

Contactless Pedal Position Sensor Example

www.ams.com



Typical Applications: Acceleration pedal for electronic throttle control systems

- Best-in class stray field immunity
- High-performance, superior durability
- Adherence to the most stringent safety requirements (ISO26262)



For more information, please visit:
www.ams.com/Magnetic-Position-Sensors

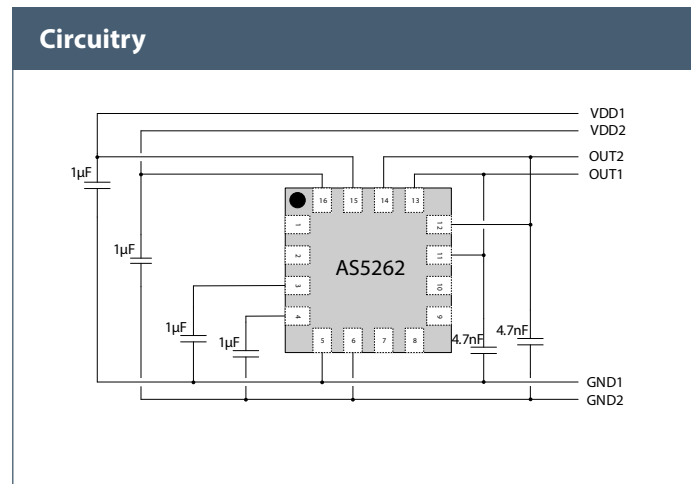
We provide innovative
analog solutions to
the most challenging
applications in sensor
and sensor interfaces,
power management,
and wireless.

General Description

The AS5262 sensor IC solution inside the pedal module is a contactless Hall-based magnetic position sensor that delivers highly accurate angular measurements over a full turn of 360°. The AS5262 (with analog voltage output) offers best-in-class automotive safety features, enabling vehicle manufacturers to qualify for ISO26262 safety compliance. The solution is highly integrated and can be used with a low-cost ferrite magnet.

Also, the AS5262 is tolerant of magnet misalignment and variances in the air gap from one unit to another. As with all of ams' position sensors, the AS5262 comes with proprietary differential-input technology that ensures immunity to magnetic stray fields and makes expensive external shielding unnecessary. Overall, AS5262 sensor solution is ideal for vehicle manufacturers seeking to lower their bill-of-materials and assembly costs.

Typical Specifications	
Electrical	
Linearity (absolute)	1%
On-axis Rotation Range	programmable
Typical Supply Voltage	5 VDC
Failure diagnostics	Broken Wire (GND and VDD) Overvoltage Protection Short circuit Protection
Environmental	
Automotive qualification	AEC-Q100 grade 0
Operating temperature range	-40° to 150°C (sensor IC)
Sensor Details	
Name	AS5262 (ams AG)
Type	On-axis redundant magnetic position sensor based on Hall-effect technology

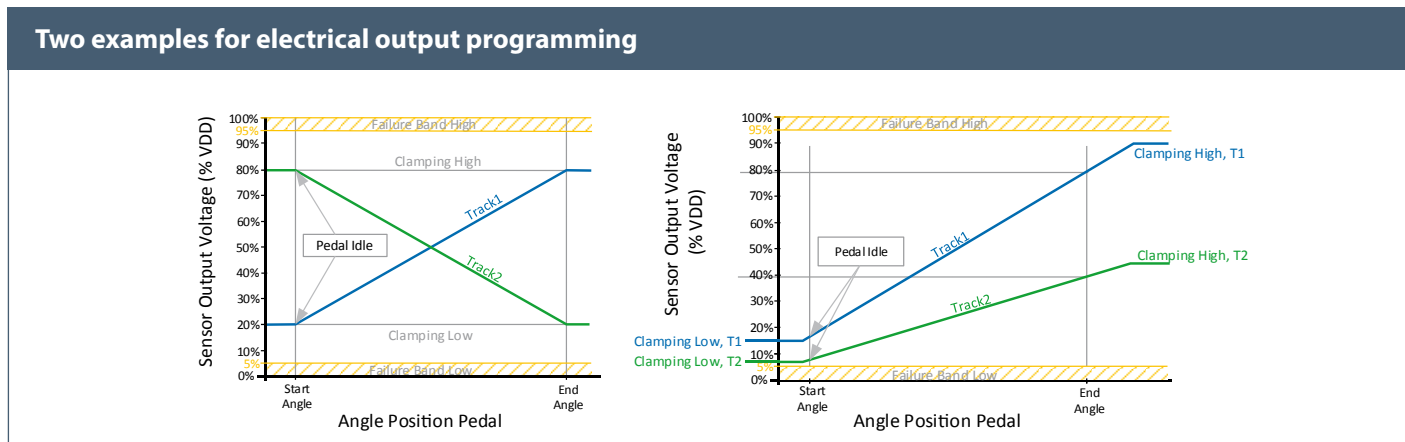


Features/Benefits

- Fully redundant, dual output Hall-effect sensor
- Programmable output signals
- Digital or analog output signals available
- Contactless position sensing
- Failure diagnostics
- Absolute magnetic strayfield Immunity

Recommended Magnet

Specification: Diametric magnetization direction, surface magnetization



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