Melexis
INSPIRED ENGINEERING

Thanks to its magnetic compass the fascinating honey bee has the ability to perceive the omnipresent magnetic field (MF) of the Earth. This magnetic field sensitivity matches this wonderful creature with our Triaxis® magnetic sensors.

MLX90376

TRIAXIS® PERFORMANCE

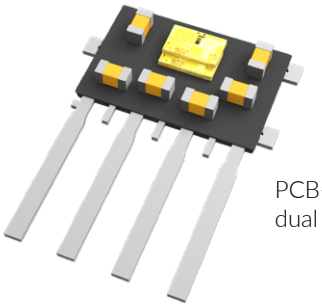
MAGNETIC POSITION SENSOR

The MLX90376, an angular and linear motion magnetic position sensor, offers high performance, safety, and integration for demanding automotive and industrial applications.

MLX90376

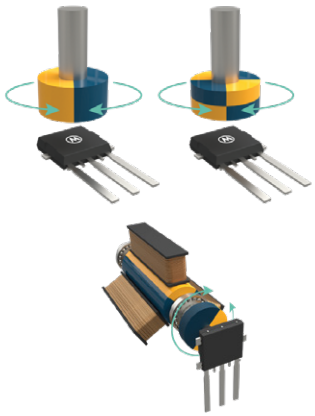
Triaxis®

- Dual stacked-die in a Single-Mold-Package (SMP), a PCB-less solution. This new option is especially optimized for 360° rotary applications requiring dual die and some strayfield immunity.
- Multiple output modes (Analog, PWM, SENT, SPC)
- Developed according to ISO26262 as a SEooC
- Improved Absolute Maximum Rating (AMR)



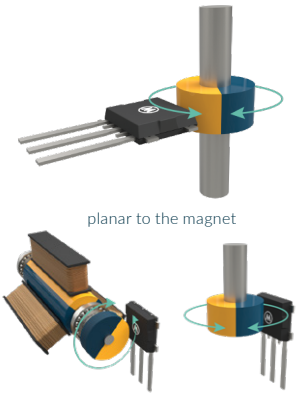
PCB-less
dual stacked-die

On-axis



(including End-of-Shaft)

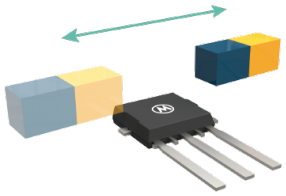
Off-axis



planar to the magnet

perpendicular to the magnet
(including Through-Shaft)

Linear



FOR MORE INFORMATION: WWW.MELEXIS.COM/MLX90376

Melexis

KEY FEATURES

- Supported output modes
  - (fast) SENT (SAE J2716 APR2016)
  - SPC (Short PWM Code)
  - PWM (Pulse Width Modulation)
  - Ratiometric analog
- Programmable linear transfer characteristic
  - 4 or 8 multi-points
  - 16 or 32 Piece-Wise-Linear
- Programmable measurement range
- Robustness against stray magnetic field up to 5 mT (4 kA/m) as per ISO 11452-8. Stray-field immune angle sensing up to 360°
- Operating supply voltage from 4.5 V to 18 V
- Operating temperature from -40°C to 160°C
- Triaxis® Hall Technology for performance and flexibility
- On chip signal processing for robust absolute position sensing
- Enhanced serial data communication
- 48 bits usable for customer traceability
- Packages, RoHS compliant
  - SOIC-8 (DC), single die
  - TSSOP-16 (GO), dual stacked-die (redundancy)
  - SMP-4 (VD), dual stacked-die in Single Mold PCB-less solution
- Certification
  - AEC-Q100 Grade-0
  - ISO26262 SEooC (Safety Element out of Context)
    - ASIL C compliant for (fast) SENT, SPC and PWM output modes
    - ASIL B compliant for analog output mode

APPLICATION EXAMPLES

- Throttle position sensor
- Ride height position sensor
- Float-level sensor
- Steering wheel position sensor

Steering Angle Sensor (SAS)

BLOCK DIAGRAM