



AMS 4711 – Ready-to-use pressure sensor for mechanical and plant engineering



Figure: Differential/relative pressure sensor AMS 4711

The ready-to-use pressure sensors in the AMS 4711 series combine silicon element microstructuring with microelectronics to create calibrated, high-precision, temperature-compensated pressure sensors in a miniature format of 35 x 25 x 13.5 mm³.

AMS 4711 devices are ready for use in interior and exterior assembly without the need for any additional components. They come with an industrial 0...5 V output and include industrial protection circuitry, such as protection against reverse polarity.

AMS 4711 sensors are available in pressure ranges of 5, 10, 20, 50, 100, 200, and 350 mbar for differential and relative measurement. Bidirectional differential sensors can also be supplied for these ranges and are capable of measuring both

differential negative and positive pressures of ± 5 mbar, for instance. Absolute, differential, and relative versions are manufactured for the 1 and 2 bar ranges. Sensors of 0.7 to 1.2 bar are also obtainable for barometric pressure sensing.

The sensors are suitable for the entire supply voltage range of 7 to 36 V.

The offset and span are calibrated and the offset and span drift are compensated for during manufacture with the help of an integrated, digital sensor signal processor. This electronic calibration ensures that a high level of accuracy is achieved at room temperature and that the total error across the entire operating temperature range is low. With the low pressure sensors (20, 50, and 100 mbar) and standard pressure sensors (≤ 200 mbar) a deviation in accuracy of $\pm 01.0\%$ FSO maximum is obtained at room temperature (non-linearity, reproducibility, pressure hysteresis, and calibration errors). For the lowest pressure sensors (5 and 10 mbar) this value has a maximum of $\pm 1.5\%$ FSO.

The total error (accuracy including the temperature error) within a temperature range of -25°C to 85°C is $\pm 1.5\%$ FSO maximum for the standard pressure sensors, $\pm 2.0\%$ FSO maximum for the low pressure sensors, and just $\pm 2.5\%$ for the lowest pressure sensors (5 and 10 mbar).

The sensors conform with protection class IP 67 and can be used both in interior and exterior assembly. Their design and simple installation (which requires just two screws) make them ideal for surface mounting in the field of mechanical engineering. If mounted vertically, with the pressure connectors facing down, AMS 4711 devices can also be used for level sensing in water cisterns and tanks.

Typical applications include air flow measurement, barometric pressure sensing, detection of negative and positive pressure, vacuum control, and the measurement of gas pressure and gas flow.

For further information, visit www.amsys.de.

2.917 Anschläge lt. Aufzählung im PC ("Zeichen mit Leerzeichen")
÷ 50 Anschläge pro Zeile

= **58 Zeilen**

Datum: 23.01.2012

Datei: AMS 4711 _EN.DOC