

# Product Information

## Linear Hall Sensors

### Short Description

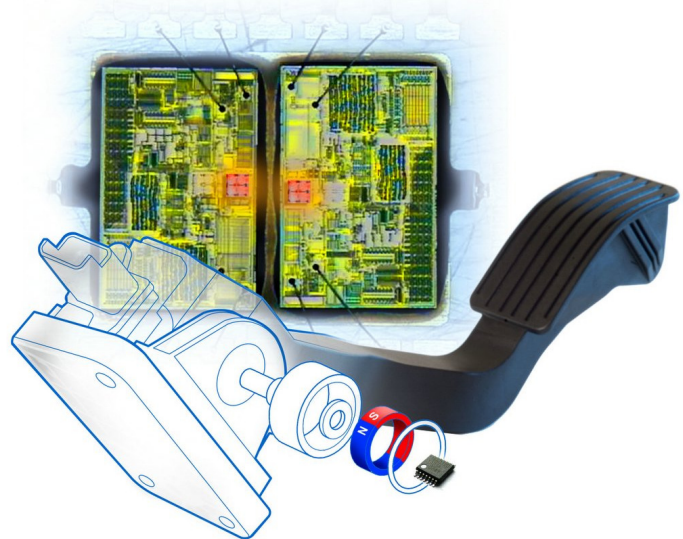
Since the introduction of the first programmable linear Hall sensor in 1995, Melexis has continuously grown its linear Hall sensor portfolio. The last generation products are MLX90251 and the MLX90277.

The MLX90251 is an automotive programmable linear Hall sensor featuring EEPROM. The analog output is proportional to the applied flux density and the transfer characteristic can be adjusted to any specific requirement. The MLX90251 is fully protected and includes several diagnostic modes.

The MLX90277 is nothing but 2 isolated dies of the MLX90251 in a single surface-mount package. The MLX90277 allows an elegant and cost-effective implementation of the automotive redundancy requirements.

### Features

- Analog Signal Processing
- Quad Switched Hall Plate / Chopper Stabilized Amplifier
- Linear Analog Ratiometric Output Voltage
- Supply Voltage  $5\text{ V} \pm 10\%$
- Rail-to-Rail Analog Output Stage
- Programmable Features
  - Output Quiescent Voltage (Voq)
  - Sensitivity
  - Clamping Levels
  - Low-Pass Filter
  - Serial Number
- Built-in Diagnostic Features for Broken Supply and Broken Ground Recognition
- Protection:
  - Over-voltage Protection on Supply and Output pins
  - Reverse Supply Voltage Protection
  - Output Short-circuit Protection
- Full Redundancy Solution - MLX90277
  - 2 Separate Dies Providing 2 Independent Outputs
  - Galvanic Isolation
  - Optimized Matching
- Two Grades:
  - $-40 \dots +85\text{ }^{\circ}\text{C}$ . — typ.  $\pm 1\%V_{\text{dd}}$  Accuracy
  - $-40 \dots +150\text{ }^{\circ}\text{C}$ . — typ.  $\pm 2\%V_{\text{dd}}$  Accuracy
- MLX90251 is available in 4-SIP-VA Package. Alternative package: TSSOP-14
- MLX90277 is available in TSSOP-14 Package



Bus ICs

BLDC Motor  
Control ICs

Pressure Sensors

Wireless ICs

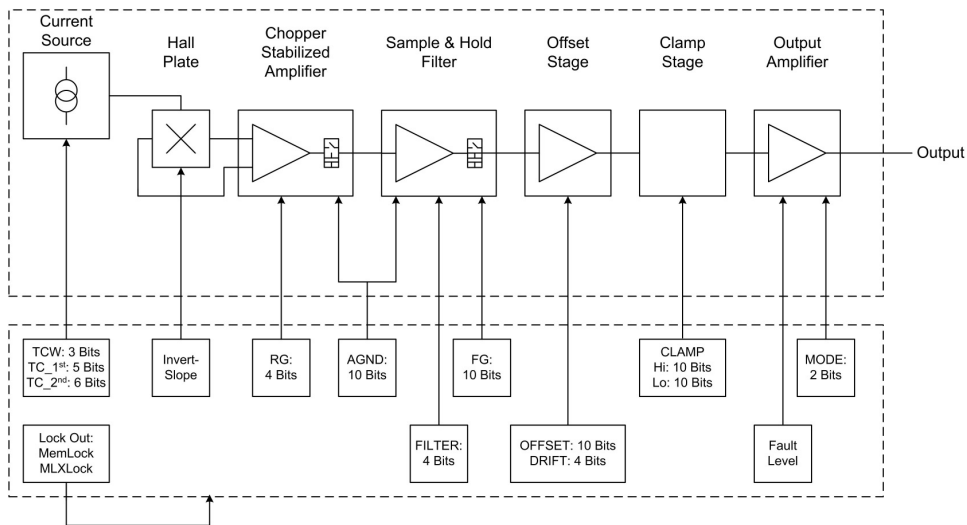
Hall Effect ICs  
And Sensors

Optoelectronic  
Sensors

Sensor Interface ICs

Infrared Sensors

## Block Diagram



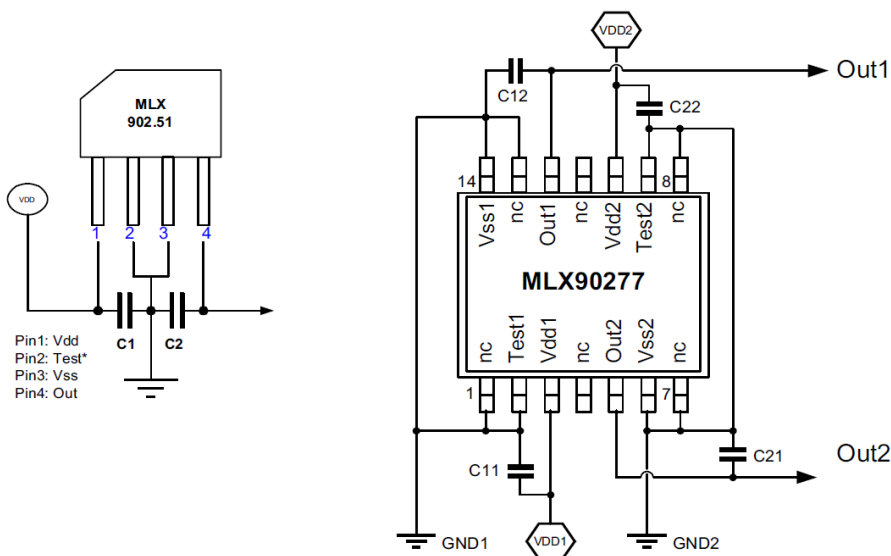
## Applications

- Linear Position Sensing
- Rotary Position Sensing
- Current Sensing

## Other Melexis Linear Hall Sensors

- MLX90215 Programmable Linear Hall Sensor
- MLX90242 Fixed Linear Hall Sensor
- MLX90244 Programmable Linear Hall Sensor feat. PWM Output

## Application Circuitry



For additional information email [info@melexis.com](mailto:info@melexis.com) or go to our website at: [www.melexis.com](http://www.melexis.com)



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