



Analog - Digitale
Mikromechanische
Sensorsysteme

Technology of the future

The newest generation of pressure sensors with 24-bit resolution

24-bit module MS5803 for barometric pressure sensing

AMSYS (<http://www.amsys.de>) is now launching the new **MS5803-01BA** 24-bit pressure sensor module from MEAS Switzerland S.A. (formerly Intersema Sensoric S.A.) for the precision measurement of barometric pressure.

The **MS5803** belongs to the newest generation of high-resolution altimeter sensors with an SPI and I²C bus interface. Sensor module **MS5803** is based on the tried-and-tested MS5540 altimeter and has the same dimensions (6.4 x 6.2 x 2.88 mm³) and identical constructional features.

In the **MS5803** a 24-bit $\Delta\Sigma$ ADC converts the measured pressure and temperature-dependent voltage from the highly linear sensing element into a 24-bit data word. Additionally, individual coefficients are stored in the internal PROM which enable extremely precise software correction for pressure and temperature measurement using an external microprocessor. An I²C interface or SPI permits communication with this microprocessor.

The sensor module provides various programmable modes of operation, allowing users to adjust the speed of conversion and the power consumption in their application.

With the 24-bit ADC a resolution of 0.012 mbar is achieved without filtering, which corresponds to a height of 15 cm. The temperature sensor implemented here, with its resolution of 0.02°C, permits high-resolution temperature measurement. The **MS5803** requires no additional external components.

Another positive feature of sensor module **MS5803** is its extremely low power consumption of 1 μ A (standby < 0.15 μ A) and a wide supply voltage range (1.8 to 3.6 V). It is thus particularly suitable for mobile applications.

The **MS5803** module has been designed for a pressure range of 10–1,300mbar and for temperatures of -40 to 85°C.



New sensor module **MS5803** is suitable for precision altimeter and barometric applications. Thanks to features such as its small size, low power consumption, and high stability it can be used in devices powered by battery without any problem whatsoever.

The moisture-protective gel on the sensing element and the non-magnetic stainless steel cover allow it to be used in waterproof sports and multifunctional watches, as well as in mobile weather stations, aeronautical equipment, and model making.

MS5803 has been designed for those users who require a resolution greater than that of the familiar MS5540.

Contact: info@amsys.de or +49 (6131) 469-8750