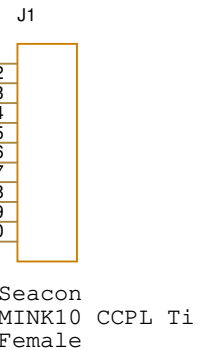
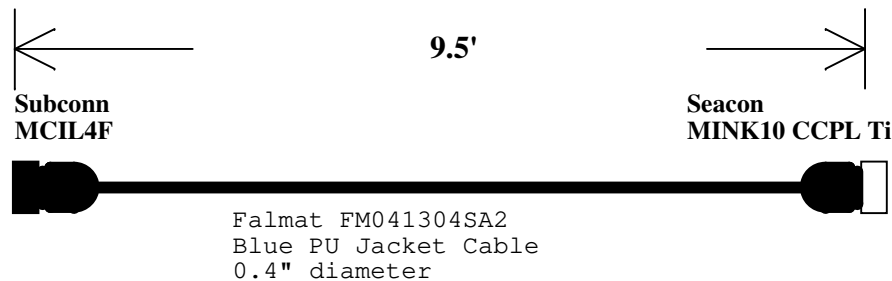
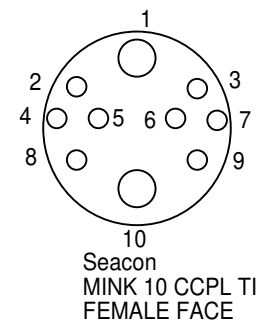
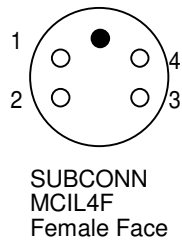


20 gauge	ORG	+12V BUS
22 gauge	YEL	+24V Bus
drain wire		Cable Shield/Drain wire
22 gauge	GRN	NC
22 gauge	BLU	NC
RG179		Video Signal
RG179 Shield		Video Shield
22 gauge	GRY	NC
22 gauge	WHT	NC
20 gauge	BLU	12V BUS COM



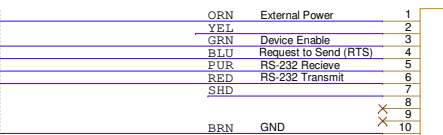
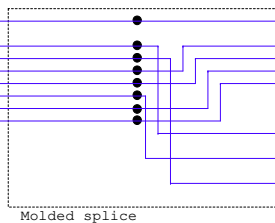
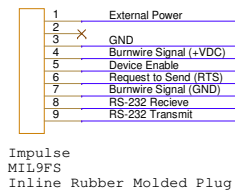
Falmat FM041304SA2 Blue PU Jacket Cable



Proprietary and confidential
as disclosed under NDA

Title		
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Size A	Document Number 1003148	Rev 1.0.0
Date:	Monday, May 05, 2025	Sheet 0 of 26

To Acoustic
Modem



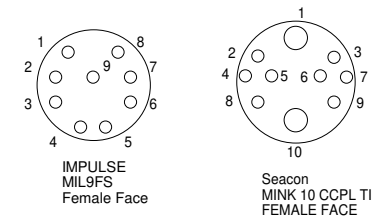
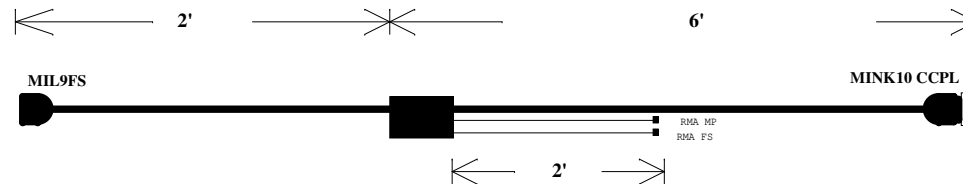
To Electronics
Sphere

