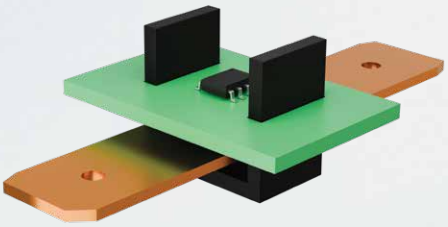
IMC-HALL® HIGH-SPEED CURRENT SENSOR

MLX91218

Unlock unparalleled precision and efficiency in your high-speed current sensing applications. The MLX91218, powered by IMC-Hall® technology, offers a compact, robust, and highly accurate solution for measuring currents from 1 A to 2000 A. Experience simplified module designs, enhanced signal-to-noise ratio, and dual OverCurrent Detection (OCD) functionality, all in a space-saving SOIC8 package. Discover how the MLX91218's flexible U-shield design and programmable features can optimize your power electronics systems and drive significant cost savings.

Key features

- Dual overcurrent detection
  - Internal threshold
  - External threshold
- Flexible Supply Voltage: 5V mode and 3.3V mode
- Selectable analog output: Ratiometric or fixed (Vref)
- High speed, Low noise
  - DC to 400 kHz bandwidth
  - 2µs response time
- Measurement range
  - AxL versions (Low field): 1 to 200 A
  - AxV versions (Very high field): 200 to 1200 A
  - AxX versions (eXtra high field): 200 to 2000 A
- IMC-Hall® Technology
  - Smaller, lighter solution than conventional Hall
  - Easy mechanical integration
  - Vertical stacking possible w/ existing control boards (PCBs)
- End-of-line programmable sensor
- High linearity down to ±0.5% full scale
- Very low thermal drift for wide temperature range
  - Offset drift (<5mV)
  - Sensitivity drift (<1.5%)
- Package RoHS compliant
  - SOIC-8 (DC) package, MSL-3
- AEC-Q100 – Grade 0 Automotive Qualified



XHF and VHF examples with standard shields

- AxV versions (Very high field): from 200 to 1200 A
- AxX versions (eXtra high field): from 200 to 2000 A

LHF examples with standard shields

- AxL versions (Low field): from 10 to 200 A

Applications

- Redundant monitoring of BMS
- High Voltage Traction inverters (HV)
- 48V Boost-recuperation machines (48V)
- DCDC Converter
- Smart Battery Junction Boxes
- Smart Fuse Overcurrent Detection

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