Melexis
INSPIRED ENGINEERING

Oilbirds navigate by echolocation. They produce a high-pitched clicking sound of around 2 kHz which is audible to humans. With the ability to transmit and receive information to sense their position, the oilbirds represent our inductive position sensors.

MLX90517

HIGH-SPEED INDUCTIVE INTERFACE IC ANALOG OUTPUTS

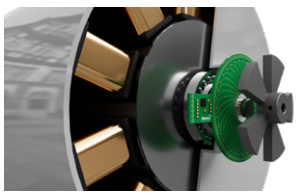
AUTOMOTIVE RESOLVER FOR E-MOTORS

MLX90517

The MLX90517 is an accurate inductive high-speed resolver interface for e-machine (BLDC, PMSM, PMSR...) used as traction motors or auxiliary motors (steering, braking). The MLX90517 is designed to interface an inductive transducer and to provide raw sine & cosine signals which must be compensated by the ECU prior to angle calculation. The MLX90517 (off-chip calculation) complements the MLX90510 (on-chip calculation).

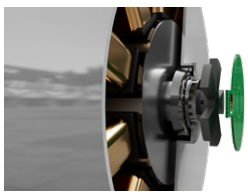
KEY FEATURES

- High accuracy: maximum ±0.36°
- Immune to magnetic stray fields (ISO 11452-8)
- ISO26262 ASIL C SEooC (Safety Element out of Context)
- High-speed operational up to 660000 e-rpm
- Differential sine and cosine analog outputs
- 5V operating supply voltage
- Overvoltage and reverse-polarity protection:-24V to +24V maximum
- Ambient operating temperature Range from -40°C to 160°C
- Through-Shaft, End-of-Shaft and Side-of-Shaft operation
- TSSOP-16 Package RoHS Compliant



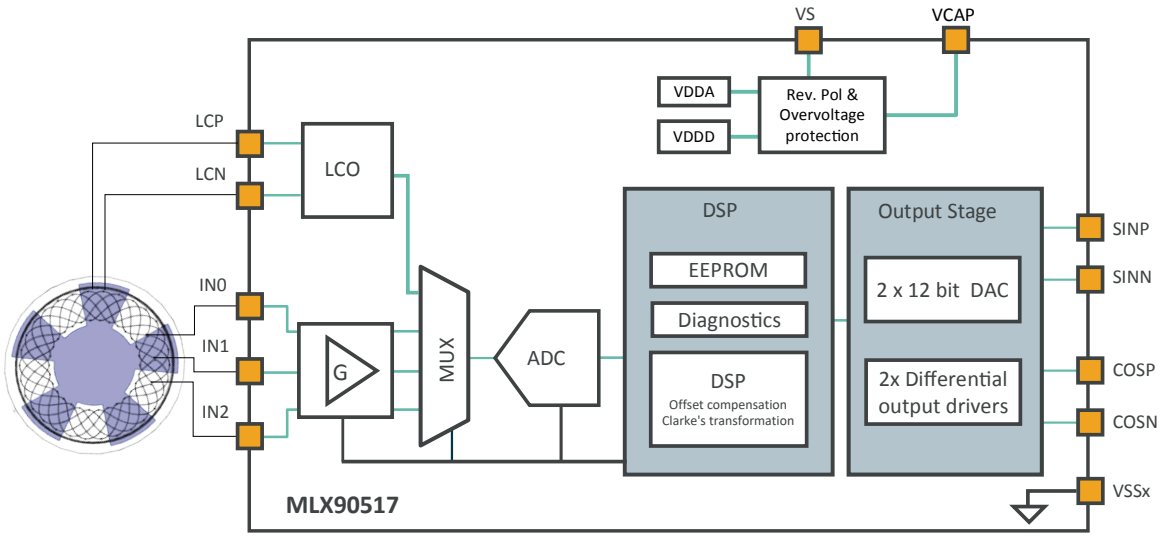
Through-shaft

Side-of-shaft



End-of-shaft

BLOCK DIAGRAM



APPLICATION VISUAL