

Program Version: 4:09:01 AM

Product: Oxygen Optode 4831

Serial No: 606

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)	21.2	mA
2.2 CANBus Current drain at 0.5 Hz sampling (Max.: 33 mA)		mA
2.3 Current drain in sleep (Max.: 180 μ A)	203	μ A
2.4 CANBus Current drain in sleep (Max.: 180 μ A)		μ A
2.5 DSP IO voltage, J4.18 (3.3 \pm 0.15V)		V
2.6 DSP Core voltage, J4.17(1.8 \pm 0.05 V)	1.82	V
2.7 Excitation driver voltage, C4 Analog Board (4.5 \pm 0.15 V)	4.32	V

Performance test:

	Channel:	Blue	Red
3.1 Average of Receiver readings (0 \pm 150mV)		-13.4 mV	-8.6 mV
3.2 Standard Deviation of Receiver readings (Max.: 45mV/10mV)		1.41 mV	0.30 mV
3.3 Amplitude measm. with non-fluorescence foil (<60mV/650-1200mV)		14.1 mV	860.9 mV
3.4 CANBus Output test			

Function test from 0 to 40°C:

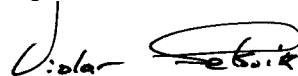
	Channel:	Blue	Red
4.1 Minimum amplitude measurement (Blue: >550 mV, Red >650 mV)		763.8 mV	661 mV
4.2 Maximum amplitude measurement (Blue: <1600 mV, Red <1400 mV)		1194 mV	1052.6 mV
4.3 Minimum phase measurement (Blue: >24°, Red: >1°)		36.23 °	9.88 °
4.4 Maximum phase measurement (Blue: <34°, Red: <5°)		43.29 °	10.35 °
4.5 Maximum standard deviation of Phase measurement: (< 0.02°)		0.02 °	0.01 °
4.6 Minimum temperature raw data measurement: (<-200 mV)			-549 mV
4.7 Maximum temperature raw data measurement: (>450 mV)			610.3 mV

Pressure test :

5.1 Pressure (IW version: 20MPa, DW version 60MPa)	60MPa
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Date: 07 Mar 2016

Sign:



Vidar Selsvik, Production Engineer

Certificate no: 4831_606_00116389
Foil batch no: 1517MProduct: 4831
Calibration date: 06.03.2016Serial no: 606
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Index	Temperature reference(°C)	[O2] Reference(μM)	Temperature raw data(mV)	Phase reading(°)
0	30.249	0.85	-269.990	59.49
1	19.726	0.04	61.620	60.60
2	9.823	-0.02	387.575	61.36
3	0.660	0.51	678.455	61.97
4	0.639	19.49	679.090	59.42
5	0.637	41.82	679.165	56.72
6	0.628	61.87	679.425	54.54
7	0.627	104.15	679.440	50.56
8	0.617	145.58	679.735	47.33
9	0.610	216.73	679.975	42.87
10	0.605	323.31	680.105	37.94
11	0.605	429.46	680.105	34.36
12	0.606	529.44	680.085	31.78
13	10.038	13.08	380.525	58.81
14	9.995	32.28	381.945	55.51
15	9.957	48.71	383.195	53.02
16	9.932	82.25	384.020	48.73
17	9.915	115.36	384.575	45.28
18	9.901	171.19	385.040	40.72
19	9.895	255.50	385.210	35.77
20	9.889	336.78	385.400	32.37
21	9.885	417.98	385.545	29.81
22	19.900	10.09	55.900	57.81
23	19.844	25.70	57.720	54.09
24	19.794	38.43	59.345	51.46
25	19.758	65.68	60.535	46.82
26	19.736	91.71	61.260	43.27
27	19.710	135.31	62.080	38.69
28	19.695	199.95	62.600	33.93
29	19.692	268.68	62.700	30.43
30	19.690	337.76	62.705	27.85
31	30.021	8.19	-263.190	56.74
32	30.046	20.71	-263.925	52.72
33	30.065	31.46	-264.510	49.78
34	30.084	53.48	-265.055	44.90
35	30.094	74.57	-265.375	41.26
36	30.103	109.50	-265.635	36.72
37	30.123	162.32	-266.235	31.99
38	30.133	217.66	-266.530	28.65
39	30.142	273.71	-266.805	26.22

Product: Oxygen Optode 4831

Certificate No: 116449260606

Serial No: 606

Date: 29.03.2016

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:

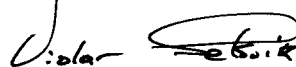
Autoklav 800 bar – sn: 0210005

Pressure readings:

Pressure (Bar)	Pressure time (hour)
600	1

Date: 07 Mar 2016

Sign:



