



Has your pH sensor ever dried out?

One of the more common issues that can impact upon the effective service lifetime of pH sensors and ORP sensors is if they are left to dry out. When using competing pH sensors and ORP sensors this means that a replacement must always be purchased if they are left dry in air for any significant period of time. In contrast, pH sensors & ORP sensors manufactured by Advanced Sensor Technologies (ASTI) offer two levels of resistance for sensors being left dry in air significantly reducing the operating cost for operating such pH measurements.

The first level of dehydration resistance is built into all standard models and allows for recuperation of the sensor through a well-tested procedure that yields back a working pH sensor or ORP sensor within a relatively brief period of time. This recuperation procedure has been successfully used to minimize costs due to mistakes such as leaving the pH sensor stored in the warehouse without a protective cap, left dry in the air out of the tank or else left installed in the process line or tank after it was drained without first removing the sensor from service. This first level of dehydration resistance is perfect to avoid costly replacements for situations where the design of the process is such that the sensor will normally stay wetted but may be accidentally left dry from time to time. This first level of dehydration resistance can be achieved while maintaining full compatibility with most any third-party OEM pH transmitter or ORP transmitter that is currently installed.

The second level of dehydration resistance is achieved with an altogether novel special design that is engineered from the ground up for continuous exposure to dry conditions with only intermittent periods of wetness where pH or ORP measurements are to be performed. This style of pH sensor or ORP sensor is invoked with the "Extreme Dehydration Resistant" option which is indicated by an "E" in the alpha prefix of the ASTI pH sensor or ORP sensor part number. This novel "Extreme Dehydration Resistant" functionality is accomplished by means of a completely water-free solid-state conductive polymer reference technology that is built upon the foundation of over three decades of proven field service of the core reference design concept. This "Extreme Dehydration Resistant" style is ideal for situations where it cannot be ensured that the sensor will stay wetted due to restrictions of the process installation scheme or very limited operator availability such as in rather remote locations. Use of the "Extreme Dehydration Resistant" feature requires mating with a suitably configured ASTI supplied pH transmitter or ORP transmitter.

Advanced Sensor Technologies manufactures advanced electrochemical sensors and transmitters for pH, ORP, ion selective (ISE), conductivity and dissolved oxygen (DO) measurements for use in a wide variety of industries such as mining, semiconductor, wastewater treatment, chemical manufacturing, food & beverage, dairy, pulp and paper, municipal and environmental monitoring.