

MLX91219

CONVENTIONAL HALL HIGH-SPEED CURRENT SENSOR

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DUAL OCD, LOW NOISE AND FLEXIBLE SUPPLY FOR INVERTER, AND BATTERY APPLICATIONS

MLX91219

The MLX91219 is a high-speed high-accuracy conventional hall current sensor simplifying module designs with a dual OverCurrent Detection (OCD) functionality, a flexible supply 3.3V/5V and an improved SNR. With the hall technology - using a ferromagnetic core - currents can be measured in the ranges of 200A to beyond 2000A.

The MLX91219 comes in 2 package variants: VA & SOIC8. The VA is a thin through hole package well suited for placement inside the core airgap, especially with the several Trim&Form options available. The thin package body combined with a high Signal-to-Noise Ratio (SNR) leads to unparalleled performance levels. Next to the classic VDD/OUT/GND pins, an OCD pin is offered which internalizes the sensor output's window comparator often required on automotive boards aiming to protect the power electronics from short circuits or overcurrents in general. This integrated feature saves board space and BoM cost, with a current level that can be programmed within or outside of the linear sensing range. The SOIC8 package offers the same electrical performance, with the difference of being a fully surface mount solution amended with additional package pins such as the VREF pin which enables either a non-ratiometric output mode or serves as an input pin defining the OAmp level around which the sensor will build the output signal.

APPLICATIONS

- Redundant monitoring of battery-management system (BMS)
- High Voltage Traction inverters (HV)
 - Phase current measurement
 - DC link current measurement
- ✓ 48V Boost-recuperation machines (48V)
 - Phase current measurement
 - DC link current measurement
- 🛇 DCDC Converter
- Smart Battery Junction Boxes
- Smart Fuse Overcurrent Detection



FOR MORE INFORMATION: WWW.MELEXIS.COM/MLX91219



KEY FEATURES

BLOCK DIAGRAM

HALL

SOIC8 only



DC fast charge

Clock

Х

Chopping

SOIC8 & SIP4-VA

EEPROM

DCDC converter

Reference

OCD_EXT

OCD_INT

Х

De-Chopping

 V_{DD}

Regulator

Traction inverter

 V_{REF}

V_{OUT}

VOC_EXT

OCD_EXT

OCD_INT

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GND