

## Frequently Asked Questions on 300-D-X Optical DO Sensor



- **What is membrane coefficient?**

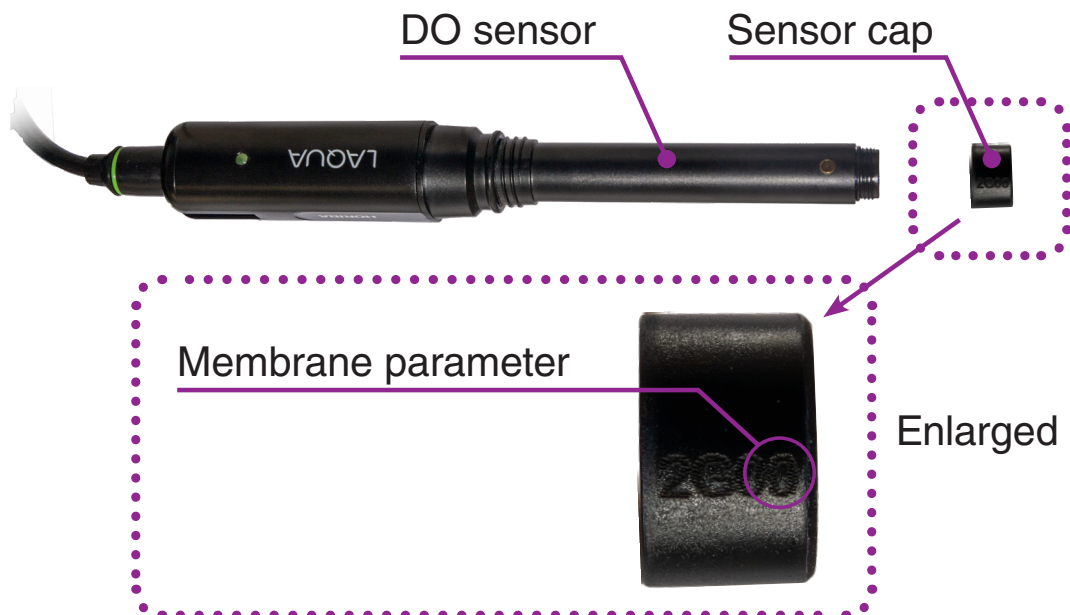
The membrane coefficient, also known as membrane parameter, is a single-digit number associated with the DO membrane cap and is determined during the manufacturing process. To ensure accurate measurements, the membrane coefficient is used in the calibration process to account for the specific permeability of the membrane. This is especially important when different replacement DO membrane caps are used with the same DO sensor to allow the meter to adjust for the specific properties of the membrane in use. The membrane coefficient is used in conjunction with the temperature reading to adjust the dissolved oxygen measurement accordingly.

When a 300-D-X optical DO sensor is purchased from HORIBA, it comes with a pre-installed 300-D-M DO membrane cap and the membrane coefficient of that cap is already stored in the DO sensor. The membrane coefficient can be viewed when the DO sensor is connected to the meter.

If you install a replacement DO membrane cap to your existing 300-D-X DO sensor, you are required to enter the membrane coefficient into the DO sensor using the meter.

- **How to check the membrane coefficient of the 300-D-M DO membrane cap?**

You can find it on the DO membrane cap—the digit close to the membrane surface. Refer to the image below or to the 300-D-M DO membrane cap instruction manual for more details.



Continued on the next page

Continued from previous page

## • What to do after replacing the DO membrane cap?

Connect the DO sensor to the WQ-300 meter and move the focus to the DO measurement screen. Press SET key on the meter and select the following on the setup menu:

1. Membrane Coefficient: Enter the membrane coefficient (range: 0 – 9) of the DO membrane cap. This will clear existing calibration data.
2. CAL in Cap Replacement: Select this mode and perform High [100%] calibration in either water vapor-saturated air (using calibration bottle with moist sponge) or air-saturated water. This will reset the offset value to 0.

This mode is available in WQ-300 series handheld meters with software version 1.1.0. If your meter has the earlier software version, contact the authorized distributor near you for software update.

After performing the above, the DO sensor is ready for measurement. For subsequent calibrations, just press CAL key.

## • What is offset?

Offset is an indicator for the DO membrane cap lifespan. It is displayed after performing High [100%] calibration.

## • What is E2308 Cal Error: membrane?

E2308 Cal Error: membrane means DO membrane has reached its useful lifespan. If the offset value exceeds  $\pm 25$ , the E2308 Cal error: membrane occurs. Replace the DO membrane cap.

If the DO membrane cap has been newly replaced and E2308 Cal error: membrane occurs during calibration, select CAL in Cap Replacement in the setup menu and perform High [100%] calibration as described above.

## • What should I do if my DO sensor is not working properly?

Uninstall the DO membrane cap and check if there is water or moisture present inside the cap and DO sensor tip. If water or moisture is present, carefully remove using a lens cleaning tissue or cloth. Install the DO membrane cap and try to calibrate. If the problem persists, contact the authorized distributor near you for support.

## • What is the lifespan of the DO membrane cap?

300-D-M DO membrane caps have a lifespan of at least 12 months. It is recommended to change your DO membrane cap every 12 months or until the useful lifespan has been reached.

## • What is the warranty for the 300-D-X DO sensor and 300-D-M DO membrane cap?

The 300-D-X DO sensor and 300-D-M DO membrane cap are warranted for 12 months against defects in materials and workmanship as originally supplied under normal use.

Rev. 0, 30 October 2023