



TEST & SPECIFICATIONS

Form No. 712 V2, March 2014

a xylem brand

Program Version: 04:09:01

Product: Oxygen Optode 4831

Serial No: 491

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)	22.8	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)	255	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)	1.81	V
2.7 Excitation driver voltage, C4 Analog Board (4.5 \pm 0.15 V)	4.34	V

Performance test:

	Channel:	Blue	Red
3.1 Average of Receiver readings (0 \pm 150mV)		-2.9 mV	2.2 mV
3.2 Standard Deviation of Receiver readings (Max.: 45mV/10mV)		5.00 mV	1.18 mV
3.3 Amplitude measm. with non-fluorescence foil (<60mV/650-1200mV)		12.9 mV	994.5 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)		4831 mV	74 mV
4.2 Maximum amplitude measurement (Blue: <1600 mV, Red <1400 mV)		628.4 mV	725.6 mV
4.3 Minimum phase measurement (Blue: >24°, Red: >1°)		1040.9 °	1269.3 °
4.4 Maximum phase measurement (Blue: <34°, Red: <5°)		36.3 °	9.44 °
4.5 Maximum standard deviation of Phase measurement: (< 0.02°)		44.36 °	10 °
4.6 Minimum temperature raw data measurement: (<-200 mV)			0.05 mV
4.7 Maximum temperature raw data measurement: (>450 mV)			0.01 mV

Pressure test :

5.1 Pressure (IW version: 20MPa, DW version 60MPa)	29.187MPa
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Date: 26 May 2015

Sign:

Karl Magne Klepsvik

Karl Magne Klepsvik,
Production Engineer Manager



PRESSURE CERTIFICATE

Form No 667, Sept 2009

Product: Oxygen Optode 4831
Serial No: 491
Date: 11.05.2015

Certificate No: 107935260491

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: 22 May 2015

Sign:

Vidar Selsvik, Production Engineer



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CALIBRATION CERTIFICATE

Form No 830, Juli 2012

Certificate no: 4831_491_00107909
Foil batch no: 1517EM

Product: 4831
Calibration date: 22.05.2015

Serial no: 491
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Index	Temperature reference(°C)	[O ₂] Reference(μM)	Temperature raw data(mV)	Phase reading(°)
0	30.246	1.74	-71.290	60.16
1	19.838	1.14	256.120	61.22
2	9.897	1.26	567.605	61.97
3	0.681	1.94	834.330	62.59
4	0.640	18.16	835.410	60.41
5	0.669	43.19	834.650	57.35
6	0.697	63.87	833.900	55.11
7	0.722	105.20	833.215	51.22
8	0.741	147.79	832.700	47.88
9	0.762	216.96	832.120	43.54
10	0.779	317.52	831.640	38.83
11	0.794	422.99	831.235	35.22
12	0.815	528.30	830.670	32.48
13	10.189	14.47	558.720	59.36
14	10.123	33.54	560.740	56.07
15	10.068	49.81	562.410	53.61
16	10.016	84.06	564.000	49.24
17	9.981	115.46	565.050	45.98
18	9.954	169.79	565.890	41.52
19	9.930	248.64	566.610	36.81
20	9.918	330.25	566.990	33.34
21	9.914	410.74	567.100	30.75
22	20.009	11.83	250.700	58.24
23	19.938	27.11	252.995	54.60
24	19.878	39.74	254.880	52.01
25	19.833	66.34	256.310	47.46
26	19.804	91.58	257.235	44.02
27	19.782	136.62	257.930	39.31
28	19.766	198.61	258.460	34.74
29	19.756	263.47	258.800	31.37
30	19.750	329.62	259.000	28.86
31	30.158	9.70	-68.580	57.14
32	30.169	21.77	-68.935	53.27
33	30.182	32.48	-69.320	50.34
34	30.192	53.38	-69.610	45.68
35	30.199	74.33	-69.825	42.03
36	30.203	109.39	-69.980	37.44
37	30.202	162.57	-69.920	32.69
38	30.200	215.69	-69.885	29.46
39	30.197	273.76	-69.800	26.95

Certificate no: 4831_491_00107909
Foil batch no: 1517EM

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Index	0	1	2	3	4	5	6
SVUFoilCoef	2.78635E-03	1.19474E-04	2.40391E-06	2.29918E02	-3.14814E-01	-5.70817E01	4.55897E00
TempCoef	2.79343E01	-3.21636E-02	3.40499E-06	-4.80148E-09	0.00000E00	0.00000E00	

