



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

## SAMI<sup>2</sup> pH Validation Certificate

November 13, 2024

Serial Number: P0116  
RMA Number: 785  
Technician: BW  
Reagent: 1278

Table 1: SAMI<sup>2</sup> pH E-values.

| Ea <sub>434</sub> | Eb <sub>434</sub> | Ea <sub>578</sub> | Eb <sub>578</sub> |
|-------------------|-------------------|-------------------|-------------------|
| 19168.0           | 2546.0            | 111.0             | 41962.0           |

## Validation Notes

Tris Batch: 090924

$\Delta T = 0.17^{\circ}\text{C}$

Tris Bottle: 5

$N = 9$

Validation Temp: 24.90 °C

$\Delta \text{pH} = 0.0023 \pm 0.0007$

## Build Notes

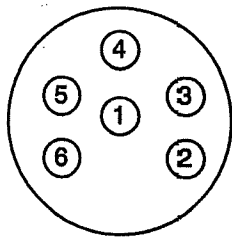
Pressure Test: 200 psi – Passed

Modifications:

New Valve  
New Diaphragm  
1hour labor  
validation  
IR Testing

# INSULATION RESISTANCE TEST: OOI - UW/OSU UNITS

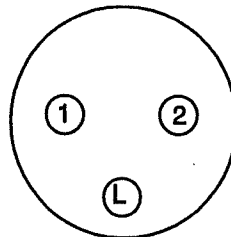
## Communications and Power - TI Bulkhead



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            | 755                   | 755                           |
| 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 #

P116

DATE

11-13-24

Technician Signature

Notes:

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

SHIP DATE: 21NOV24  
ACTWGT: 44.00 LB  
CAD: 5452121/MET 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

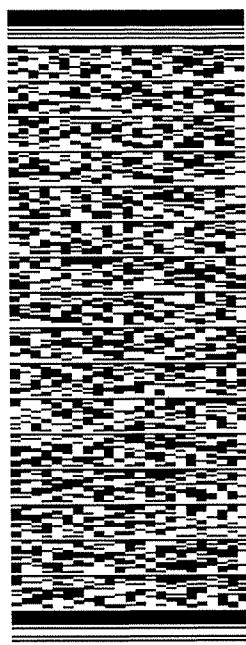
(206) 221-5906

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

PO:

DEPT:

58CJB/39D3/C6C4



1 of 5

TRK# 7701 3759 5834

0201  
## MASTER ##

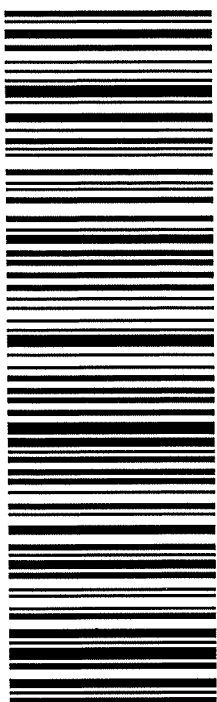
MON - 25 NOV 5:00P

\*\* 2DAY \*\*

SS SEATG

LKEA 98105

WA-US SEA



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