



# TEST & SPECIFICATIONS

Form No. 784, July 2008

AANDERAA DATA INSTRUMENTS

Layout No: 1372A, 1374A, 1376  
Circuit Diagram No: : V-3979A, V3977A, V-3980  
Program Version: V1.23.2

Product: Oxygen Optode 4330F  
Serial No: 246

### 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)	24.5	mA
2.2 CANBus Current drain at 0.5 Hz sampling (Max.: 33 mA)	22.3	mA
2.3 Current drain in sleep (Max.: 180 $\mu$ A)	111	$\mu$ A
2.4 CANBus Current drain in sleep (Max.: 180 $\mu$ A)	106	$\mu$ A
2.5 DSP IO voltage, J4.18 (3.3 $\pm$ 0.15V)	3.30	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)	4.61	V

### Performance test:

	Channel:	BLUE	RED
3.1 Average of Receiver readings (0 $\pm$ 150mV)		11.7 mv	3.5 mv
3.2 Standard Deviation of Receiver readings (Max.: 45mV/10mV)		82.98 mv	5.87 mv
3.3 Amplitude measurement with non- fluorescence foil(<110mV/1200-1200mV)		60.4 mv	2641.1 mv
3.4 Amplitude measurement with fluorescence foil (700-1200mV)		838 mv	984.6 mv
3.5 CANBus Output test			

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

	Channel:	BLUE	RED
4.1 Amplitude measurement (Blue: 300 – 900mV,Red 300-900mV)		460.5 mv	693.2 mv
4.2 Phase measurement (Blue: 4 $\pm$ 2°,Red: 4 $\pm$ 2°)		5.5 °	5.0 °
4.3 Standard deviation of Phase measurement: (Max: 0.02°)		0.017 °	0.003 °
4.4 Raw data temperature measurement: (600 $\pm$ 200mV)			744.9 mv

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

	Channel:	BLUE	RED
5.1 Amplitude measurement (Blue: 300 – 900mV,Red 300-900mV)		445.9 mv	507.1 mv
5.2 Phase measurement (Blue: 5 $\pm$ 2°,Red: 5 $\pm$ 2°)		5.6 °	5.1 °
5.3 Standard deviation of Phase measurement: (Max: 0.02°)		0.009 °	0.005 °
5.4 Raw data Temperature measurement: (0 $\pm$ 200mV)			24.9 mv

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

	Channel:	BLUE	RED
6.1 Amplitude measurement (Blue: 300 – 900mV,Red 300-900mV)		432.7 mv	422.5 mv
6.2 Phase measurement (Blue: 5 $\pm$ 2°,Red: 5 $\pm$ 2°)		5.6 °	5.2 °
6.3 Standard deviation of Phase measurement: (Max: 0.02°)		0.012 °	0.005 °
6.4 Raw data Temperature measurement: (-400 $\pm$ 200mV)			- mv

### Pressure test :

7.1 Pressure (IW version: 20MPa, DW version 60MPa)	60MPa
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Date: 15 April 2010

Sign:

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