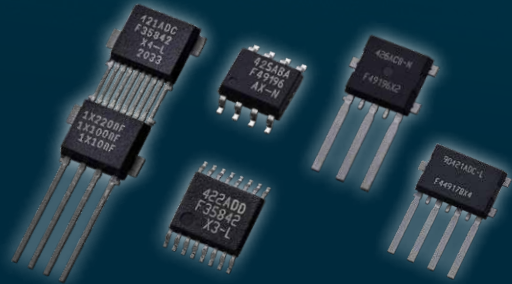


MLX9042x

TRIAxis® MAINSTREAM

**MAGNETIC
POSITION SENSOR**



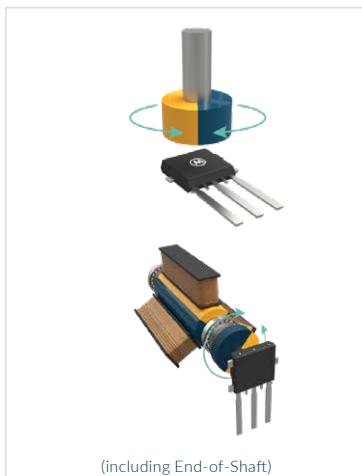
STANDALONE 3D POSITION SENSORS FOR DEMANDING APPLICATIONS

MLX9042x

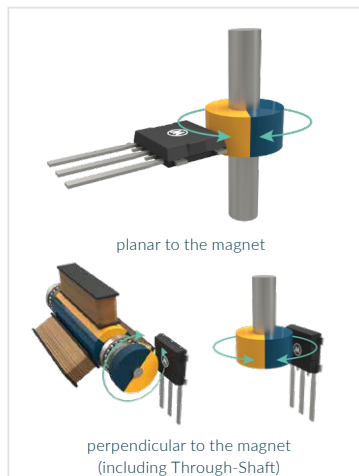


The MLX9042x series is designed for use in cost-sensitive automotive applications including powertrain actuators, pedal positioning, level gauges and transmission systems, though also suitable for industrial implementations. It consists of a Triaxis® Hall magnetic front end, an analog to digital signal conditioner, a DSP for advanced signal processing and a programmable output stage driver (analog, PWM, SENT or SPI). The MLX9042x series has superior capabilities in terms of functional safety, absolute maximum ratings (AMR), electromagnetic compliance (EMC) characteristics and supports operating temperature up to 160 °C.

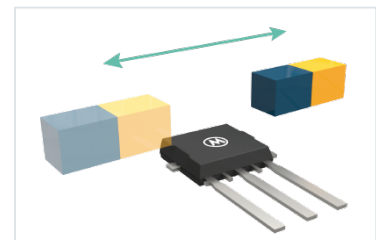
On-axis



Off-axis



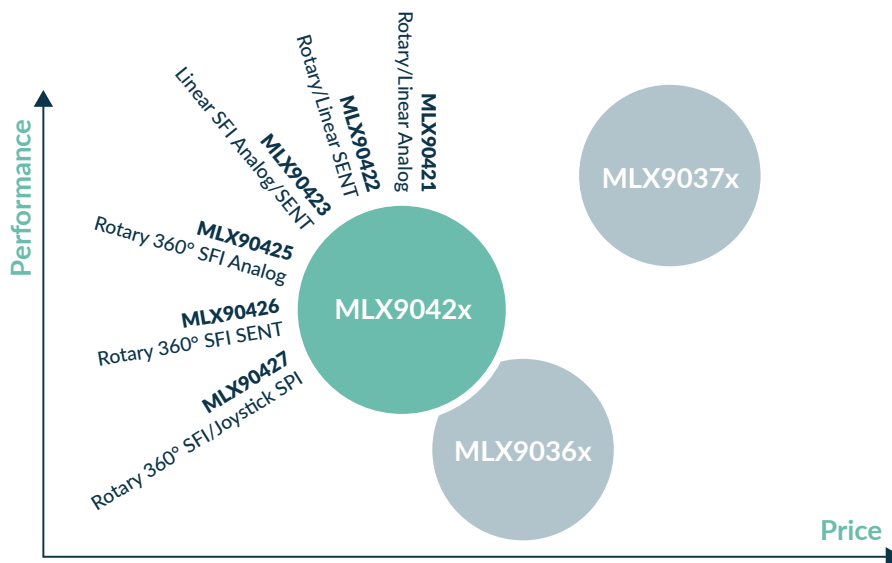
Linear



MLX9042x KEY FEATURES

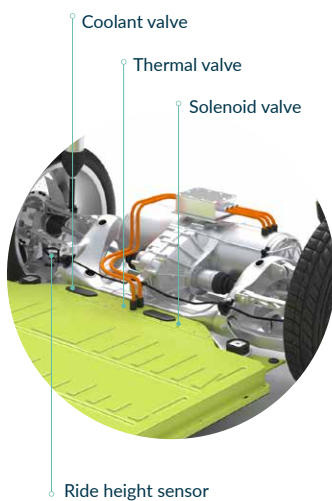
- ✓ Available output modes:
Ratiometric analog, PWM, SENT or SPI
- ✓ Programmable measurement range
- ✓ Programmable linear transfer characteristic with
up to 17 points
- ✓ Operating temperature from -40°C to 160°C
- ✓ On chip signal processing for robust absolute
position sensing
- ✓ Robustness against stray magnetic field up to
5 mT (or 4 kA/m) as per ISO 11452-8
- ✓ Triaxis® Hall technology
- ✓ 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 or ASIL C Safety Element out of
Context (SEooC)

MLX9042x FAMILY

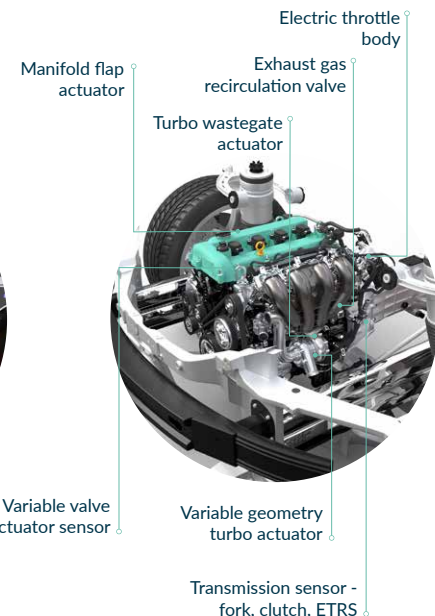


MLX9042x APPLICATION EXAMPLES

- ✓ Absolute Rotary Position Sensor



- ✓ Absolute Linear Position Sensor



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