

With its in-house Parylene process, All Sensors successfully coats pressure sensors as low as ± 1 -in H₂O (± 0.036 psi) full scale (FS) with sensitivities in the range of 4.5mV/V/in H₂O.

Examples of Sensors with Parylene Protection in Harsh Environments

In addition to medical applications, where it has been used for over 40 years, Parylene is ideal for industrial applications such as flow controllers, gas/propane appliances and more.

Medical Applications

Since Parylene is chemically inert, it is biocompatible and safe to use as a coating for medical equipment. Also, it has minimal potential for infection or distorting data readings. Parylene retains its compositional stability and performance in the presence of bodily fluids and tissues. During medical procedures, instruments coated with parylene can be safely used in less accessible, more-constricted regions of the body than those with alternative coatings.

Industrial Applications

Monitoring or controlling methane, the primary constituent of natural gas, are natural applications for Parylene protected pressure sensors. For flow control, a sensor with a range as low as ± 1 -in H₂O (± 0.036 psi) may be required. As the cleanest burning fossil fuel, methane has great potential as an alternative to other fossil fuels. Controlling and monitoring methane, especially to detect leakage is essential for its safe usage.

Propane appliances are another targeted industrial application for Parylene-protected pressure sensors. In fact, any low-pressure measurement in an industrial control environment could benefit from the stability and performance abilities of a low-pressure sensor with Parylene protection.

Summary

Successfully surviving a wide range of applications requires addressing all of the application's key parameters. For pressure sensors, this include the proper protection for harsh and sometimes corrosive media. For over 40 years, Parylene has been used to provide this protection to pressure sensors and other electronic products. Parylene coating can be found as an option on a wide variety of All Sensors' products. Interested users should contact the factory regarding an application requiring parylene coating.