



CALIBRATION CERTIFICATE

Form No. 710, Dec 2005

AANDERAA DATA INSTRUMENTS

Sensing Foil Batch No: 1707
Certificate No: 5013 21 1017

Product: 5013
Serial No: 21
Calibration Date: November 21, 2009

This is to certify that this product has been calibrated using the following instruments:

Fluke CHUB E-4	Serial No. A7C677
Fluke 5615 PRT	Serial No. 802056
Fluke 5615 PRT	Serial No. 802676
Fluke 5615 PRT	Serial No. 802057
Fluke 5615 PRT	Serial No. 802054
Calibration Bath model FNT 321-I-40	

Parameter: Internal Temperature:

Calibration points and readings:

Temperature (°C)	1.150	12.100	24.100	36.070
Reading (mV)	742.520	402.200	11.970	-353.340

Giving these coefficients

Index	0	1	2	3
TempCoef	2.431767E+01	-3.112080E-02	2.938471E-06	-4.220552E-09

Parameter: Oxygen:

	O2 Concentration	Air Saturation
Range:	0-500 μM ¹⁾	0 - 120%
Accuracy ¹⁾ :	< $\pm 8\mu\text{M}$ or $\pm 5\%$ (whichever is greater)	$\pm 5\%$
Resolution:	< 1 μM	< 0.4%
Settling Time (63%):	< 25 seconds	

Calibration points and readings²⁾:

	Air Saturated Water	Zero Solution (Na ₂ SO ₃)
Phase reading (°)	3.224954E+01	6.665181E+01
Temperature reading (°C)	9.906616E+00	9.972756E+00
Air Pressure (hPa)	9.927300E+02	

Giving these coefficients

Index	0	1	2	3
PhaseCoef	2.908020E-01	1.107869E+00	0.00E+00	0.00E+00

¹⁾ Valid for 0 to 2000m (6562ft) depth, salinity 33 - 37ppt

²⁾ The calibration is performed in fresh water and the salinity setting is set to: 0

Date:
November 21, 2009

Sign: Brandon W. Rieff

Service and Calibration Engineer

AANDERAA DATA INSTRUMENTS, INC



TEST & SPECIFICATIONS

Form No. 620, Nov 2005

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Layout No:
Circuit Diagram No:
Program Version:

Product: 5013
Serial No: 21

1. Visual and Mechanical Checks:

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

2. Current Drain and Voltages:

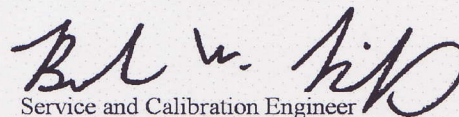
2.1. Average current drain at 0.5Hz sampling (Max: 38mA)	31.8	mA
2.2. Current drain in sleep (Max: 300 μ A)	203	μ A

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

3.1. Amplitude measurement (Blue: 290 – 470mV)	371.29	mV
3.2. Phase measurement (Blue: 25 \pm 5°)	29.44	°
3.3. Temperature Measurement (100 \pm 300mV)	41.44	mV

Date: November 21, 2009

Sign: Brandon W. Rieff


Service and Calibration Engineer

AANDERAA DATA INSTRUMENTS, INC

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