Seacon
MINK10
CCPL Ti
Female

Falmat FM012-694-X Orange PU Jacket Cable

To Burnwire +
Impulse
RMA MP

To Burnwire -
Impulse
RMA FS

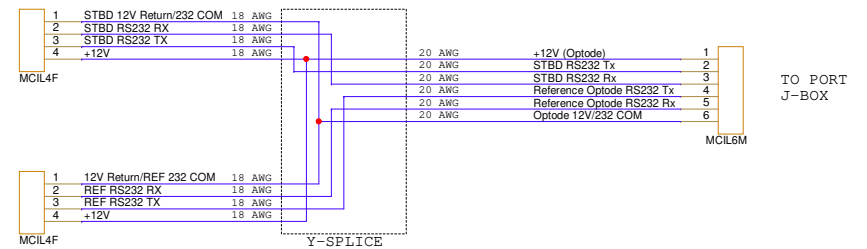
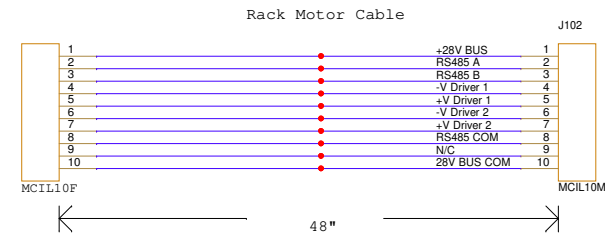
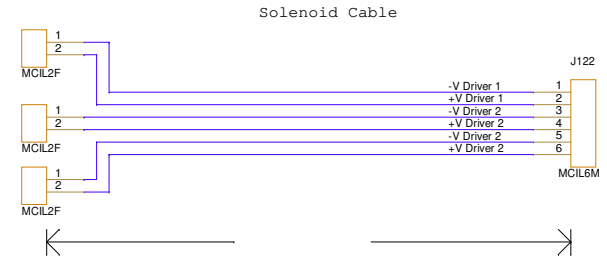
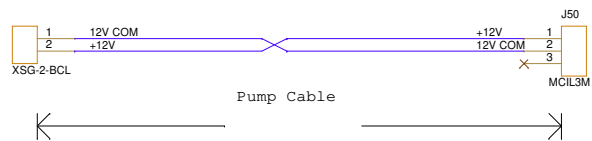
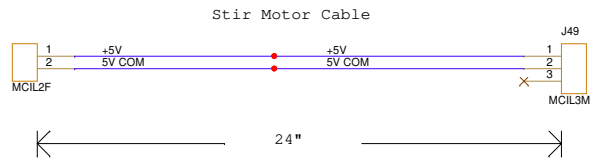
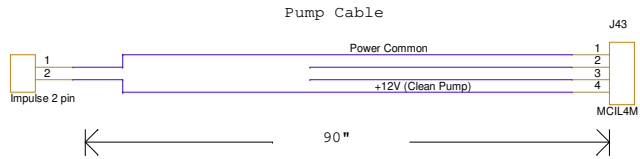


