

Application Notes

Differential Sensor Life Expectancy

In comparison to a conventional combination sensor

If a combination pH sensor lasts 6 months, Eutech differential sensor, with its large reference chamber volume (14mL) will last 2 to 5 times longer when contamination of the reference solution is the mode of failure. The differential pH sensor life is further extended when the sensor is recycled by replacing the salt bridge. In total, the differential sensor life is **5 to 10 times that of a combination sensor** because it can be refurbished.

The lifespan of a pH sensor also depends on the process. Where sulfates are present (for example), the differential sensor will last 10 times longer than the combination sensor without maintenance because of the salt bridge and the buffered reference.

When the mode of failure is abrasion or wear of the active electrode, the life of the differential sensor is still 1 to 2 times better than the standard combination sensor. The differential sensor active electrode has a low profile and a smaller surface area that helps to reduce wear and tear.

