In order to achieve maximum efficiency in industrial drive trains and processes, it is essential to have precise knowledge of the torque and its distribution.

Schaeffler’s TorqueSense torque measurement module offers a mechatronic solution that allows applications and processes to be monitored and controlled with significantly greater precision as the torque is recorded right where it is applied.

Features:
- Plug & play
- High precision even at low torque
- Non-contact and maintenance-free
- Scalable shaft diameter and measuring range
- Rotational speed can also be measured
- No loss of rigidity

Schaeffler Technologies AG & Co. KG
Georg-Schäfer-Straße 30
97421 Schweinfurt
Germany
Phone +49 9721 91-0
E-mail industry4.0@schaeffler.com

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ENHANCE AVAILABILITY AND INCREASE PRODUCTIVITY

Added value through digitalization

Schaeffler’s Smart EcoSystem offers a standardized hard and software infrastructure from components equipped with sensors through to digital services and business models:

- You can reliably and precisely gather important data for controlling processes and machine monitoring with sensors and mechatronic products such as the TorqueSense Module.
- Use Schaeffler’s unique domain expertise in the form of digital services to automatically generate relevant information from the collected data and to receive specific recommended actions.
- Benefit from our various digital solutions for industrial applications and use these solutions in a targeted manner to control processes, maximize availability, and optimize product quality.

Schaeffler is shaping the field of digital transformation with a clear vision and specific solutions.

Functional principle:
- Two or more magnetic tracks are applied to a sensor shaft.
- If no load or torque is applied, the magnetic field of the tracks runs inside the material and is therefore not measurable from the outside.
- If a torque acts on the shaft, the resulting surface tension forms a magnetic field along the magnetic tracks.
- The strength of this magnetic field is proportional to the transmitted torque.
- Magnetic field sensors record the magnetic field and convert it into electrical voltage (0–5 V).
- This electrical voltage can be directly processed by a control unit.

The application of torque to a magnetized shaft changes its magnetic field. The sensor function is primarily based on the linearity between the torque and the magnetic field.