

MLX91217

CONVENTIONAL HALL HIGH-SPEED CURRENT SENSOR



The snout of the platypus is a sensory organ with electroreceptors in the skin of the bill, which allow him to detect the electrical field that gets generated when his prey contracts its muscles. With his 40,000 sensitive electronic sensors, this unique semi-aquatic egg-laying mammal represents our current-sensor.

BOOSTING ACCURACY AND DIAGNOSTICS FOR INVERTER AND CONVERTER APPLICATIONS

MLX91217

The MLX91217 is the Conventional Hall variant of the Melexis Gen 2.5 high-speed current sensor portfolio. It introduces three main changes over the Gen 2 MLX91209. To serve the ever more demanding automotive application requirements, our open-loop Hall-effect sensors are now increasing the accuracy of sensitivity and offset over temperature resulting in market-leading sensor accuracy. Next to this improvement, the diagnostic coverage was increased with the introduction of clamping and broken wire detection, in order to address applications with higher ASILs and/or connectors from e.g. sensor module to control board with ECU. Finally, on-chip filtering allows for an accurate trade-off between bandwidth/response time and higher resolution. The MLX91217 in SIP4-VA package is introduced with several Trim&Form options to facilitate sensor integration in the air gap of the ferromagnetic core. These provide greater flexibility to designers in the mechanical integration challenges that through-hole packages represent.

KEY FEATURES

- ✓ Higher accuracy
 - \pm Sensitivity Thermal Drift < 1% (33% improvement)
 - \pm Offset Thermal Drift < 5 mV (50% improvement)
- ✓ Increased diagnostic capability
 - Programmable Output Clamping
 - Broken Wire Detection
- ✓ Extended On-chip filtering options
- ✓ Automotive AEC-Q100 Grade 0
- ✓ High Speed
 - 250 kHz bandwidth
 - 2.5 μ s response time

- ✓ Custom factory trim options available
- ✓ Trim&Form options available



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