



Sunburst Sensors, LLC
1226 W Broadway Ave
Missoula, MT 59802
+1 406 532 3246

SAMI² pH Validation Certificate

November 13, 2024

Serial Number: P0162
RMA Number: 785
Technician: BW
Reagent: 1404

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: 24.88 °C

$\Delta \text{pH} = 0.0028 \pm 0.0007$

Build Notes

Pressure Test: 200 psi – Passed

Modifications:

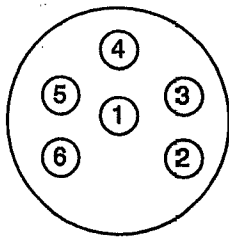
standard refurb

IR testing

2x sem filters

INSULATION RESISTANCE TEST: OOI - UW/OSU UNITS

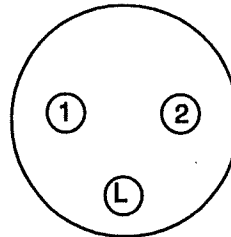
Communications and Power - TI Bulkhead



Top view of MCBH(WB)-FS-8-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		
Tx	3	0		
V+	4	0		
RTS	0	1		
GND	0	2		
GND - Pump	0	3	X	X
V+ - Pump	0	4	X	X

UNIT # P162

DATE 11-13-24

Technician Signature BW

Notes:

Sunburst SAMI Service Report

Ver 1.0 3 Oct 2024

SAMI Type: PHSEN-A

Serial number: P0162

AT number: ATAPL-58337-00010

Service date: 11/13/24

Remaining reagent amount: 134 ML \approx 25%

Incoming observations/remarks:

Good cond.

Repairs/Replacements made:

2x semrock optical filters

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

MISSOULA, MT 59802
UNITED STATES US

SHIP DATE: 21NOV24
ACTWT: 44.00 LB
CAD: 5452121/NET 4760
DIMS: 32x21x12 IN

BILL RECIPIENT

TO TRINA LITCHENDORF

UNIVERSITY OF WASHINGTON

APPLIED PHYSICS LAB

1013 NE 40TH ST.-HENDERSON HALL

SEATTLE WA 98105

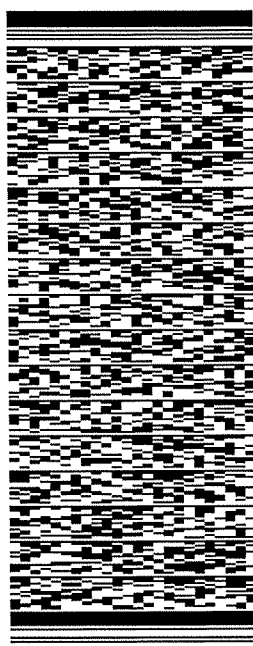
(206) 221-5906

REF: P162,P153,P163,P132,P159 11212

PO

DEPT

58CJ839D3/C6C4



J244824091001uv

4 of 5

MP# 7701 3759 7425

0201

Mst# 7701 3759 5834

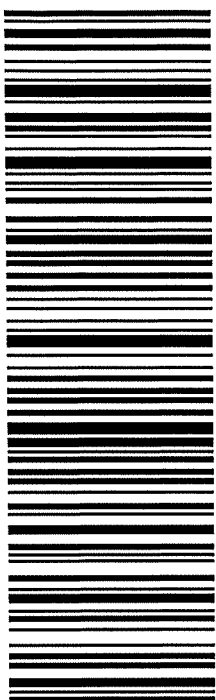
MON - 25 NOV 5:00P

** 2DAY **

SS SEATG

LKEA 98105

WA-US SEA



After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.