Proprietary and confidential
as disclosed under NDA

Engineer: Alana Sherman, x1780

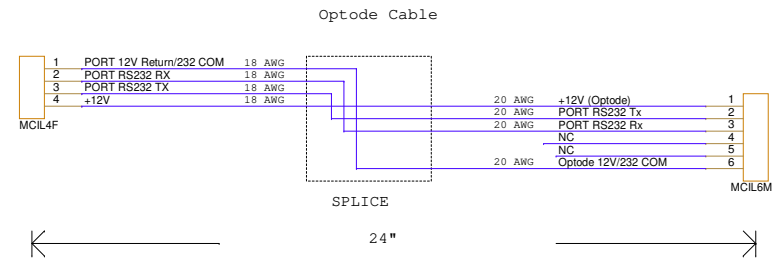
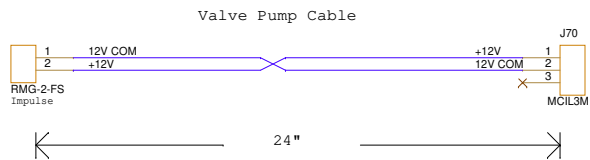
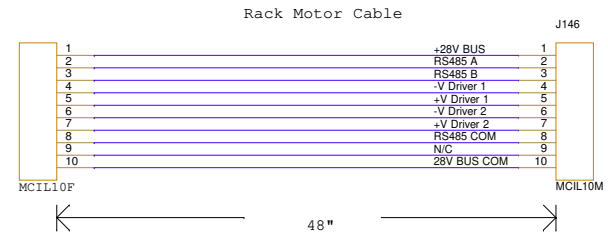
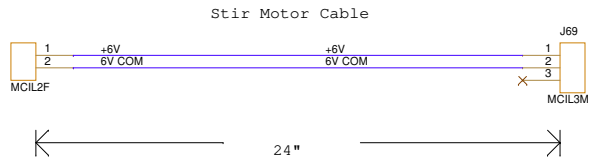
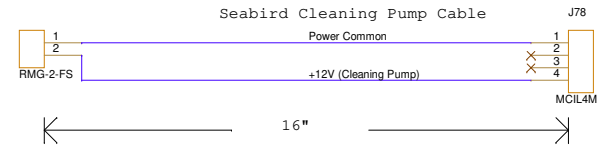
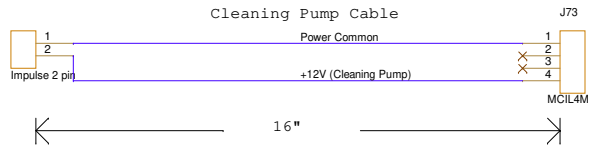
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Size	Document Number	Rev
B	1003148	1.0.1
Date: Monday, May 05, 2025		
Sheet 1 of 14		

Rev 1.0.1- Fixed colors to match Seacon's work.



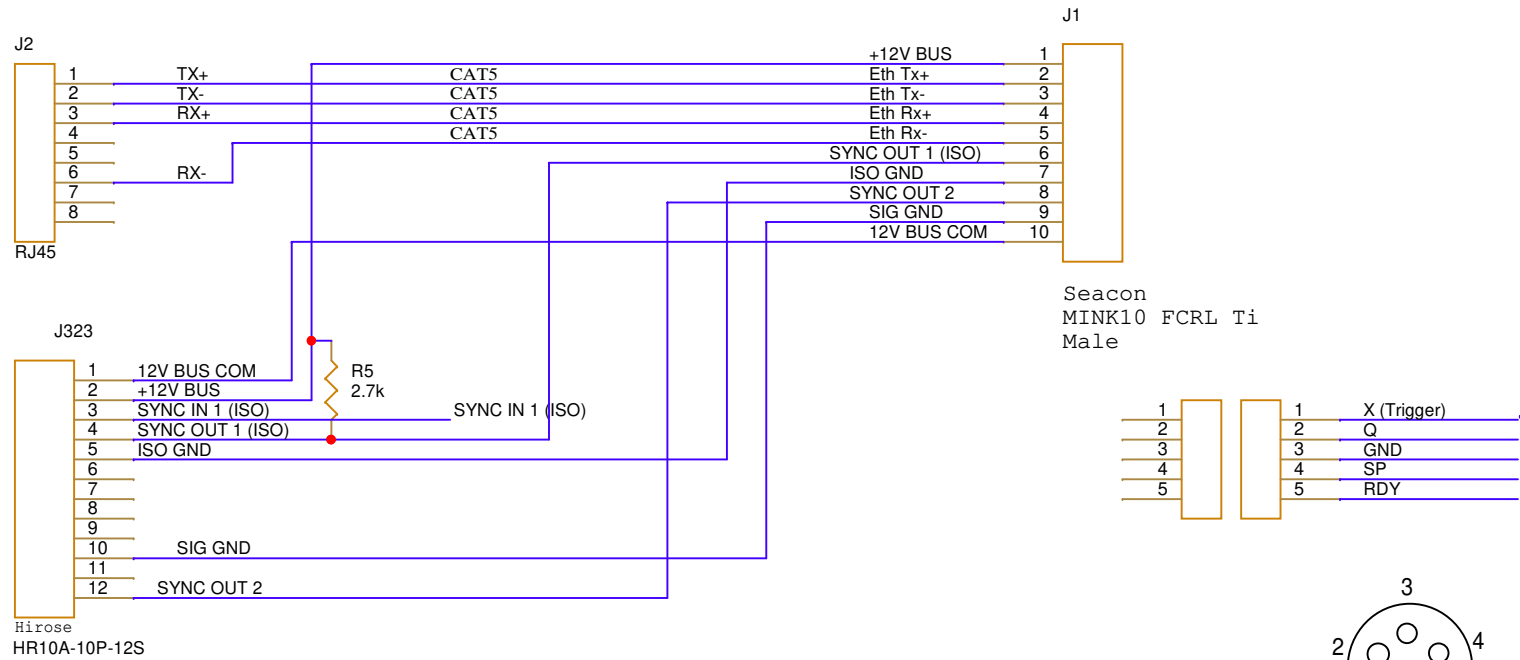
Proprietary and confidential
as disclosed under NDA

