



AANDERAA DATA INSTRUMENTS

TEST & SPECIFICATIONS

Form No. 620, Nov 2005

Layout No: 1308E, 1299F
Circuit Diagram No:
Program Version: 3, Build: 11

Product: Oxygen Optode 3830
Serial No: 761

1. Visual and Mechanical Checks:

- 1.1. O-ring surface
- 1.2. Soldering quality
- 1.3. Visual surface
- 1.4. Pressure test (60MPa)
- 1.5. Galvanic isolation between housing and electronics

2. Current Drain and Voltages:

2.1. Average current drain at 0.5Hz sampling (Max: 38mA)	32 mA
2.2. Current drain in sleep (Max: 300µA)	220 µA
2.3. Quiescent current drain from -9V (Max: 5µA)	0 µA
2.4. DSP voltage, IC5.1 (3.3 ±0.15V)	3.31 V
2.5. Excitation driver voltage, IC1.1 (3.3 ±0.15V)	3.32 V
2.6. Flash/RS232 driver voltage, IC7.4 (5 ±0.2V)	5.07 V

3. Receiver test:

3.1. Average of Receiver readings (0 ±50mV)	6 mV
3.2. Standard Deviation of Receiver readings (Max: 10mV)	2.32 mV

4. Performance Test in Air, 0°C Temperature:

4.1. Amplitude measurement (Blue: 220 – 470mV)	358.31 mV
4.2. Phase measurement (Blue: 30 ±5°)	33.5 °
4.3. Standard deviation of Phase measurement: (Max: 0.02°)	0.001 °
4.4. Temperature measurement: (700 ±300mV)	644.95 mV
4.5. SR10 Output tested (Set_Output(-100))	

5. Performance Test in Air, 20°C Temperature:

5.1. Amplitude measurement (Blue: 290 – 470mV)	377.26 mV
5.2. Phase measurement (Blue: 25 ±5°)	29.8 °
5.3. Standard deviation of Phase measurement: (Max: 0.02°)	0.001 °
5.4. Temperature measurement: (100 ±300mV)	126.28 mV
5.5. SR10 Output tested (Set_Output(-100))	

6. Performance Test in Air, 40°C Temperature:

6.1. Amplitude measurement (Blue: 320 – 500mV)	375.42 mV
6.2. Phase measurement (Blue: 22 ±5°)	26.5 °
6.3. Standard deviation of Phase measurement: (Max: 0.02°)	0.009 °
6.4. Temperature measurement: (-500 ±300mV)	-388.83 mV
6.5. SR10 Output tested (Set_Output(-100))	

Date: 24 April 2008

Sign:

Vidar Selsvik, Production Engineer



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