AANDERAA a xylem brand

TEST & SPECIFICATIONS

Form No. 712 V2 March 2014

Program Version: 04.09.2001

Product: Oxygen Optode 4831
Serial No: 674

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)	22.9	mA
2.2	CANBus Current drain at 0.5 Hz sampling (Max.: 33 mA)		mA
2.3	Current drain in sleep (Max.: 180 µA)	214	µA
2.4	CANBus Current drain in sleep (Max.: 180 µA)		µA
2.5	DSP IO voltage, J4.18 (3.3 ±0.15V)		V
2.6	DSP Core voltage, J4.17(1.8 ±0.05 V)	1.81	V
2.7	Excitation driver voltage, C4 Analog Board (4.5 ±0.15 V)	4.32	V

Performance test:	Channel:	Blue		Red	
3.1	Average of Receiver readings (0±150mV)	9.0	mV	4.1	mV
3.2	Standard Deviation of Receiver readings (Max.: 45mV/10mV)	1.51	mV	0.24	mV
3.3	Amplitude measm. with non-fluorescence foil (<60mV/650-1200mV)	16.3	mV	994.9	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)	798.9	mV	750.1	mV
4.2	Maximum amplitude measurement (Blue: <1600 mV, Red <1400 mV)	1215.9	mV	1166.4	mV
4.3	Minimum phase measurement (Blue: >24°, Red: >1°)	35.2	°	7.82	°
4.4	Maximum phase measurement (Blue: <34°, Red: <5°)	40.6	°	8.84	°
4.5	Maximum standard deviation of Phase measurement: (< 0.02°)	0.04	°	0.04	°
4.6	Minimum temperature raw data measurement: (<-200 mV)			-443.6	mV
4.7	Maximum temperature raw data measurement: (>450 mV)			644.7	mV

Pressure test :

5.1	Pressure (IW version: 20MPa, DW version 60MPa)	60MPa

Date: 23 Mar 2017

Sign:

Vidar Selsvik, Production Engineer

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PRESSURE CERTIFICATE

Form No. 667, Sept 2009

Product: Oxygen Optode 4831
Serial No: 674
Date: 06,03,2017

Certificate No: 128752260674

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: 23 Mar 2017

Sign:

Vidar Selsvik, Production Engineer

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CALIBRATION CERTIFICATE

Form No 830, Juli 2012

Certificate no: 4831_674_00128383
Foil batch no: 1517M

Product: 4831
Calibration date: 15.03.2017

Serial no: 674

Index	Temperature reference(°C)	[O2] Reference(µM)	Temperature raw data(mV)	Phase reading(°)
0	30.276	0.30	-141.775	61.12
1	19.743	0.19	194.130	62.01
2	9.708	0.39	517.585	62.78
3	0.532	1.29	793.785	63.44
4	0.549	20.04	793.280	60.96
5	0.562	42.73	792.980	58.27
6	0.561	63.42	793.000	56.07
7	0.583	102.52	792.340	52.42
8	0.586	141.57	792.260	49.37
9	0.574	210.70	792.585	44.99
10	0.581	310.77	792.400	40.27
11	0.589	412.16	792.165	36.72
12	0.586	518.33	792.250	33.89
13	10.051	13.17	506.855	60.40
14	9.983	31.69	509.000	57.21
15	9.923	48.53	510.875	54.68
16	9.883	80.05	512.150	50.65
17	9.847	110.93	513.260	47.42
18	9.817	164.71	514.220	42.94
19	9.805	243.87	514.600	38.16
20	9.807	323.57	514.530	34.69
21	9.808	405.48	514.500	32.00
22	19.859	9.79	190.335	59.45
23	19.787	24.24	192.675	55.98
24	19.726	37.08	194.665	53.31
25	19.678	62.01	196.225	48.99
26	19.642	87.29	197.400	45.48
27	19.608	129.96	198.510	40.92
28	19.595	194.65	198.900	36.02
29	19.588	258.58	199.135	32.63
30	19.586	324.07	199.200	30.07
31	29.997	7.38	-133.115	58.48
32	29.998	18.93	-133.200	54.71
33	30.005	29.64	-133.395	51.73
34	30.014	49.60	-133.660	47.18
35	30.021	70.62	-133.900	43.45
36	30.030	105.39	-134.190	38.80
37	30.059	158.30	-135.095	33.98
38	30.063	210.15	-135.200	30.71
39	30.060	265.35	-135.100	28.22