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Size	Document Number	Rev
B	<Doc>	1.0.0
Date:	Monday, May 05, 2025	Sheet 1 of 1



Proprietary and confidential
as disclosed under NDA

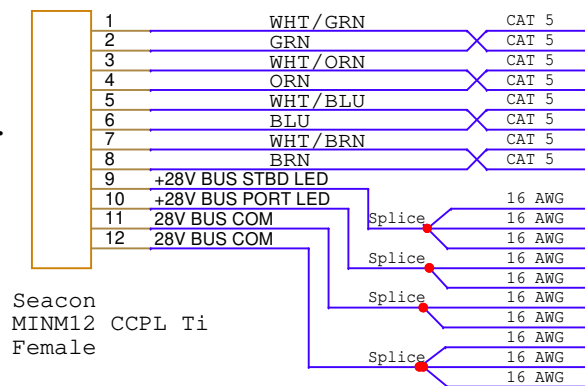
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BR PORT Cables			
Size	Document Number	Rev	
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Date:	Monday, May 05, 2025	Sheet	1 of 1



Proprietary and confidential
as disclosed under NDA

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Size A	Document Number <Doc>	Rev <RevC>
Date:	Monday, May 05, 2025	Sheet 1 of 1

To Elec.
Sphere

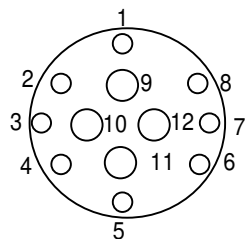


Splice

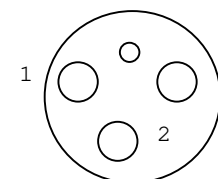
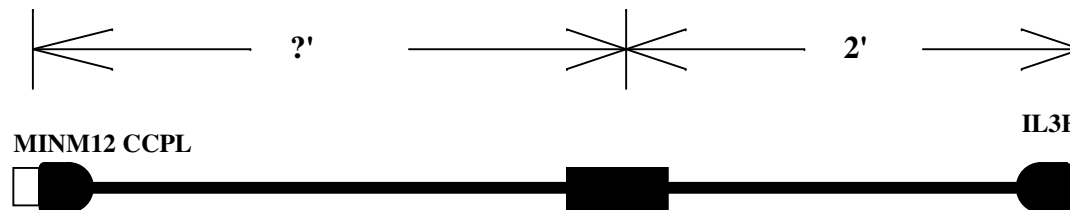
IL3F
Subconn

