

# Melexis

INNOVATION WITH HEART

MLX92442

## 2-3-WIRE INDUXIS® LATCH & SWITCH

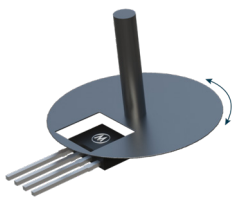
### INDUCTIVE SWITCH WITH FULLY INTEGRATED COILS

MLX92442

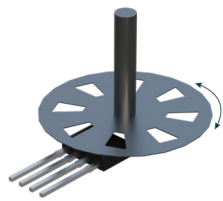
The MLX92442 is a revolutionary inductive latch & switch designed to detect the presence of an electrically conductive target (e.g. metal). This novel solution, called **Induxis®**, overcomes traditional bulky inductive designs and reduces component count (no PCB/no external coils, no magnet/no holder). The smart switch/latch operation is established by simply defining the motion and the shape of the target. Sensing metal has never been easier!

#### Induxis®

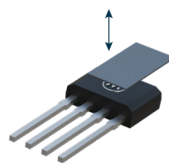
- ✓ Contact-less
- ✓ Magnet-less
- ✓ Strayfield immune
- ✓ Integrated coils



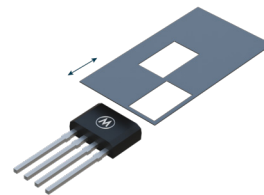
Rotary



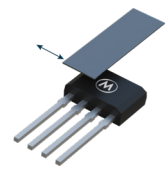
Rotary speed sensing



Push



Linear differential



Linear

#### KEY FEATURES

- ✓ Induxis® Innovative technology
- ✓ Stray-field immune
- ✓ Integrated coils and no need for PCB
- ✓ Wide operating voltage: 3.5 V to 18 V
- ✓ Operating temperature: -40°C to 150°C
- ✓ Airgaps of up to 1.5 mm
- ✓ Push-button with memory functionality
- ✓ Current wire interface (2-wire) or open drain output (3-wire)
- ✓ ISO26262 ASIL A SEooC (Safety Element out of Context)
- ✓ Packages, RoHS compliant
  - TO92-4L (VK), through-hole (THD)
  - SOIC-8 (DC), surface mount (SMD)
- ✓ Protections
  - Reverse supply voltage
  - Under-voltage lockout
  - Thermal
  - Integrated self-diagnostic functions

## APPLICATIONS

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- ✔ Charging flap
- ✔ Hood/Trunk latch
- ✔ Brake light switch
- ✔ Door lock & handle
- ✔ Inverter Interlock
- ✔ Seatbelt buckle
- ✔ Seat positioning
- ✔ Transmission applications
- ✔ Gear tooth sensing
- ✔ Speed-sensing (motorcycles)
- ✔ Bank angle sensor (motorcycles)
- ✔ Push-button / Radio-button



Charging flap open/closed



Hood/Trunk latch



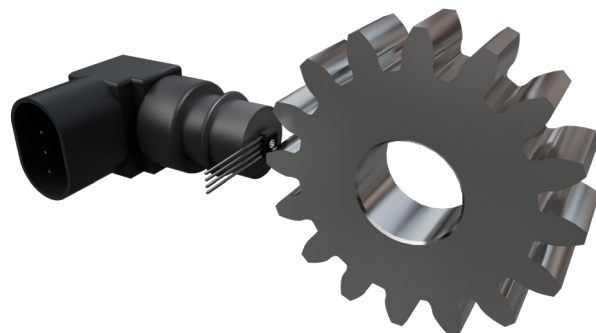
Inverter interlock



E-pedal switch



Inductive proximity sensor



Geartooth sensing