



MS5837 - Small absolute pressure sensor with high resolution for 2 or 30 bar

AMSYS GmbH & Co. KG, Mainz, December 2021 – With the air pressure sensor MS5837, AM-SYS offers two pressure range variants of a miniaturized pressure sensor for absolute pressure with high resolution. The sensors are calibrated and provide the measured values as I²C digital output signal.



MS5837 digital absolute pressure sensor

The reflowable air pressure sensors are designed for pressure ranges of 300–1'200 mbar (MS5837-02BA03) and 0–30 bar (MS5837-30BA) and are protected with a gel coating. In addition to the pressure, they also measure the temperature.

The MS5837 consist of a piezoresistive pressure cell and an amplifier A/D-interface-IC, housed in a QFN package (3.3 x 3.3 x 2.75 mm³). The metal top protects the electronic components and facilitates O-ring mounting.

The sensors convert the measured pressure- and temperature-dependent signal of the measuring cell into a 24-bit data word, then stored in the EPROM. In addition, 6 individual coefficients are stored, allowing a highly accurate software correction for the pressure and temperature measurement by an external microprocessor. The I²C interface is used for serial communication with the microprocessor.

MS5837 sensors are intended for applications within a digital system. With an existing processor at system level, temperature can be easily calculated.

AMSYS offers as further variants the MS5839, with chlorine-resistant gel protection and a grove board that can be used to quickly evaluate sensors and build prototypes.

[MS5837 – small absolute pressure sensor for 2 or 30 bar with high resolution](#)

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Metadata

Title

MS5837 – small absolute pressure sensor for 2 or 30 bar with high resolution

Outstanding features

- Pressure ranges absolut: 300–1'200 mbar or 0 – 30 bar
- Temperature range: -40..+85 °C
- Resolution pressure: 0.016 mbar (MS5837-02BA03) / 0.2 mbar (MS5837-30BA)
- Resolution temperature: 0.002 °C
- Supply voltage 1.5–3.6 V
- Low power consumption: 0.6 µA (standby <0.1 µA)
- I²C interface
- Ceramic substrate with metal cap: 3.3 x 3.3 x 2.75 mm³
- RoHS and REACH compliant

Company

AMSYS GmbH & Co. KG is a medium-sized company based in Germany and has its focus on the field of sensor technology. As a distributor for sensors, AMSYS is one of the specialists in pressure measurement technology on the German-speaking market.

The product range extends from piezoresistive pressure sensing elements, simple SMD mountable transducers, amplified/unamplified and matched OEM sensors, PCB modules, to ready-to-use pressure transmitters.

AMSYS offers sensors and pressure cells in the pressure range from 1.25 mbar up to 800 bar. In addition to a wide variety of pressure sensor types, AMSYS also offers OEM humidity sensors, temperature and inclination sensors, and wireless Bluetooth solutions.

Due to the technical competence of the employees and the good contact with suppliers, customer-specific modifications of the standard products can also be offered, allowing individual problem solutions. Further information can be found on www.amsys-sensor.com.

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