TO STBD
FLUOR
LIGHT

Falmat FMXCAT51610K24 Green PU Jacket Cable



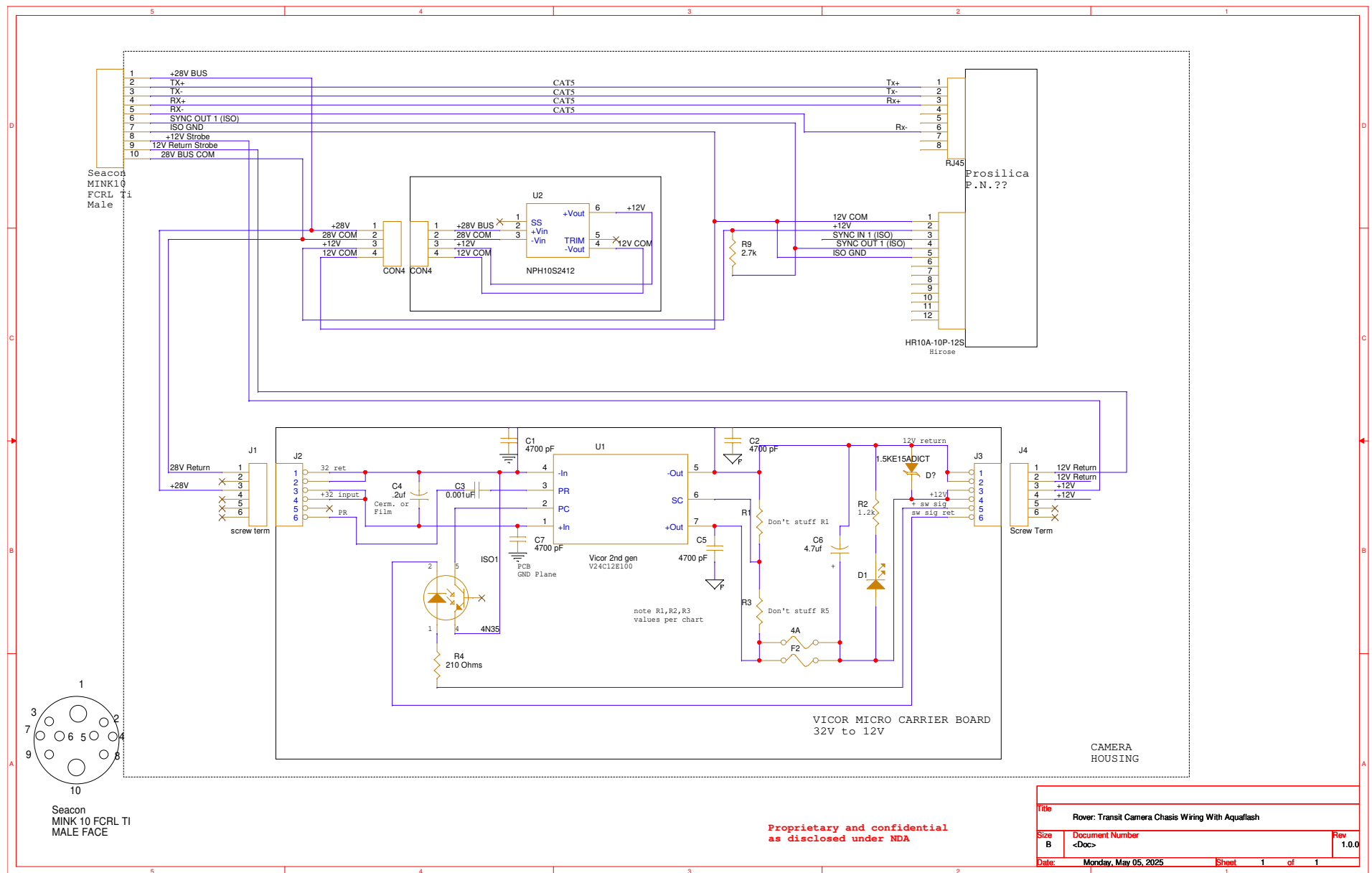
Seacon
MINM 12 CCPL TI
FEMALE FACE

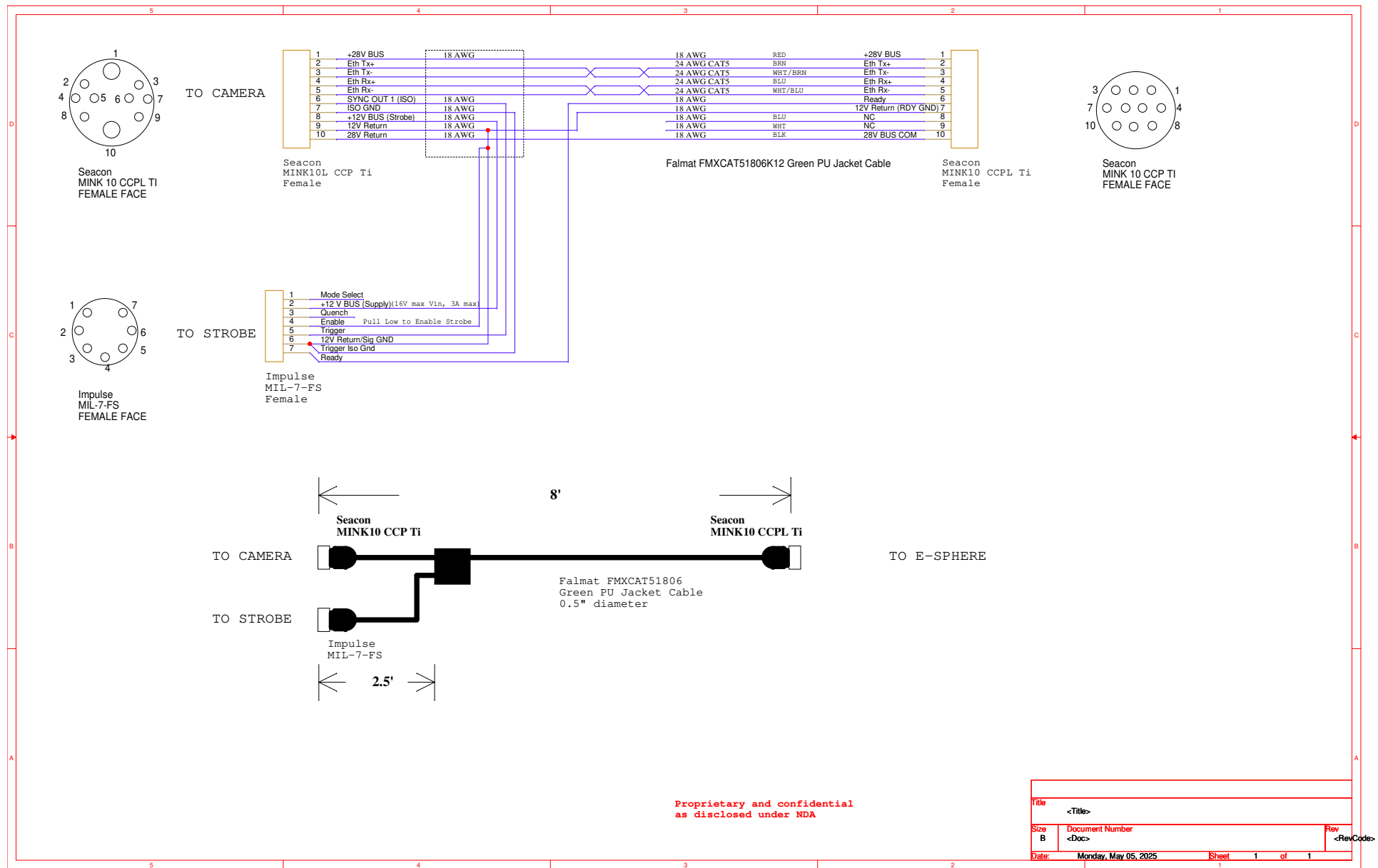


Subconn IL3F
Face View

Proprietary and confidential
as disclosed under NDA

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Size	Document Number	Rev
A	<Doc>	<RevC>
Date:	Monday, May 05, 2025	Sheet 1 of 1

