

Program Version: V4.9.1

Product: Oxygen Optode 4835

Serial No: 631

Visual and Mechanical Checks:

- 1.1 Soldering quality
- 1.2 Visual surface
- 1.3 Galvanic isolation between housing and electronics

Current Drain and Voltages:

2.1 Average current drain at 0.5 Hz sampling (Max.: 33 mA)	23.6	mA
2.2 CANBus Current drain at 0.5 Hz sampling (Max.: 33 mA)	22.5	mA
2.3 Current drain in sleep (Max.: 180 μ A)	92	μ A
2.4 CANBus Current drain in sleep (Max.: 180 μ A)	85	μ A
2.5 DSP IO voltage, J4.18 (3.3 \pm 0.15V)	3.29	V
2.6 DSP Core voltage, J4.17 (1.8 \pm 0.05 V)	1.80	V
2.7 Excitation driver voltage, C4 Analog Board (4.5 \pm 0.15 V)	4.35	V

Performance test:

	Channel:	Blue	Red
3.1 Average of Receiver readings (0 \pm 150mV)		6.1 mV	5.6 mV
3.2 Standard Deviation of Receiver readings (Max.: 45mV/10mV)		3.47 mV	1.18 mV
3.3 Amplitude measm. with non-fluorescence foil (<60mV/650-1200mV)		9.2 mV	1004.7 mV
3.4 CANBus Output test			

Function test from 0 to 40°C:

	Channel:	Blue	Red
4.1 Minimum amplitude measurement (Blue: >550 mV, Red >650 mV)		4835 mV	631 mV
4.2 Maximum amplitude measurement (Blue: <1600 mV, Red <1400 mV)		703.4 mV	736.9 mV
4.3 Minimum phase measurement (Blue: >24°, Red: >1°)		1046.4 °	1189.8 °
4.4 Maximum phase measurement (Blue: <34°, Red: <5°)		35.96 °	8.02 °
4.5 Maximum standard deviation of Phase measurement: (< 0.02°)		42.02 °	8.53 °
4.6 Minimum temperature raw data measurement: (<-200 mV)			0.02 mV
4.7 Maximum temperature raw data measurement: (>450 mV)			0.02 mV

Pressure test :

5.1 Pressure (IW version: 20MPa, DW version 60MPa)	MPa
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Date: 15 Aug 2017

Sign:

Kalle A Skanes

Production Engineer

Sensing Foil Batch No: 1711
Certificate No:

Product: Oxygen Optode 4835
Serial No: 631
Calibration Date: 08 Aug 2017

This is to certify that this product has been calibrated using the following instruments:

Parameter: Internal Temperature:

Calibration points and readings:

Temperature (°C)	1.01	11.98	24.01	35.99
Reading (mV)	783.35	452.70	67.87	-297.48

Giving these coefficients

Index	0	1	2	3	4	5
TempCoef	2.61546E01	-3.17824E-02	3.01803E-06	-4.37192E-09	0.00000E00	0.00000E00

Parameter: Oxygen:

	O2 Concentration	Air Saturation
Range:	0-500 µM ¹⁾	0 - 120%
Accuracy ¹⁾ :	< ±8µM or ±5% (whichever is greater)	±5%
Resolution:	< 1 µM	< 0.4%
Settling Time (63%):	< 25 seconds	

Calibration points and readings²⁾:

	Air Saturated Water	Zero Solution (Na ₂ SO ₃)
Phase reading (°)	3.32469E+01	6.24898E+01
Temperature reading (°C)	9.89496E+00	2.19071E+01
Air Pressure (hPa)	9.79617E+02	

Giving these coefficients

Index	0	1	2	3
PhaseCoef	-1.71900E00	1.00000E00	0.00000E00	0.00000E00
ConcCoef				

¹⁾ Valid for 0 to 2000m (6562ft) depth, salinity 33 - 37ppt

²⁾ The calibration is performed in fresh water and the salinity setting is set to: 0

Date: 09 Aug 2017

Sign:



Arne Instebo,
 Calibration & Production Engineer

Product: Oxygen Optode 4835
Serial No: 631
Date: 15.08.2017

Certificate No: 132930185631

This is to certify that this product has been pressure tested with the following instrument, and we confirm that no irregularities were found during the test:

Autoklav 800 bar – sn: 0210005

Pressure readings:

Pressure (Bar)	Pressure time (hour)
30	1

Date: 15 Aug 2017

Sign:

Laila A Skanes

Production Engineer