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CALIBRATION CERTIFICATE

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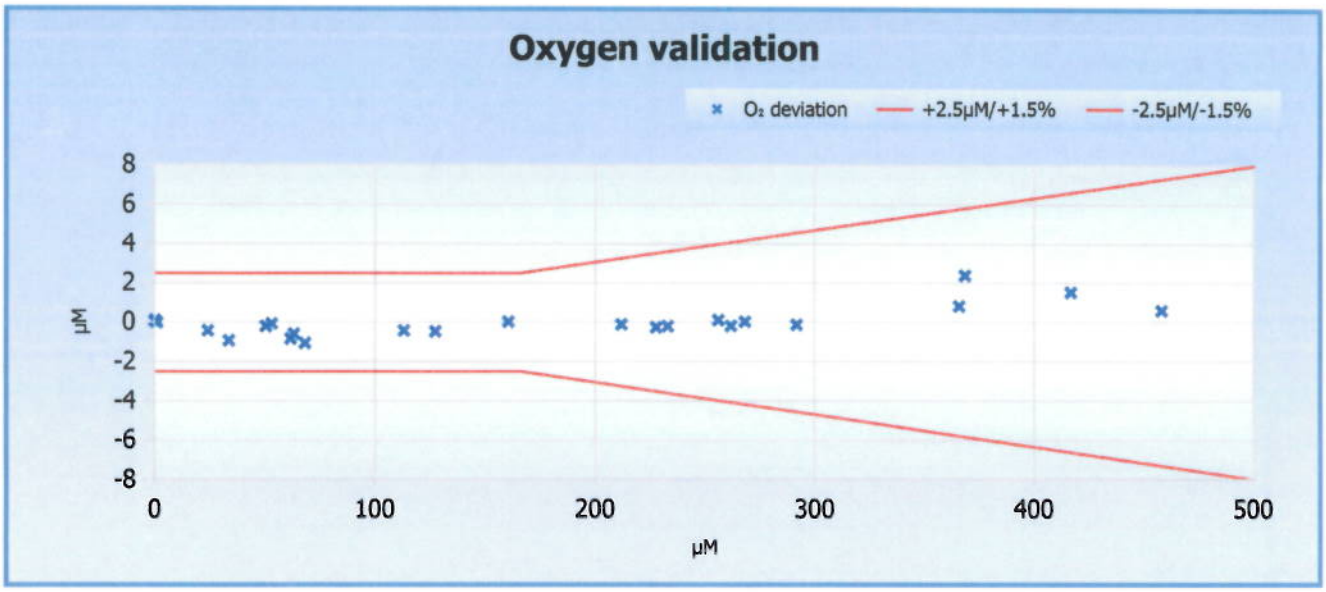
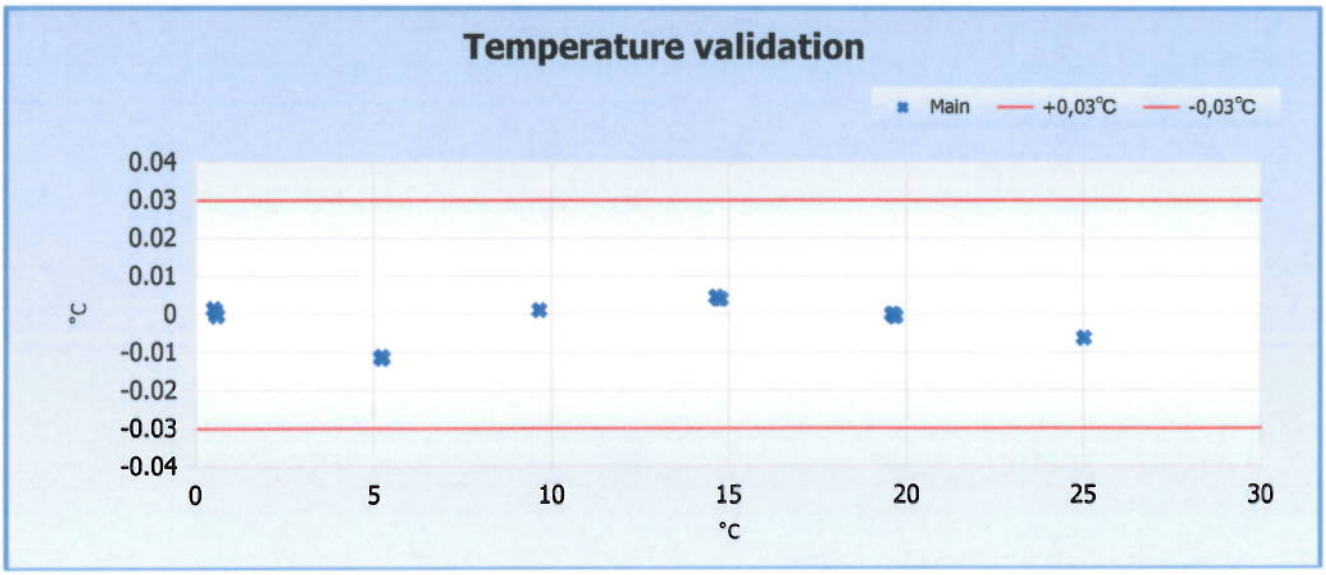
Certificate no: 4831_674_00128383
Foil batch no: 1517M

Product: 4831
Calibration date: 15.03.2017

Serial no: 674

Index	0	1	2	3	4	5	6
SVUFoilCoef	2.72870E-03	1.15061E-04	2.44541E-06	2.31674E02	-3.65224E-01	-5.03912E01	4.60601E00
TempCoef	2.57518E01	-3.13879E-02	3.09242E-06	-4.50366E-09	0.00000E00	0.00000E00	





Date:15.03.2017

Tor-Ove Kvalvaag, Calibration Engineer