

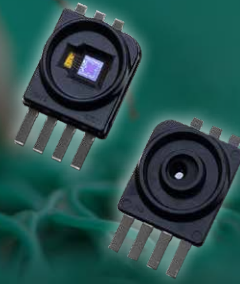
Melexis

INSPIRED ENGINEERING

MLX90823

RELATIVE PRESSURE SENSOR

ANALOG PRESSURE WITH A PCB-LESS SOLUTION



Hermit crabs are members of the superfamily of Paguroidea that have adapted to occupy empty shells. This robust shell-less animal represents our family of PCB-less pressure sensors. Their ability to adapt easily to a new shelter is an analogy to the ease of integrating sensors.

FACTORY CALIBRATED AND HIGHEST DEGREE OF ACCURACY OVER LIFE-TIME

Very accurate and stable pressure measurements allow optimal engine management to guarantee fuel savings and emission reductions.

MLX90823

The MLX90823 is a packaged PCB-less, factory calibrated, relative pressure sensor measuring spans from 0.1 to 1.5 bars. It makes it ideal for Fuel vapor, crankcase ventilation, EGR (Exhaust Gas Recirculation), GPF/DPF (Gasoline/Diesel Particulate Filter) or SAI (Secondary Air Injection) especially for automotive. The MLX90823 offers an analog output signal.



KEY FEATURES

- ✓ PCB-less absolute pressure sensor
- ✓ Up to 0.5% full scale accuracy over extended mission profiles
- ✓ Operating temperature from -40°C to 160°C
- ✓ Robustness
 - Over (+40V) and reverse (-40V) voltage capabilities
 - Excellent module level EMC performance
 - Harsh media resistance against halogens, acids...
- ✓ Analog output
- ✓ Fast response time <400 μs
- ✓ All-in-one: MEMS, interface and passive components
- ✓ Certification
 - AEC-Q100 (automotive) and AEC-Q103-002 (pressure sensor MEMS)
 - ASIL compliant developed as an ASIL A SEoC (ISO 26262)
- ✓ Factory calibrated or fully programmable through the connector with PTC04 for customized calibration curves
- ✓ Configurable diagnostic features
- ✓ Package RoHS compliant SMP-7 (XP)
 - Ridges to enable glued pressure seals

V1/03-2023

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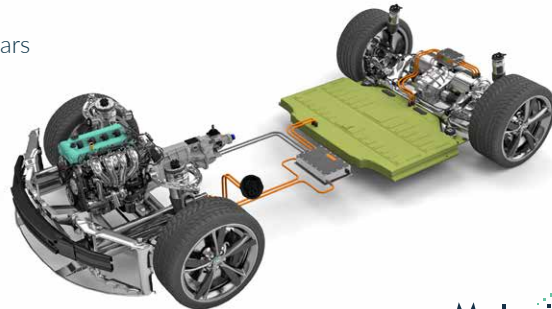
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MLX9082x PCB-LESS PRESSURE SENSOR



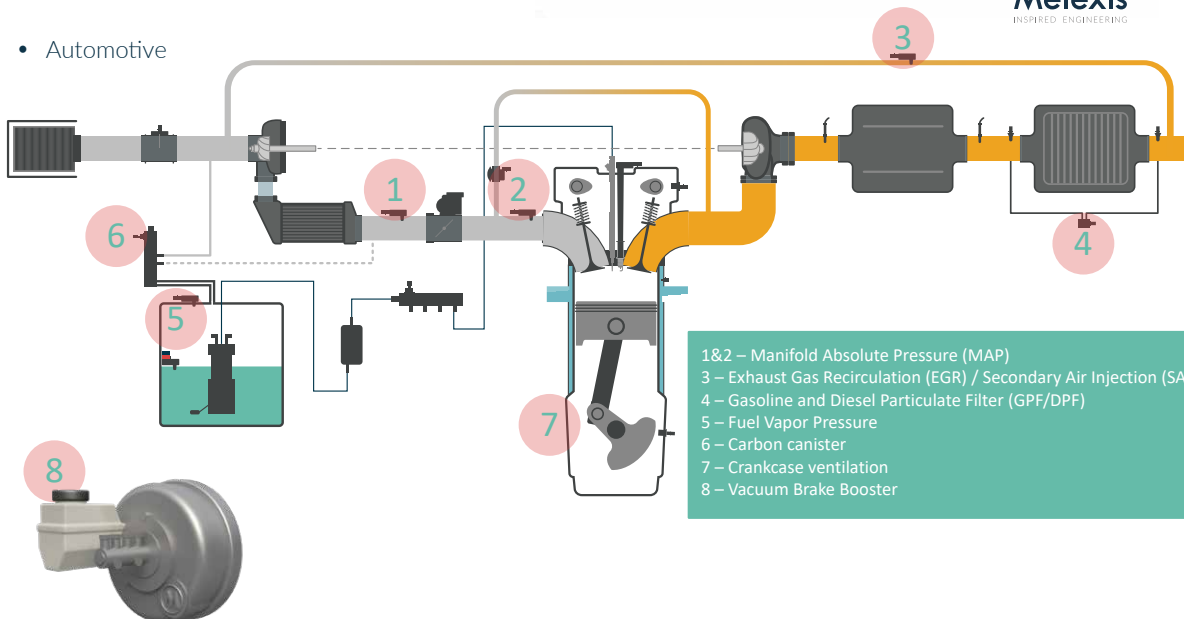
MLX90823 PCB-LESS PRESSURE SENSOR APPLICATIONS

- ✓ Relative pressure measurement from 0.1 bar to 1.5 bars
- ✓ Fuel vapor
- ✓ Crankcase ventilation
- ✓ EGR (Exhaust Gas Recirculation)
- ✓ GPF/DPF (Gasoline/Diesel Particulate Filter)
- ✓ SAI (Secondary Air Injection)



Melexis
INSPIRED ENGINEERING

• Automotive



- 1&2 – Manifold Absolute Pressure (MAP)
- 3 – Exhaust Gas Recirculation (EGR) / Secondary Air Injection (SAI)
- 4 – Gasoline and Diesel Particulate Filter (GPF/DPF)
- 5 – Fuel Vapor Pressure
- 6 – Carbon canister
- 7 – Crankcase ventilation
- 8 – Vacuum Brake Booster