



Measure Low Pressures Analog or Digital with the AMS 5812 Pressure Sensor



AMSYS GmbH & Co. KG in Mainz (<https://www.amsys-sensor.com>) expands its series of ready-to-install micromechanical silicon pressure sensors AMS 5812 with two new models in the low-pressure range. Newly added to the standard portfolio are the differential pressure sensor AMS 5812-0004-D with a pressure range of 0...0.4 psi and the bidirectional differential pressure sensor AMS 5812-015W-D-B with a pressure range of -1.5...1.5 inches of water (approx. -0.05...0.05 psi), primarily used in medical and HVAC applications.

The AMS 5812 series sensors are amplified, calibrated, and compensated pressure sensors for PCB mounting, featuring both an analog and a fully digital output. The analog output is ratiometric to the supply voltage and provides a pressure-dependent output voltage of 0.5...4.5V at 5V supply voltage with a resolution of 11 bits. The digital output is implemented via an I2C interface, which provides the measured pressure and sensor temperature as fully calibrated 15-bit data values.

The AMS 5812 pressure sensors are available for all pressure types (absolute, gauge, and differential pressure) in various configurations and pressure ranges from 0.05 psi to 100 psi. They come in a ceramic dual-in-line package (15 x 15 mm²) with vertical pressure ports, without pressure ports for O-ring mounting, or with custom pressure port configurations.

Additionally, the AMS 5812 can be used as a replacement for the SM5852 and SM5812 sensor series. The sensors share the same dimensions and pinout and offer similar functionalities.

The AMS 5812 stands out due to its combination of measurement speed and achieved accuracy and can be used universally with its analog and digital output: as a purely analog pressure sensor, as a digital sensor for pressure and temperature, or especially in safety-critical applications where both outputs are used in parallel. Since the analog and digital outputs of the AMS 5812 are independent of each other, they continue to function if one output stage or its connected system fails, ensuring the overall system's functionality.

Typical applications for the AMS 5812 series sensors include medical technology, such as spirometers, ventilators, or insufflators, as well as home and HVAC technology, flow measurements, and use in plant engineering and automation industries.



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AMS 5812 at a Glance

- Relative, absolute, and differential pressure ranges: 0.075 psi to 30 psi
- Temperature range: -25...+85 °C
- 5 V supply voltage
- Analog output and I²C bus interface
- Temperature output via I²C bus
- Calibrated and temperature compensated
- High accuracy
- RoHS and REACH compliant
- Product made in Germany
- USB starter kit available for easy setup, testing/measurement, and I²C adjustment