

Certificate no: Oxygen Optode 4831\_801\_165297  
FoillID: 1824M

Product: **Oxygen Optode 4831**  
Serial no: 801  
Calibration date: 17.01.2020

## 2-POINT RECALIBRATION, MULTIPOINT CALIBRATED OXYGEN OPTODE

This is to certify that this product has been calibrated and verified using the following reference equipment:

| Reference Equipment                    | Serial                                  |
|--|---|
| Calibration Bath Model Toho TM-005-P-A | 12-K                                    |
| Fluke 5615 PRT                         | Serial No. 802054 and Serial No. 849155 |
| Fluke CHUB E-4                         | Serial No. A7C677                       |
| Reference sensor 4330                  | 338                                     |

### Specification

|                     | O2 Concentration            | Air Saturation    | Temperature           |
|---------------------|-----------------------------|-------------------|-----------------------|
| Range               | 0-500 µM                    | 0 - 120%          | -5 to +40°C           |
| Accuracy            | < ±3µM or ±2% <sup>1)</sup> | ±2% <sup>2)</sup> | ±0.03°C <sup>3)</sup> |
| Resolution          | < 1 µM                      | < 0.4%            | 0.01°C                |
| Settling Time (63%) | < 25 seconds                | < 25 seconds      | < 2 seconds           |

1) Requires salinity compensation for salinity variations > 1mS/cm, and pressure compensation for pressure > 100meter

2) Within calibrated range 0 - 120% / 0 - 30°C

3) Within calibrated range 0 - 36°C for standard version and 0 - 30°C for multipoint version

### Calibration points and readings:

|                          | Air Saturated Water | Zero Solution (Na2SO3) |
|--------------------------|---------------------|------------------------|
| Phase reading (°)        | 31.86               | 58.99                  |
| Temperature reading (°C) | 10.06               | 21.01                  |
| Air Pressure (hPa)       | 965.00              |                        |

### Giving these coefficients

| Index    | 0 (Offset)    | 1 (Slope)    |
|----------|---------------|--------------|
| ConcCoef | -2.489341E+00 | 1.020046E+00 |

### With following settings

| Index            | 0            | 1             | 2            | 3             | 4            | 5            | 6           |
|------------------|--------------|---------------|--------------|---------------|--------------|--------------|-------------|
| SVUFoilCoef      | 2.77512E-03  | 1.19993E-04   | 2.25007E-06  | 1.62362E+02   | -2.12826E-01 | -3.78126E+01 | 3.26553E+00 |
| PhaseCoef        | 2.140000E-01 | 1.000000E+00  | 0.000000E+00 | 0.000000E+00  |              |              |             |
| TempCoef         | 2.739096E+01 | -3.154995E-02 | 3.228839E-06 | -4.659130E-09 | 0.000000E+00 | 0.000000E+00 |             |
| Salinity (mS/cm) | 0.00         |               |              |               |              |              |             |

Date:17.01.2020



Sr. Repair Technician