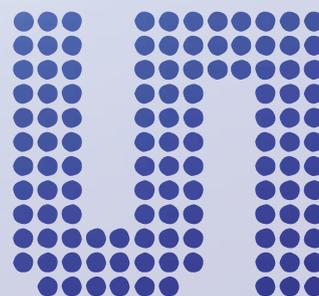


Product Document

Small & Low Power

www.ams.com/AS5050A

www.ams.com/AS5055A



AS5050A – Smallest 10-bit Magnetic Rotary Position Sensor

AS5055A – Smallest 12-bit Magnetic Rotary Position Sensor

- High resolution: 10-bit / 12-bit
- Low power consumption – ideal for battery powered devices
- Immune to external magnetic stray fields
- Small size: 4 x 4mm QFN package

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

General Description

The AS5050A/AS5055A is a single-chip magnetic rotary position sensor IC with low voltage and low power features. It includes 4 integrated Hall elements, a high resolution ADC and a smart power management controller. The angle position, alarm bits and magnetic field information are transmitted over a standard 3-wire or 4-wire SPI interface to the host processor. The AS5050A/AS5055A is available in a small QFN 16-pin 4x4x0.85mm package and specified over an operating temperature of -40 to +85°C.

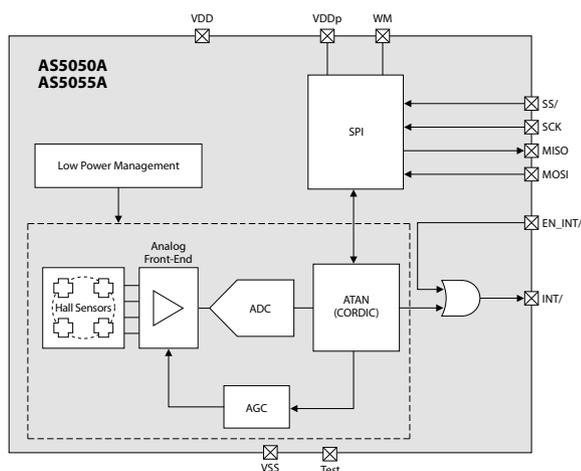
Applications

- RC-Servo motor control
- Robotics
- Rotary knobs
- Rotary Position Sensor for battery operated portable devices

Features

- 10-bit (AS5050A) / 12-bit (AS5055A) resolution
- 3µA current consumption in low power mode
- Immune to external magnetic stray fields
- Interrupt indication for availability of new data
- QFN-16 4x4 package
- SPI interface, 3 or 4 wire

AS5050A/AS5055A Block Diagram



Benefits

- Precise and reliable absolute angle measurement
- Very low power consumption
- High reliability sensing in harsh environments
- Synchronization between microcontroller and sensor
- Ideal for small and compact designs
- Easy to use with SPI interface

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