

CALIBRATION SHEET

Name : RINKO-III

Model : ARO-CAV-SB

Serial No. : 0137

Parameter Temperature
 Dissolved Oxygen



JFE Advantech Co., Ltd.



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Temperature

MODEL : ARO-CAV-SB

SERIAL : 0137

DATE : August 1, 2013

Loaction : Calibration office of manufacture department at Kobe

Method : The instrument is calibrated in a constant temperature water tank.
5 outputs in n-value corresponding to 5 water temperature ranging from 3 to 31 degrees C are computed by least square method.
(To make the tank temperature constant, water is stirred. The reference temperature is measured by a thermometer)

Reference : Platinum thermometer (certified by JCSS)

Temperature : $\text{Temperature } (^{\circ}\text{C}) = A + B \times N + C \times N^2 + D \times N^3$

$$\begin{aligned} A &= -5.767044\text{E}+00 \\ B &= 1.6577460\text{E}+01 \\ C &= -2.123403\text{E}+00 \\ D &= 4.5635700\text{E}-01 \end{aligned}$$

Reference [$^{\circ}\text{C}$]	Output [V]	Calculated [$^{\circ}\text{C}$]	Error [$^{\circ}\text{C}$]
3.590	0.60529	3.590	0.000
10.188	1.07648	10.187	-0.001
17.001	1.58588	17.003	0.002
24.307	2.12903	24.306	-0.001
31.279	2.61877	31.279	0.000

Criteria for acceptability : 1. The errors in above form must be within $\pm 0.02^{\circ}\text{C}$
2. After writing the calibration coefficients into instrument, one point check at any temperature must agree with the accuracy declared by the instrument.

Output Check :

Reference [$^{\circ}\text{C}$]	Calculated [$^{\circ}\text{C}$]	Error [$^{\circ}\text{C}$]
23.109	23.113	0.004

Judgement : **Good**

Calibration group,

Ocean and River Instruments Division

JFE Advantech Co., LTD



Dissolved Oxygen

MODEL : ARO-CAV-SB
SERIAL : 0137
DATE : August 1, 2013
Location : Calibration office of manufacture department at Kobe
Method : 2 points calibration of span and zero is carried out with 100% saturation water and nitrogen gas. Calibration should be done after making the instruments accustomed in the water and keeping saturation with air-bubbling. Outputs in saturated water and nitr

Film No= 132002A

A =	-44.7150	E =	0.0044
B =	150.484	F =	0.00
C =	-0.33839	G =	0.00
D =	0.0102	H =	1.00

Results :

Temperature at calibration[°C]	25
Air pressure at calibration[hPa]	996.8
Air saturation at calibration[%]	98.3

	Span output [%]	zero output [%]	Span Error [%]	Zero Error [%]
1st	98.11	-0.03	-0.21	-0.03
2nd	98.11	-0.07	-0.21	-0.07
3rd	97.98	-0.07	-0.34	-0.07

Judgement : **Good**

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