wings

On their wings, aircraft have slats on the front side and flaps on the rear side which act as buoyancy aids. If these are extended unevenly or on only one side, this can cause significant problems in terms of the aerodynamics of the aircraft. Slats and flaps are retracted and extended by spindle drives. The respective spindle is connected to the drive motor in the gear bay via the drive shaft. A Wing Tip Brake is positioned on the shaft in the outboard wing area. This not only avoids any uneven extension of the slats and flaps, but also prevents any uncontrolled movements of the floating head due to external influences.

In its function as a switch, the 'induSENSOR IS-5-C-CR/WTB' inductive sensor from Micro-Epsilon checks the position of the brake shoes. The sensor communicates the status of the Wing Tip Brake as either 'open' or 'closed' to the on-board electronics system. The inductive sensor is made from ferromagnetic stainless steel and so contributes significantly to the aviation safety of modern wide-body aircraft.

Advantages

- Robust sensor
- Position detection of the brake shoes
- Suitable for aerospace applications

Requirements for the measurement system

- Meets all aviation standards
- Lifetime 30 years

Ambient conditions

- From -55 to +70 °C
- Up to 90% rel. humidity

Sensor design

- induSENSOR IS-5-C-CR

