

# **CALIBRATION CERTIFICATE**

Form No 854, Dec 16th 2016

Certificate no: Oxygen Optode 4831\_473\_127878

FoilID: 1206EM

Product: Oxygen Optode 4831

Serial no: 473

Calibration date: 02.03.2017

## 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 μΜ	0 - 120%	-5 to +40°C	
Accuracy	< ±3µM or ±2% 1)	±2% 2)	±0.03°C 3)	
Resolution	< 1 µM	< 0.4%	0.01°C	
Settling Time (63%)	< 25 seconds	< 25 seconds	< 2 seconds	

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

#### Calibration points and readings:

	Air Saturated Water	Zero Solution (Na2SO3)
Phase reading (°)	33.41	60.76
Temperature reading (°C)	9.98	20.99
Air Pressure (hPa)	984.00	

#### Giving these coefficients

Index	0 (Offset)	1 (Slope)	
ConcCoef	-4.135176E+00	1.086786E+00	

### With following settings

Index	0	1	2	3	4	5	6
SVUFoilCoef	2.92507E-03	1.24112E-04	2.49843E-06	2.31139E+02	-3.10457E-01	-5.72950E+01	4.54918E+00
PhaseCoef	0.000000E+00	1.000000E+00	0.000000E+00	0.000000E+00			
TempCoef	2.593412E+01	-3.110504E-02	3.057784E-06	-4.502148E-09	0.000000E+00	0.000000E+00	
Salinity (mS/cm)	0.00						

Date:02.03.2017

Sr. Repair Technician

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

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