



Sunburst Sensors, LLC
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Missoula, MT 59802
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SAMI² pH Validation Certificate

November 13, 2024

Serial Number: P0132
RMA Number: 785
Technician: BW
Reagent: 1402

Table 1: SAMI² pH E-values.

Ea ₄₃₄	Eb ₄₃₄	Ea ₅₇₈	Eb ₅₇₈
19168.0	2546.0	111.0	41962.0

Validation Notes

Tris Batch: 090924

$\Delta T = 0.14^{\circ}\text{C}$

Tris Bottle: 5

$N = 9$

Validation Temp: 24.90 °C

$\Delta \text{pH} = 0.0027 \pm 0.0007$

Build Notes

Pressure Test: 200 psi – Passed

Modifications:

standard refurb

new pump - corroded

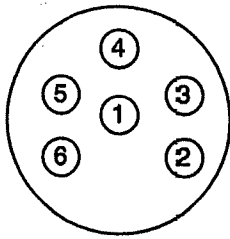
IR test

IR replacements - 3-pin cable, BH Pressure cap

2x sem filters

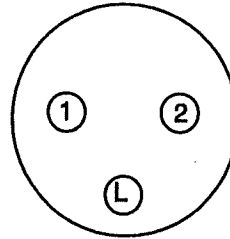
INSULATION RESISTANCE TEST: OOI - UW/OSU UNITS

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	.1	16
Rx	2	0	.1	21
Tx	3	0	.1	36
V+	4	0	.1	21
RTS	0	1	.1	23
GND	0	2	55	55
GND - Pump	0	3	X	X
V+ - Pump	0	4	X	X

UNIT # P132
DATE 11-14-24

Technician Signature

Notes:

IR fail on rept. rept 3-pin cable, BH, pressure cap
- Will likely need new 6-pin BH next cycle.

Sunburst SAMI Service Report

Ver 1.0 3 Oct 2024

SAMI Type: PHSEN-D

Serial number: P0132

AT number: ATOSU-70751-00003

Service date: 11/13/24

Remaining reagent amount: $\approx 30\%$ (244 ML)

Incoming observations/remarks:

Repairs/Replacements made:

- Pressure cap, all bulkhead wiring
- Oils pump rusty & broken; replaced
- IR replacement - fail IR test
 - pressure cap
 - 3 pin BH
 - 3 pin cable

ORIGIN ID:MSOA (406) 532-3246
KATHERINE F. BECK
SUNBURST SENSORS, LLC
1226 WEST BROADWAY

SHIP DATE: 21NOV24
ACTWGT: 44.00 LB
CAD: 5452121/INET/4760
DIMS: 32x21x12 IN

MISSOULA, MT 59802
UNITED STATES US

BILL RECIPIENT

TO TRINA LITCHENDORF

UNIVERSITY OF WASHINGTON

APPLIED PHYSICS LAB

1013 NE 40TH ST.-HENDERSON HALL

SEATTLE WA 98105

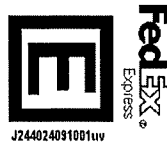
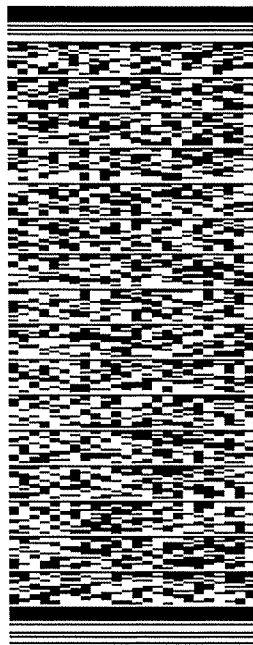
(206) 221-5906

REF: P162,P163,P163,P162,P159 11212

PO

DEPT:

58CJ8/39D3/C6C4



2 of 5

MPS# 7701 3759 7208

0263

Mst# 7701 3759 5834

0201

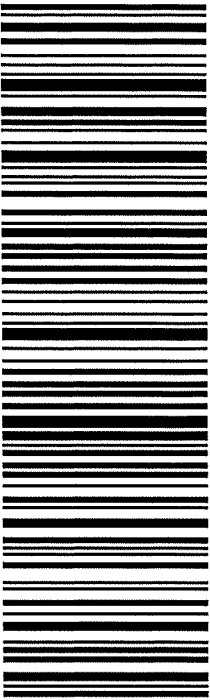
MON - 25 NOV 5:00P

** 2DAY **

SS SEATG

LKEA 98105

WA-US SEA



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