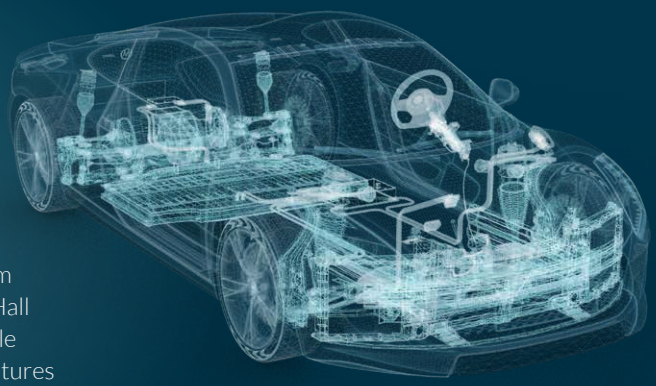
# TRIAXIS® MAGNETIC POSITION SENSORS



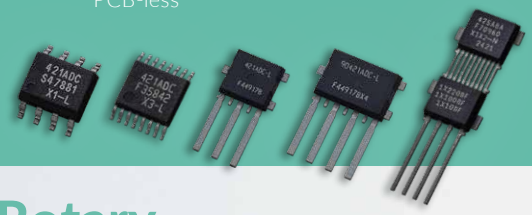
## MLX9042X

The MLX9042x series is a cost-effective solution for automotive and industrial applications. This versatile series offers superior functional safety, absolute maximum ratings (AMR), and electromagnetic compliance (EMC). With its advanced Triaxis® Hall magnetic front end, on-chip signal conditioner & processing (DSP), and programmable output stage, the MLX9042x delivers reliable performance even in extreme temperatures up to 160°C. Experience the future of efficiency and safety with MLX9042x.

Pos

## Key features

- Stray field immunity (SFI) up to 5 mT (or 4 kA/m) as per ISO11452-8
- Programmable measurement range and linear transfer characteristic
- Certification
  - AEC-Q100 Grade-0
  - ISO26262 ASIL B or ASIL C (SEooC)
- Temperature from -40°C to 160°C
- Packages, RoHS compliant
  - SOIC-8 single die
  - TSSOP-16 dual die or dual stack die
  - DMP-4, single die PCB-less
  - SMP-3, single die PCB-less
  - SMP-4, dual die or dual stack die PCB-less

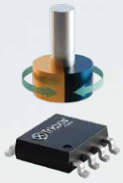


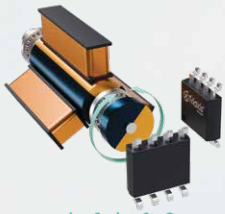
## Highlights

| | Motion | Output | |
|---|---|---|---|
| **MLX90421** | Rotary/Linear | Analog/PWM | |
| **MLX90422** | Rotary/Linear | SENT | |
| **MLX90423** | Linear SFI | Analog/PWM/SENT | SFI |
| **MLX90424** | Linear SFI with wake-up switch | Analog/PWM/SENT | SFI |
| **MLX90425** | Rotary SFI 360° | Analog/PWM | SFI |
| **MLX90426** | Rotary SFI 360° | SENT | SFI |
| **MLX90427** | Rotary SFI 360° Joystick | SPI | SFI |

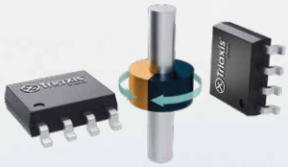
ASIL

## Rotary



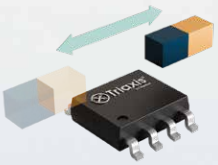


end of shaft & through-shaft



planar & perpendicular to the magnet

## Linear



## Joystick



## Applications

**MLX90424**
With integrated switch
for brake pedal stroke

**MLX90427**
for steering
for HMI-joystick



**MLX9042X**

Accelerator pedal position
Brake pedal position
Steering angle
Ride height position
Human machine interfaces
Shifter position
Transmission sensor
Flap actuators
Coolant valves
Thermal valves
Air management valves

www.melexis.com/MLX9042X

Melexis

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