

# Product Information

## Managing *Xtreme* Environments **MLX92211**

### Automotive Hall Latch - 2<sup>nd</sup> Generation

The **MLX92211** is the **second generation** of **Automotive Hall-Effect Latch** sensors. It comes as a great successor of the worldwide famous USx88x series by Melexis. This brand **new platform** has been meticulously designed to deliver a **standard product** with **tremendous performance** and **exceptional robustness** for more and more stringent **automotive requirements** such as Electrical Power Steering (EPS), Window lifters/Sunroof, Seat Adjusters, Wipers or Motor Commutation.



### Wide Operating Voltage & Temperature

The MLX92211 is more than ready to address any demanding automotive — industrial and consumer applications by covering a wide supply range from 2.7 to 24 volts and easily enduring extreme conditions from  $-40^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$ .

### State-Of-The-Art Platform

Improving the magnetic core by designing an ultra dynamic offset suppression system insensitive to temperature and stress dramatically increases the repeatability factor in the application. The MLX92211 accurately measures magnetic field of  $\pm 3\text{mT}$  (at  $25^{\circ}\text{C}$ ) with a super-fast 6us refresh rate — low offset and low jitter of only  $\pm 3\mu\text{s}$ .

With the integrated magnetic compensation of  $-1100\text{ppm}/^{\circ}\text{C}$ , the magnetic switching points become more sensitive to match the natural behavior of magnets with rise in temperature.

### More than Fully Protected

Reduce external components count and improve application reliability thanks to the protection bundle available in this new platform. Avoid frequent application mistakes with the built-in reverse voltage protection and output current limit with auto-shutoff — prevent overheating with the on-chip thermal shutdown — ensure proper operating condition with the under-voltage lock-out.

And all that comes with a robust 4kV ESD HBM protection — bringing a comfortable safety margin for module assembly or usage as well as outstanding EMC performance.

### Environmental Friendly

The MLX92211 offers a high performance non-contacting sensor solution respectful of the environment by being delivered in a fully "Green" compliant 3-pin Thin SOT package.

Bus ICs

BLDC Motor  
Control ICs

Pressure Sensors

Wireless ICs

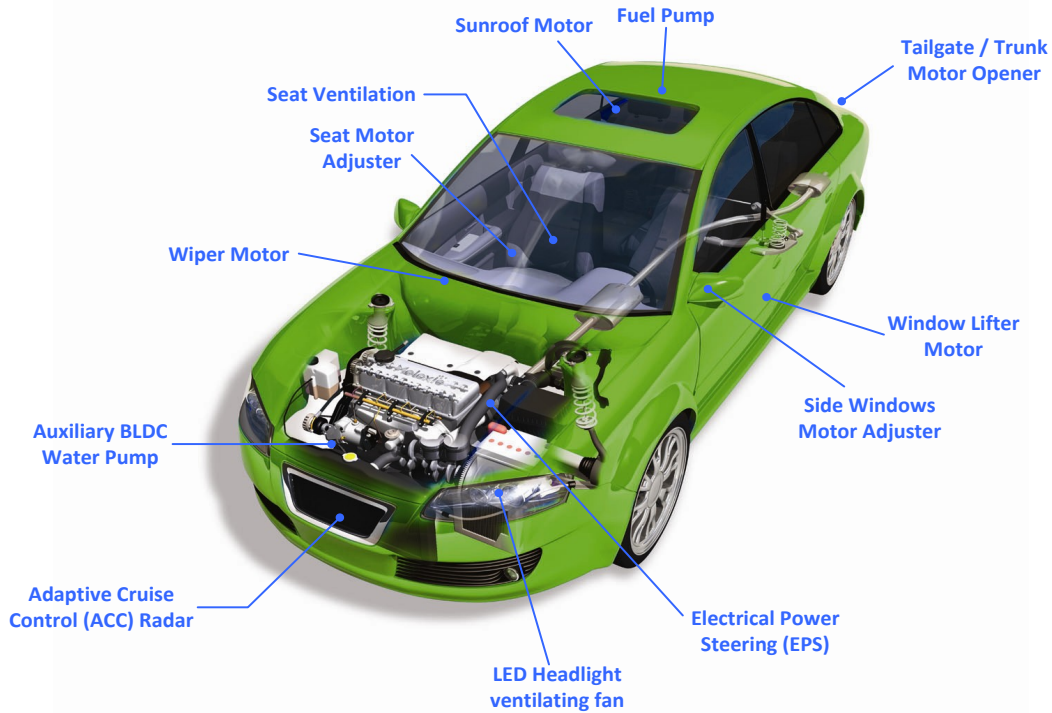
Hall Effect ICs  
And Sensors

Optoelectronic  
Sensors

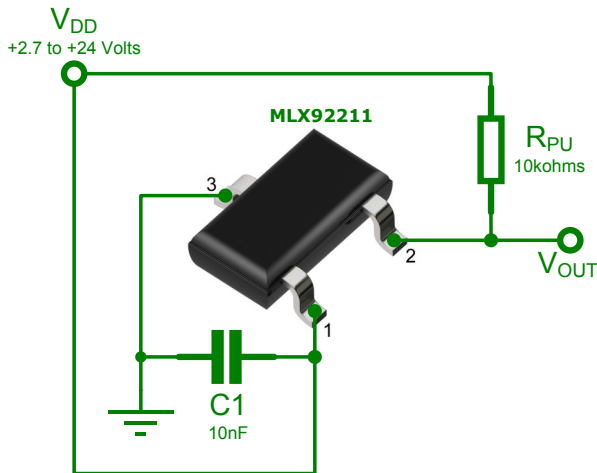
Sensor Interface ICs

IntraRed Sensors

# Automotive Application Examples



## Application Schematics & Package Pin-Out



SE Pin No	Name	Type	Function
1	VDD	Supply	Supply Voltage pin
2	OUT	Output	Open Drain Output
3	GND	Ground	Ground pin

## Features

- 2.7V to 24V Operating Voltage
- 40°C to +150°C Operating Temperature
- Ultra Dynamic Offset Suppression
- +/-3mT Very High Magnetic Sensitivity
- 1100ppm/°C Magnetic Compensation
- Reverse Supply Voltage Protection
- Output Current Limit with Auto-Shutoff
- Under-Voltage Lockout Protection
- Thermal Protection
- +4kV HBM ESD resistant
- Outstanding EMC performance
- Thin SOT23 3L Green Compliant package

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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- Bus ICs
- BLDC Motor Control ICs
- Pressure Sensors
- Wireless ICs
- Hall Effect ICs And Sensors
- Optoelectronic Sensors
- Sensor Interface ICs
- Infrared Sensors