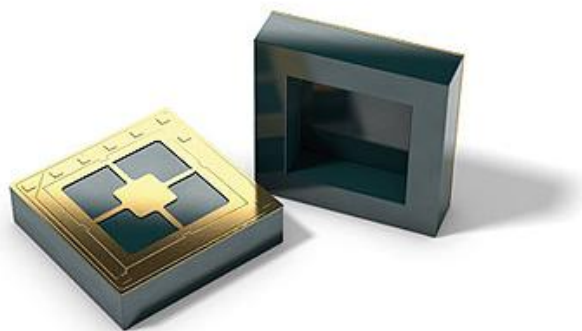


High-Precision Pressure Measurement with AMSYS Pressure Sensor Series

AMSYS offers a broad portfolio of micromechanical silicon-based pressure sensor dies (MEMS), which have already proven their reliability millions of times in ventilation technology (HVAC), medical technology, and the automotive industry. This technology has largely replaced mechanical pressure sensors with elastic membranes and enables highly precise measurement of even the lowest pressures.



The rigid center of the MEMS and the maximized membrane surface are clearly visible in the low-pressure die SM9520A, despite its compact edge length of only 2.1 mm

The SM9520A is particularly suited for measuring ultra-low differential pressures ranging from below 0.15 psi to 1.5 psi (10 mbar - 100 mbar). Thanks to an innovative microstructuring of the sensor die, a rigid membrane center has been integrated, allowing increased deflection in the membrane's peripheral areas. Additional masking and etching at the final stage of production create a relief-like structuring of the membrane's back side and a symmetrical surface thickening. This enhances the SM9520A's sensitivity to up to 300 mV/psi, while maintaining an exceptionally high linearity of $\pm 0.1\%$.

In addition to pre-packaged sensors, AMSYS also offers bare MEMS pressure sensor dies, which, due to their compact design, are ideal for integration into high-volume devices. These pressure dies provide an even better fit within available installation space compared to conventional SOIC sensors.

For nearly 30 years, AMSYS has been supplying pressure sensor dies for all pressure types and ranges. The product range includes differential, relative, and absolute pressure sensor dies, with the latter also designed for harsh environments. One standout product is the SM97A, developed as the successor to the SM98A for 150 and 300 psi (10 and 20 bar) applications.

The product portfolio is further complemented by the SM30F differential pressure die (successor to the SM30G) and the ultra-compact absolute pressure die SM5108E, available in variants for 30, 60, and 100 psi (2, 4, and 7 bar). With this extensive selection, AMSYS offers the ideal solution for applications that demand the highest levels of precision and sensitivity.

Press Release

AMSYS GmbH & Co. KG



Title

High-Precision Pressure Measurement with AMSYS Pressure Sensor Series

Applications

- Patient Monitors
- Blood Pressure Monitors
- Oxygen Concentrators
- Fluid Suction Systems
- Ventilators
- Industrial Controls
- Compressors & Pumps
- Pressure Switches
- Household Appliances
- Pneumatic Measuring Devices
- Handheld Measuring Instruments
- Barometric Measurement

Product Page

<https://www.amsys-sensor.com/products/ceramic-and-silicon-pressure-measuring-cells/sm9520a-low-pressure-sensor-die/>

The Company

AMSYS GmbH & Co. KG is a German company specializing in sensor technology, particularly pressure measurement. Its product range includes pressure sensors from 1.25 mbar to 800 bar, as well as humidity, temperature, and inclination sensors, along with wireless solutions. In addition to standard products, AMSYS offers custom adaptations to meet specific customer requirements.

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