

Technical Information pH Sensor

Dear SIGRIST Customer,

We have received various questions regarding the lifetime of the pH Sensor installed in our WMU system ScrubberGuard. With this technical information we would like to explain its working principle and some aspects regarding the lifetime of this pH sensor.

PH measurement is originally built as a potential measurement. That means there is a measuring electrode that is inside the medium to be measured and a reference electrode inside a reference solution, in between is a highly sensitive voltmeter that is connected to the analysis electronics. This two-electrode design is big, old and needs a lot of maintenance from experienced staff.

As result, a combined sensor was designed. The measuring electrode and the reference electrode are combined in one single sensor as well as the electronics. This provides a compact plug & play sensor without the need of critical solution handling. This sensor is a consumable without a guaranteed lifetime. The tip of the measuring electrode is a sensitive glass membrane and therefore "consumed" as well as the reference solution inside the sensor. Expected lifetime for the scrubber application under good conditions is around 12months. As soon as the pH sensor is produced, the lifetime of the sensor starts.

To achieve the longest possible lifetime, it is necessary to keep the tip always wet, clean the tip carefully and perform calibration according to the manual every three months. When the quality after a calibration is below 50%, we recommend ordering a new sensor. When the quality is 30% or below the sensor is defective and must be changed.



Detailed technical know-how about the pH sensor can be found in the pH measurement guide of our supplier: <https://craft-sensors.s3.amazonaws.com/File-Uploads/pH-MeasurementGuide.pdf?mtime=20180628112301&focal=none>

For any questions you can contact our representative or write to support@photometer.com .

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