



MLX90340

ANALOG RATIOMETRIC / PWM

TRIAxis®  
POSITION SENSOR



While hunting, the Arctic fox uses the magnetic north to locate its prey beneath the snow. No wonder it is the perfect metaphor for our wide portfolio of magnetic sensors. In addition, the Arctic fox lives in some of the coldest places on earth. Yet, it does not start to shiver until the temperature drops to  $-70^{\circ}\text{C}$ . Being able to function in even the most extreme weather conditions is a feature it shares with our products.

## FLEXIBLE SENSING FOR INDUSTRIAL SOLUTIONS

The MLX90340 is an absolute position sensor based on the Melexis Triaxis® Hall technology targeted for various applications in consumer and industrial markets. With a reduced set of core parameters compared to other Triaxis sensors in the portfolio, the MLX90340 only targets the essential: position sensing with the greatest ease of designing a magnet. It still offers the best flexibility to measure a 360 degrees rotational (end-of-shaft or through-shaft) and up to a  $\pm 20$  mm linear magnet movement.

### KEY FEATURES

- ✓ Absolute position sensor -  $\pm 1^{\circ}$  accuracy - 12 bits resolution
- ✓ Programmable linearization algorithm: arbitrary points (4 points) or 17 points piecewise linear output compensation
- ✓ Programmable magnetic mapping XY, XZ, YZ
- ✓ 5 V supply
- ✓ Magnet field range from 20 to 70 mT
- ✓ SOIC-8 package and redundant TSSOP-16 package
- ✓ Temperature range:  
Heavy-duty industrial  $[-40$  to  $150^{\circ}\text{C}]$  -  
Industrial  $[-40$  to  $85^{\circ}\text{C}]$  -  
Consumer  $[-20$  to  $85^{\circ}\text{C}]$
- ✓ Ratiometric Analog output or PWM Open drain/  
Push-pull output  $[100$  Hz to  $1$  kHz]
- ✓ 4 different pre-programmed analog version  $[90, 180, 270, 360^{\circ}]$

## APPLICATIONS

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### ✔ Motorcycle

- electronic throttle body
- throttle handle sensor
- transmission sensor



### ✔ Heavy-duty industrial

- thumbwheel sensor
- height sensor
- 1-d joystick



### ✔ Consumer

- mix table fader
- gaming
- drones
- potentiometer replacement