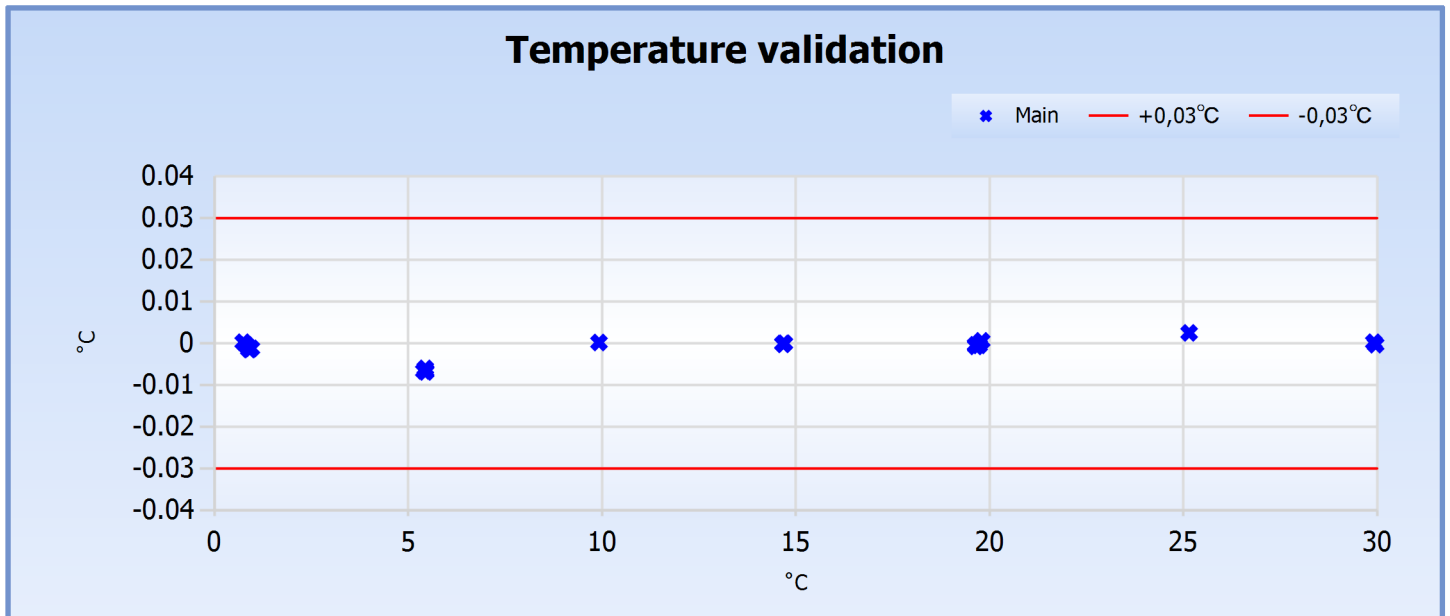
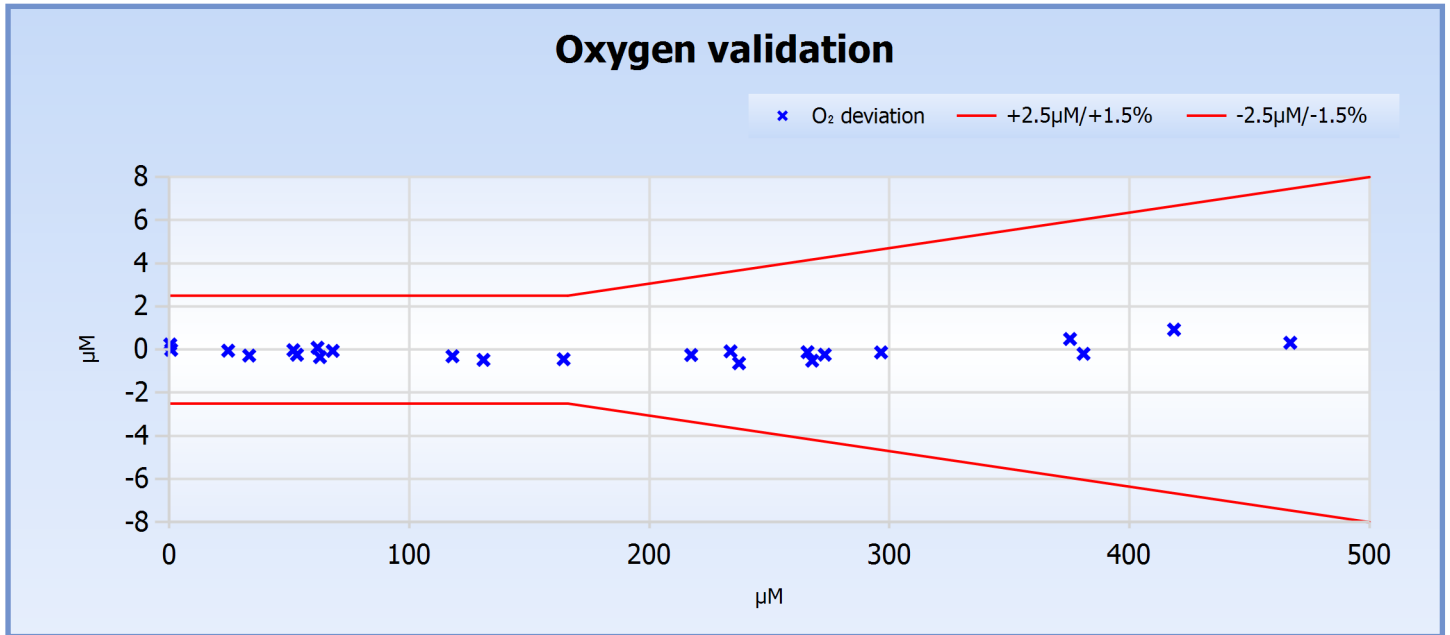
Vidar Selsvik, Production Engineer

Certificate no: 4831_606_00116389
Foil batch no: 1517M

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Index	0	1	2	3	4	5	6
SVUFoilCoef	2.76178E-03	1.16577E-04	2.34739E-06	2.31563E02	-3.45081E-01	-5.30835E01	4.58193E00
TempCoef	2.16195E01	-3.09047E-02	2.79420E-06	-4.09384E-09	0.00000E00	0.00000E00	



Date:06.03.2016

Tor-Ove Kvalvaag

Tor-Ove Kvalvaag, Calibration Engineer