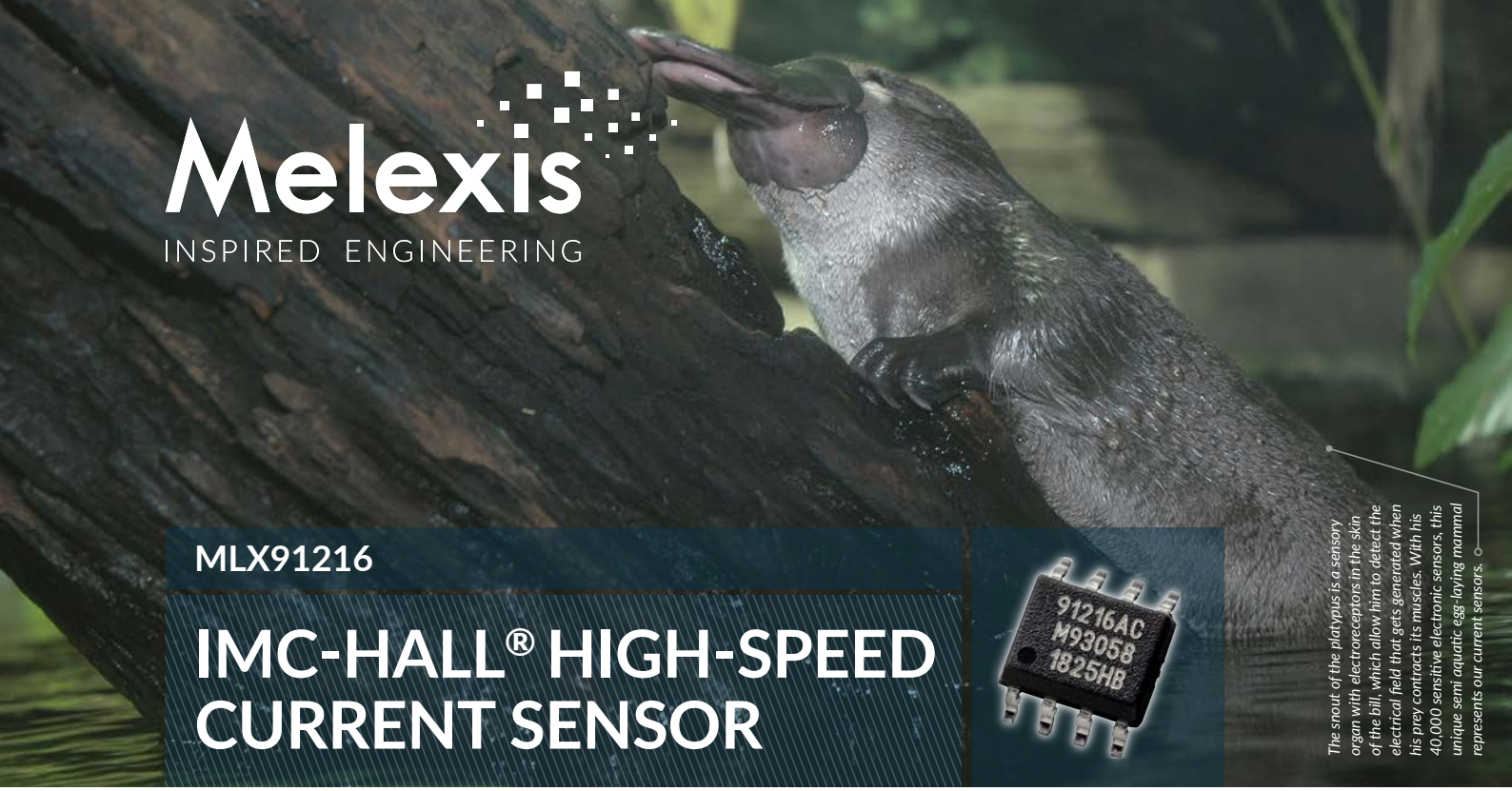
Melexis
INSPIRED ENGINEERING



MLX91216

IMC-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 sensors.

BOOSTING ACCURACY AND DIAGNOSTICS FOR INVERTER AND BATTERY APPLICATIONS

MLX91216

The MLX91216 is a IMC-Hall® high-speed current sensor portfolio serving the ever more demanding automotive requirements, especially for inverters/converters and battery applications. This open-loop Hall-effect sensor with increased accuracy of sensitivity and offset over temperature, is a market-leading sensor. 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 modules to control boards with ECU. Finally, on-chip filtering allows for an accurate trade-off between bandwidth/response time and higher resolution. The MLX91216 with the proprietary IMC-Hall® technology comes in a surface mount SOIC8 package and allows for a very compact and easy assembly with a shield. This IMC-Hall® technology provides the ultimate equilibrium in the mechanical, electrical and magnetic requirement matching for a seamless SMT manufacturing process.

KEY FEATURES

- High accuracy
  - ± Sensitivity Thermal Drift < 1%
  - ± Offset Thermal Drift < 5 mV
- Increased diagnostic capability
  - Programmable Output Clamping
  - Broken Wire Detection
- Extended On-chip filtering options
- Automotive AEC-Q100 Grade 0
- High Speed
  - 250 kHz bandwith
  - 2 µs response time
- Custom factory trim options available
- High Field, Very High Field and eXtra High Field variants for full-scale current ranges spanning 200 to > 2000 A

V3/27-01-2021