



AANDERAA DATA INSTRUMENTS

TEST & SPECIFICATIONS

Form No. 620, Nov 2005

Layout No: 1308E, 1299F
Circuit Diagram No: 1.33
Program Version: 3, Build: 7

Product: Oxygen Optode 3830
Serial No: 856

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 ± 0.15 V)	3.31 V
2.5. Excitation driver voltage, IC1.1 (3.3 ± 0.15 V)	3.32 V
2.6. Flash/RS232 driver voltage, IC7.4 (5 ± 0.2 V)	5.09 V

3. Receiver test:

3.1. Average of Receiver readings (0 ± 50 mV)	-10 mV
3.2. Standard Deviation of Receiver readings (Max: 10mV)	1.87 mV

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

4.1. Amplitude measurement (Blue: 220 – 470mV)	362.11 mV
4.2. Phase measurement (Blue: 30 ± 5)	30.3 °
4.3. Standard deviation of Phase measurement: (Max: 0.02°)	0.001 °
4.4. Temperature measurement: (700 ± 300 mV)	589.12 mV
4.5. SR10 Output tested (Set_Output(-100))	

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

5.1. Amplitude measurement (Blue: 290 – 470mV)	380.63 mV
5.2. Phase measurement (Blue: 25 ± 5)	26.9 °
5.3. Standard deviation of Phase measurement: (Max: 0.02°)	0.008 °
5.4. Temperature measurement: (100 ± 300 mV)	19.53 mV
5.5. SR10 Output tested (Set_Output(-100))	

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

6.1. Amplitude measurement (Blue: 320 – 500mV)	372.39 mV
6.2. Phase measurement (Blue: 22 ± 5)	23.6 °
6.3. Standard deviation of Phase measurement: (Max: 0.02°)	0.013 °
6.4. Temperature measurement: (-500 ± 300 mV)	-528.91 mV
6.5. SR10 Output tested (Set_Output(-100))	

Date: 23 January 2007

Sign:

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