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SAMI² pH Validation Certificate

November 25, 2019

Serial Number: P0113
RMA Number: 082720
Technician: BW
Reagent: pmcp0586

Table 1: SAMI² pH E-values.

Ea ₄₃₄	Eb ₄₃₄	Ea ₅₇₈	Eb ₅₇₈
17372.0	2284.0	94.1	38676.0

Validation Notes

Tris Batch: 101519

$\Delta T = 0.09^{\circ}\text{C}$

Tris Bottle: 5

N = 11

Validation Temp: 24.97°C

$\Delta \text{pH} = 0.0029 \pm 0.0010$

Build Notes

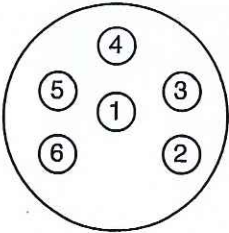
Pressure Test: 200 psi – Passed

Modifications:

Standard refurbishment with OOI P/V cable upgrade.

INSULATION RESISTANCE TEST: OOI - UW/OSU UNITS

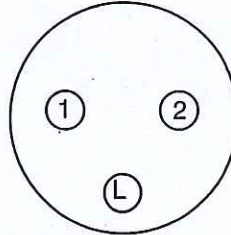
Communications and Power - TI Bulkhead



Top view of MCBH(WB)-FS-6-TI

Pin	Connection	Switch	
		L	R
1	GND (pwr)	1	0
2	Rx (SAMI)	2	0
3	Tx (SAMI)	3	0
4	V+ (PWR)	4	0
5	RTS	0	1
6	GND (com)	0	2

Pump Bulkhead



Top view of MCBH(WB)-FS-2-TI

Pin	Connection	Switch	
		L	R
1	GND	0	3
2	PWR +	0	4
L	Locate		

1. Plug test cable(s) into SAMI bulkhead(s) and immerse unit past bulkhead connection. Allow to soak for at least 2 hours.
2. Plug anode into Common on Fluke 1507. Black jumper connects 'Insulation' to box banana receptacle.
3. Set Fluke 1507 to 50V range and proceed to test each switch position in table below by pressing the 'Test' button. Hold 'Test' button until reading stabilizes. Record the insulation resistance value in table. Note that one of the switches is zero in each condition.
4. If out of spec ($<10\text{ M}\Omega$), contact customer w/r/t replacement of suspected parts (typically penetrator, bulkhead or biofouling cable).
5. Replace suspected part and re-test if needed.

Connection	Left switch	Right switch	Resistance (MegaOhms)	Re-Test Resistance (MegaOhms)
GND	1	0	>55	>55
Rx	2	0	>55	>55
Tx	3	0	>55	>55
V+	4	0	>55	>55
RTS	0	1	>55	>55
GND	0	2	>55	>55
GND - Pump	0	3	X	X
V+ - Pump	0	4	X	X

UNIT #

P113

DATE

12-2-19

Technician Signature

8 hrs

>50 hrs

Notes: