

# Wireless Optical Dissolved Oxygen Sensor Cap



#### **Included Items**

Replacement Sensor Cap Rubber O-Ring Calibration Coefficients Sheet

### Introduction

The Wireless Optical Dissolved Oxygen Sensor Cap is a replacement sensor cap for the one included with the Wireless Optical Dissolved Oxygen sensor. The sensor cap must be replaced periodically due to the sensing layer degrading over time. The sensor cap should also be replaced if it is cracked, scratched, or damaged. The working life of a Sensor Cap may be extended by keeping it clean and properly covered.

# To replace the Sensor Cap

CAUTION: Do not use a tool to install or remove the sensor cap. To ease the replacement of the sensor cap, clean and dry the sensor prior to removal.

- 1. Remove the rubber boot from the probe.
- 2. Turn the installed sensor cap until it detaches from the probe.

- 3. Remove the o-ring then put the replacement o-ring on the threads of the probe.
- 4. Put the replacement sensor cap on the probe and turn until snug-tight.
- 5. Perform the sensor cap calibration following the procedure for your software (next section).

### Sensor Cap Calibration

#### SPARKvue

1. Connect the sensor to SPARKvue and set up a data collection display.



- 3. Select Configure Sensor.
- 4. Select the Cap Coefficients textbox then enter the ten Sensor Calibration Coefficients on the Calibration Coefficients sheet.

NOTE: Each number needs to be separated by a space (see the example in Figure 1).

#### 5. Select Set Cap Coefficient.

- 6. In the Success window, click OK.
- 7. Click Done.
- 8. Perform a one-point or two-point calibration.

#### **PASCO** Capstone

- 1. Connect the sensor to Capstone.
- 2. Under Hardware Setup, Select Properties.
- 3. Select the Cap Coefficients textbox then enter the ten Sensor Calibration Coefficients on the Calibration Coefficients sheet then click OK.

NOTE: Each number needs to be separated by a space (see the example in Figure 1).

- 4. In the Success window, click OK.
- 5. Perform a one-point or two-point calibration.

Sensor Calibration Coefficients for Cap Replacement

SN: YL0118072007

Sensor Calibration Coefficients

K0: -0.0002

K1: 0.2814

K2: 0.0423

K3: -0.0015

K4: 0

K5: 0.0133997

K6: 0.0000903

K7: 30.1

K8: 1.881343

K9: BA8D

Please keep it for future reference

Figure 1. Example of a Sensor Calibration Coefficients sheet. Numbers on this sheet should be entered as "-0.002 0.2814 0.0423 -0.0015 0 0.0133997 0.0000903 30.1 1.881343 BA8D"

### Troubleshooting

One of the following error messages will appear If the sensor cap calibration is not successful:

- Invalid checksum: Verify that each number exactly matches what appears on the calibration sheet, including negative signs and decimals.
- Coefficients must be a list of 10 numbers separated by spaces: Verify that ten numbers are entered, each separated by a space.

## **Technical Support**

For assistance with PASCO products, contact PASCO at:

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