

Coreless external primary Hall current sensor IC

MLX91235



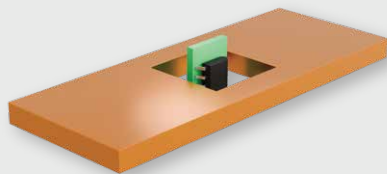
The MLX91235 is a smart high-speed coreless current sensor designed to revolutionize your power electronics designs. By eliminating the need for external ferromagnetic concentrators (C-cores or U-shields), it reduces system complexity and BOM.



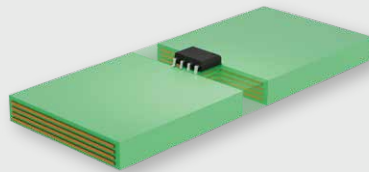
Key features



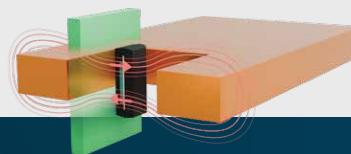
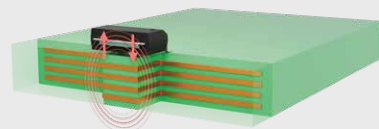
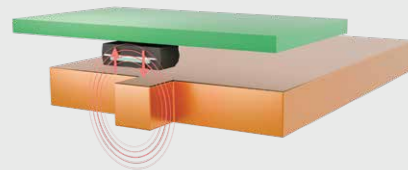
- ✓ Coreless technology
 - No need for a ferromagnetic concentrator (C-core, U-shield)
 - Get Melexis support to ensure the best mechanical integration
- ✓ DSP compensation for high accuracy
 - <0.5% thermal sensitivity drift from -40°C to 150°C
 - <1% total sensitivity drift (thermal&lifetime) from -40°C to 150°C
 - Limited noise degradation over temperature
- ✓ Open calibration via SPI
 - End-of-line programmable
 - For easy in-situ adjustment
- ✓ High-speed sensing
 - DC to 500 kHz bandwidth
 - 1.5 μ s response time
- ✓ Protection & diagnostics (via SPI)
 - Overcurrent detection (programmable, 1% accuracy) with fast detection (1.5 μ s)
 - Temperature monitoring
 - Self-test functionality
- ✓ Operating range
 - Supply 3.3V and 5V
 - Temperature from -40°C to 165°C
 - Ratiometric output
- ✓ ISO 26262 ASIL B compliant SEooC
- ✓ AEC-Q100 – Grade 0
- ✓ RoHS-compliant package SOIC-8 (die up)



Busbar (200-10'000 A)



Power PCB (<500 A)



Applications

- ✓ Inverter
- ✓ Battery Management System (BMS)
- ✓ Low voltage DC-DC converter
- ✓ Smart battery junction box
- ✓ Smart fuse
- ✓ Power distribution



[www.melexis.com/
MLX91235](http://www.melexis.com/MLX91235)

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