Wireless Optical Dissolved Oxygen Sensor Cap

PS-3605

Introduction

The Wireless Optical Dissolved Oxygen Sensor Cap is a replacement sensor cap for the one included with the Wireless Optical Dissolved Oxygen Sensor (PS-3224). The sensor cap must be periodically replaced due to the sensing layer degrading over time. The cap should also be replaced if it becomes cracked, scratched, or damaged. The working life of a sensor cap can be extended by keeping it clean and properly covered when not in use.

Components

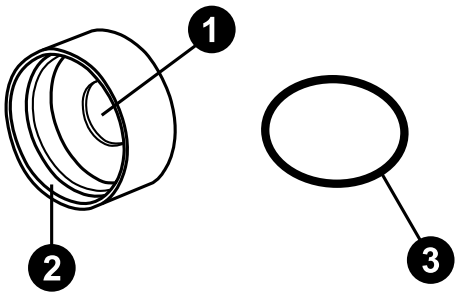
Included components:

- Wireless Optical Dissolved Oxygen Sensor Cap
- Rubber O-ring
- Sensor Calibration Coefficients sheet

Required equipment:

- Wireless Optical Dissolved Oxygen Sensor (PS-3224)
- PASCO Capstone or SPARKvue data collection software

Features



1. Sensing layer
2. Sensor cap with diffusion layer
3. Rubber O-ring

Replacing the sensor cap

IMPORTANT: Do not use a tool to install or remove the sensor cap. To make replacement easier, clean and dry the sensor prior to removal.

1. Remove the rubber boot from the probe.
2. Turn the installed sensor cap counterclockwise until it detaches from the probe.
3. Remove the rubber O-ring from the sensor, then place the replacement O-ring onto the threads of the probe.
4. Screw the replacement sensor cap on the probe and turn clockwise until secure, then replace the rubber boot on the probe.
5. Perform the sensor cap calibration process described in the next section.

Cap calibration

Before performing measurements with the Wireless Optical Dissolved Oxygen Sensor after a sensor cap replacement, you will need to calibrate the sensor for the new cap. Follow the instructions below to perform this calibration in PASCO Capstone or SPARKvue.

IMPORTANT: Each Sensor Calibration Coefficients sheet contains two sets of ten numbers each. Your Wireless Optical Dissolved Oxygen Sensor's manufacturing date determines which set of numbers should be entered into the software for maximum precision. Please contact PASCO technical support to determine which set of coefficients to use.

SPARKvue

1. Connect the sensor to SPARKvue and set up a data collection display. For more information on this process, see the sensor's manual and the SPARKvue online help.
2. Select the sensor measurement name in the **live data bar** in the bottom left, select **Configure Sensor** .
3. Select **Set Cap Coefficient...**.
4. Enter the appropriate set of ten Sensor Calibration Coefficients. Make sure each number is separated by a space. (See Figure 1.)
5. Select **OK**, then select **OK** in the success window.
6. Select **Done**.
7. Perform a one-point or two-point sensor calibration.

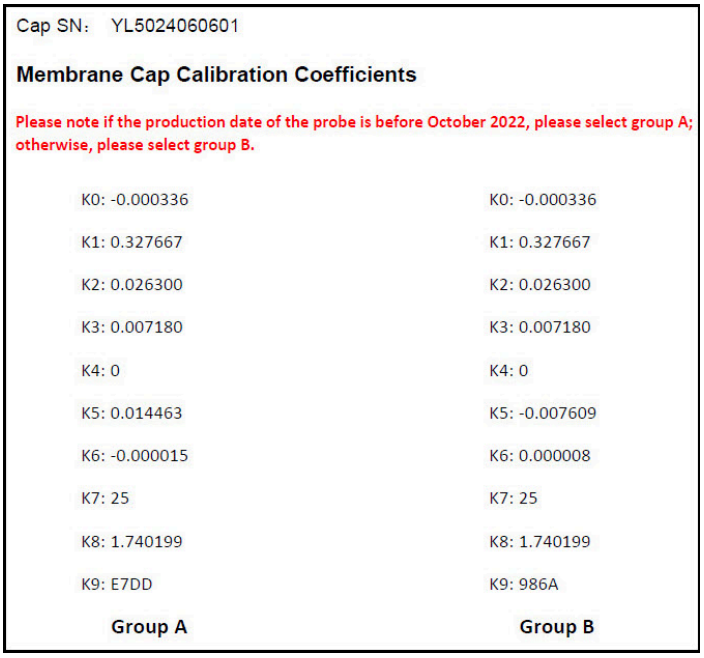
PASCO Capstone

1. Connect the sensor to Capstone. For more information on this process, see the sensor's manual and the Capstone online help.
2. In the **Hardware Setup** tool, select the **Properties** icon next to the sensor's name.
3. Select the **Cap Coefficients** text box, then enter the appropriate set of ten Sensor Calibration Coefficients. Make sure each number is separated by a space. (See Figure 1.)
4. In the success window, select **OK**.
5. Close the Properties window, then perform a one-point or two-point sensor calibration.

Troubleshooting

One of the following error messages will appear if sensor cap calibration is not successful. Follow the associated instructions if an error message appears.

- **Invalid checksum**: Verify that each number *exactly* matches the appropriate set of numbers on the Sensor Calibration Coefficients sheet, including negative signs and decimals.
- **Coefficients must be a list of 10 numbers separated by spaces**: Verify that all ten numbers have been entered, and that they are all separated by a space.



Cap SN: YL5024060601

Membrane Cap Calibration Coefficients

Please note if the production date of the probe is before October 2022, please select group A; otherwise, please select group B.

Group A	Group B
K0: -0.000336	K0: -0.000336
K1: 0.327667	K1: 0.327667
K2: 0.026300	K2: 0.026300
K3: 0.007180	K3: 0.007180
K4: 0	K4: 0
K5: 0.014463	K5: -0.007609
K6: -0.000015	K6: 0.000008
K7: 25	K7: 25
K8: 1.740199	K8: 1.740199
K9: E7DD	K9: 986A

Figure 1: Example of a Sensor Calibration Coefficients sheet. Numbers in Group A should be entered as "-0.000336 0.327667 0.026300 0.007180 0 0.014463 -0.000015 25 1.740199 E7DD".

Technical support

Need more help? Our knowledgeable and friendly Technical Support staff is ready to answer your questions or walk you through any issues.

Chat pasco.com

Phone 1-800-772-8700 x1004 (USA)
+1 916 462 8384 (outside USA)

Email support@pasco.com

Limited warranty

For a description of the product warranty, see the Warranty and Returns page at www.pasco.com/legal.

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