



# TEST & SPECIFICATIONS

Form No. 712, July 2008

a xylem brand

Layout No:  
Circuit Diagram No:  
Program Version: V4.5.7

Product: Oxygen Optode 4831  
Serial No: 182

### 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)	23.8	mA
2.2	CANBus Current drain at 0.5 Hz sampling (Max.: 33 mA)		mA
2.3	Current drain in sleep (Max.: 180 $\mu$ A)	238	$\mu$ A
2.4	CANBus Current drain in sleep (Max.: 180 $\mu$ A)		$\mu$ 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)	4.58	V

### Performance test:

	Channel:	BLUE		RED	
3.1	Average of Receiver readings (0 $\pm$ 150mV)	25.5	mv	18.0	mv
3.2	Standard Deviation of Receiver readings (Max.: 45mV/10mV)	11.58	mv	4.50	mv
3.3	Amplitude measurement with non- fluorescence foil (<60mV/650-1200mV)	16	mv	1023.2	mv
3.4	Amplitude measurement with fluorescence foil (700-1200mV)	999.1	mv	1006.9	mv
3.5	CANBus Output test				

### Function test at 0°C Temperature (in air with reference foil):

	Channel:	BLUE		RED	
4.1	Amplitude measurement (Blue: 150 – 500mV,Red 650-1800mV)	664.3	mv	1469.7	mv
4.2	Phase measurement (Blue: 4 $\pm$ 2°,Red: 4 $\pm$ 2°)	9.7	°	9.1	°
4.3	Standard deviation of Phase measurement: (Max: 0.02°)	0.003	°	0.002	°
4.4	Raw data temperature measurement: (600 $\pm$ 200mV)			714.1	mv

### Function test at 20°C Temperature (in air with reference foil):

	Channel:	BLUE		RED	
5.1	Amplitude measurement (Blue: 100 – 300mV,Red 650-1800mV)	640.3	mv	1106.7	mv
5.2	Phase measurement (Blue: 5 $\pm$ 2°,Red: 5 $\pm$ 2°)	9.9	°	9.2	°
5.3	Standard deviation of Phase measurement: (Max: 0.02°)	0.010	°	0.011	°
5.4	Raw data Temperature measurement: (0 $\pm$ 200mV)			102	mv

### Function test at 40°C Temperature (in air with reference foil):

	Channel:	BLUE		RED	
6.1	Amplitude measurement (Blue: 150 – 500mV,Red 650-1800mV)	599	mv	889.8	mv
6.2	Phase measurement (Blue: 5 $\pm$ 2°,Red: 5 $\pm$ 2°)	10.2	°	9.6	°
6.3	Standard deviation of Phase measurement: (Max: 0.02°)	0.005	°	0.004	°
6.4	Raw data Temperature measurement: (-400 $\pm$ 200mV)			-380.1	mv

### Pressure test :

7.1	Pressure (IW version: 20MPa, DW version 60MPa)	MPa
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Date: 21 May 2013

Sign:

Vidar Selsvik, Production Engineer



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# PRESSURE CERTIFICATE

Form No. 667, Sept 2009

**Product:** Oxygen Optode 4831

**Certificate No:** 83625260182

**Serial No:** 182

**Date:** 16.05.2013

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: 21 May 2013

Sign:

Vidar Selsvik, Production Engineer

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