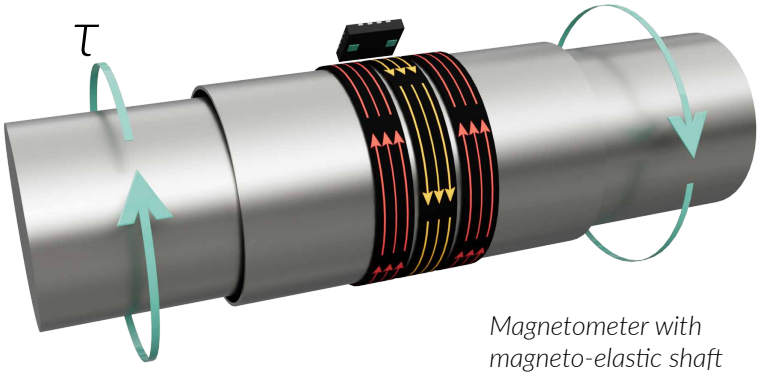
ELAXIS™

Compact and contactless integrated torque sensing

Designed for industrial robots, cobots and e-bikes that need to measure the torque applied on a shaft. Melexis brings a solution that is compact, stray-field immune and ideal for stiff shafts. Thanks to Elaxis, the use of bulky and expensive fluxgates-based system will no longer be needed. Unlike other magneto-elasticity based systems, our innovation is fully integrated and cost effective.



Magnetometer with magneto-elastic shaft

INNOVATE WITH HEART

Easy, affordable and compact torque sensing

- Reduce the electronic footprint in contactless torque sensor applications
- Fully integrate the torque calculation in one single circuit
- Avoid the use of bulky coils

APPLICATIONS

Measure torque on a shaft

- Motorized systems with gear boxes
- E-bikes
- Cobots
- Industrial robots

SECRET INGREDIENTS

- Technology: magnetometer sensor (Melexis core expertise) with high sensitivity Hall sensors
- Process: shaft magnetization
- Patent: sensing concept, single-chip sensor

Abbreviations & definitions

- Fluxgate — A magnetic sensor based on a ferro magnetic core surrounded by coils

References

- A Torque Transducer Utilizing A Circularly Polarized Ring, by I. J. Garshelis, IEEE TRANSACTIONS ON MAGNETICS, VOL. 28, NO. 5, SEPTEMBER 1992

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