



Smallest differential pressure transmitter worldwide with an extended range

TDK-EPC, a group company of the TDK Corporation, presents the EPCOS MiniCell™ series of pressure sensor transmitters, now with an extended range. Now these smallest media-separated differential pressure transmitters worldwide are available for unsymmetrical measurement ranges

from 0 to 500 hPa and 0 to 2500 hPa. In addition, variants are offered for symmetrical measurements from -500 to +500 hPa and -2500 to +2500 hPa.

With dimensions of only 19.6 x 16.2 x 11 mm³ the differential pressure sensors feature a compact design. Two stainless-steel membranes are incorporated to separate the media. All MiniCell variants have a small oil volume and use a single chip approach for genuine differential pressure measurement. This enables showed high accuracy and reproducibility of the measurements.

The stainless steel membranes and supports also make them suited for use in aggressive media. The electronics of the MiniCell transmitter are hermetically sealed in inert oil inside the ceramic package. The transmitters are designed for a broad temperature range from -40 to +140 °C.

At a supply voltage of 5 V, the transmitters supply an analog output voltage of between 0.5 and 4.5 V. The maximum measurement error is only 1.5 % FS (full scale) over the entire temperature range.

Applications of the MiniCell transmitter include process engineering, the chemical, food and water industries as well as aviation measurement systems. In addition to standard versions, customer-specific housings are also available for standalone applications.

Glossary

- Differential pressure: a measure of pressure difference. This method is used for applications such as barometric altitude measurement.
- Transmitter: a transducer that converts the signals supplied by a sensor into standardized output signals. Digital transmitters can also equalize nonlinearities of the sensor signal. Typical output signals are 0 to 5 V or 4 to 20 mA.

Main applications

- Differential pressure measurement in process engineering, the chemical, food and water industries as well as aviation measurement systems.

Main features and benefits

- Pressure ranges from 0 to 500, 0 to 2500, -500 to +500, -2500 to +2500 hPa
- Compact dimensions of only 19.6 x 16.2 x 11 mm³
- Stainless-steel case allows their use in aggressive media