

MLX90421

TRIAxis® MAINSTREAM

MAGNETIC POSITION SENSOR



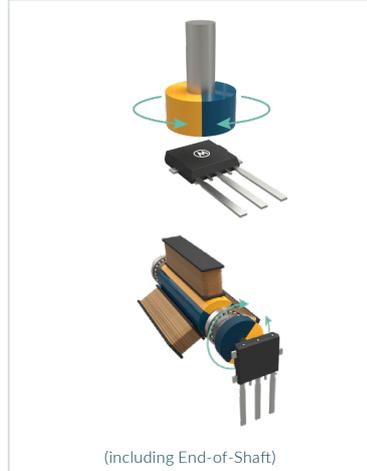
Featured with magnetoreception, homing pigeons have the ability to sense Earth's magnetic field. This faculty explains their impressive navigation skills.

STANDALONE 3D POSITION SENSOR FOR DEMANDING AUTOMOTIVE APPLICATIONS

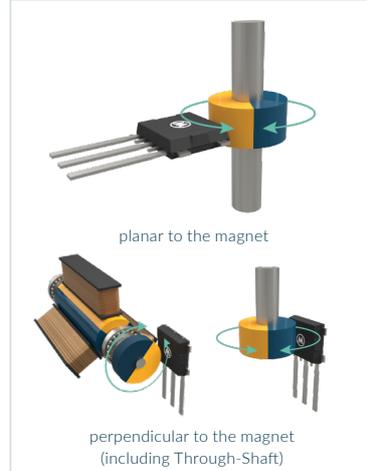
MLX90421 

The MLX90421 is designed for use in cost-sensitive automotive applications including powertrain actuators, pedal positioning, fuel level gauges and transmission systems, though also suitable for industrial implementations. It consists of a Triaxis® Hall magnetic front end, an analog to digital signal conditioner, a DSP for advanced signal processing and a programmable output stage driver (analog or PWM). The MLX90421 has superior capabilities in terms of functional safety, absolute maximum ratings (AMR), electromagnetic compliance (EMC) characteristics and supports operating temperature up to 160 °C.

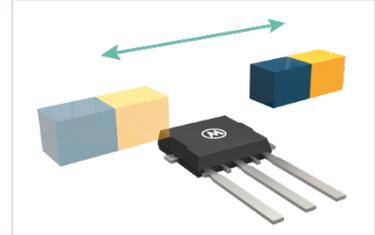
On-axis



Off-axis



Linear

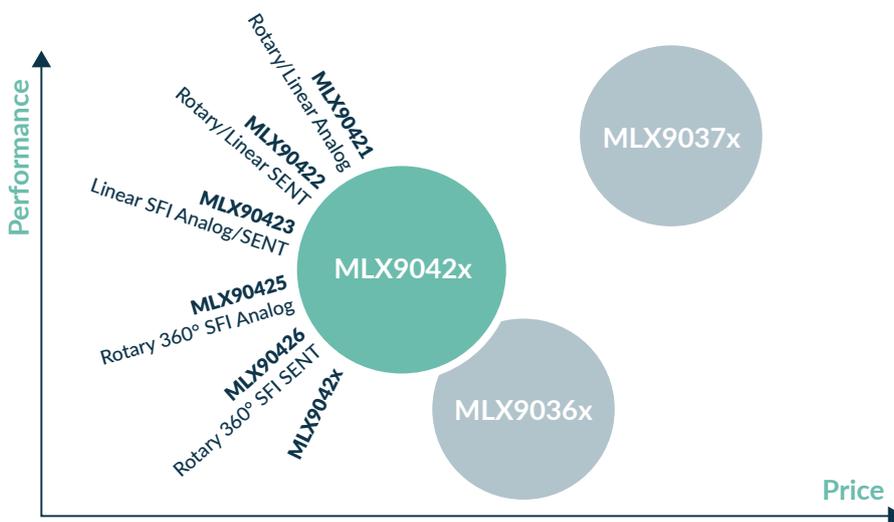


SIL | READY
BY MELEXIS

MLX90421 KEY FEATURES

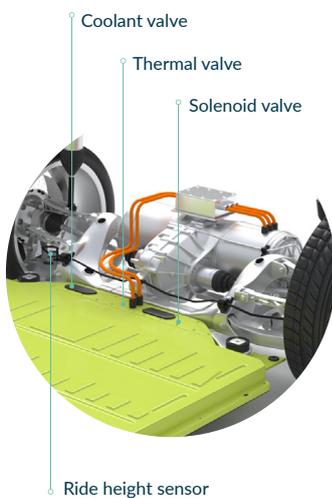
- ✔ Supported output modes
 - Ratiometric analog
 - PWM Output
- ✔ Programmable measurement range
- ✔ Programmable linear transfer characteristic with up to 17 points
- ✔ Operating temperature from -40°C to 160°C
- ✔ Triaxis® Hall technology
- ✔ On chip signal processing for robust absolute position sensing
- ✔ Packages, RoHS compliant
 - SOIC-8 (DC) Single Die
 - TSSOP-16 (GO) Dual Die (redundancy)
 - DMP-4 (VS), Single Die PCB-less solution
 - SMP-3 (VE), Single Die PCB-less solution
 - SMP-4 (VD), Dual Die PCB-less solution
- ✔ Certification
 - AEC-Q100 Grade-0
 - ISO 26262 ASIL B Safety Element out of Context (SEooC)

MLX9042x FAMILY

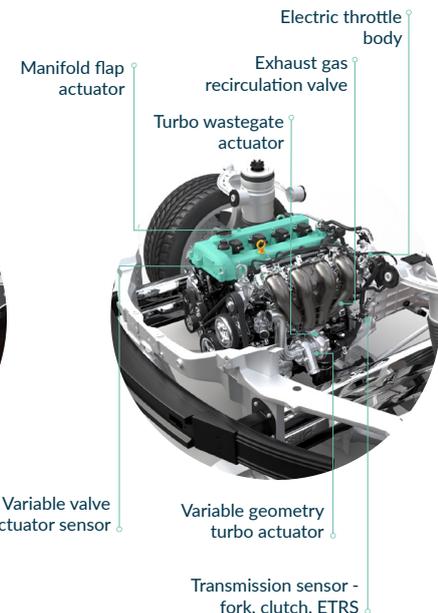


MLX9042x APPLICATION EXAMPLES

- ✔ Absolute Rotary Position Sensor



- ✔ Absolute Linear Position Sensor



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