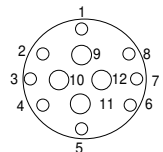




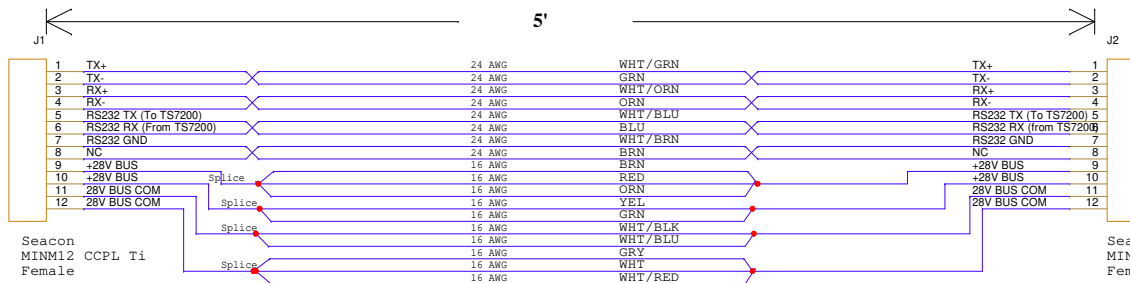
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Date:	Monday, May 05, 2025	Sheet 1 of 1

To Electronics
Sphere

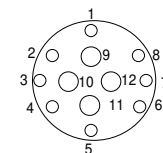


Seacon
MINM 12 CCPL TI
FEMALE FACE



Falmat FMXCAT51610K24 Green PU Jacket Cable

To Battery
Sphere

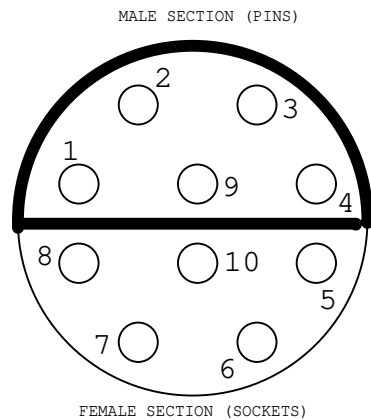


Seacon
MINM 12 CCPL TI
FEMALE FACE

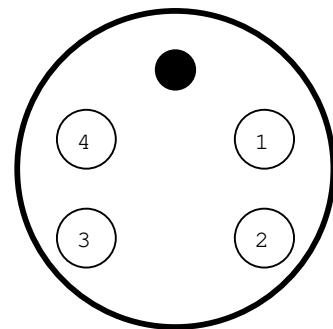
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as disclosed under NDA

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Size	Document Number	Rev
B	<Doc>	<RevCode>
Date:	Monday, May 05, 2025	Sheet 1 of 1

LEMO 10 PIN CONNECTOR
FACE VIEW

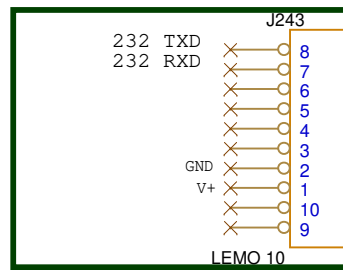


FEMALE SECTION (SOCKETS)



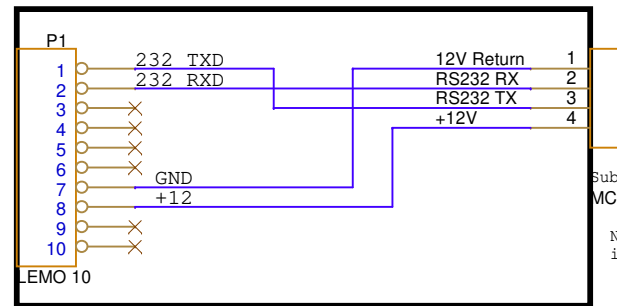
Subconn
MCBH4M
Male Face View

AANDERAA
3830 OPTODE



NOTE LEMO 10 IS
HERMAPHRODITIC
PLUG AND JACK ARE MIRROR

Ti ADAPTER SLEEVE

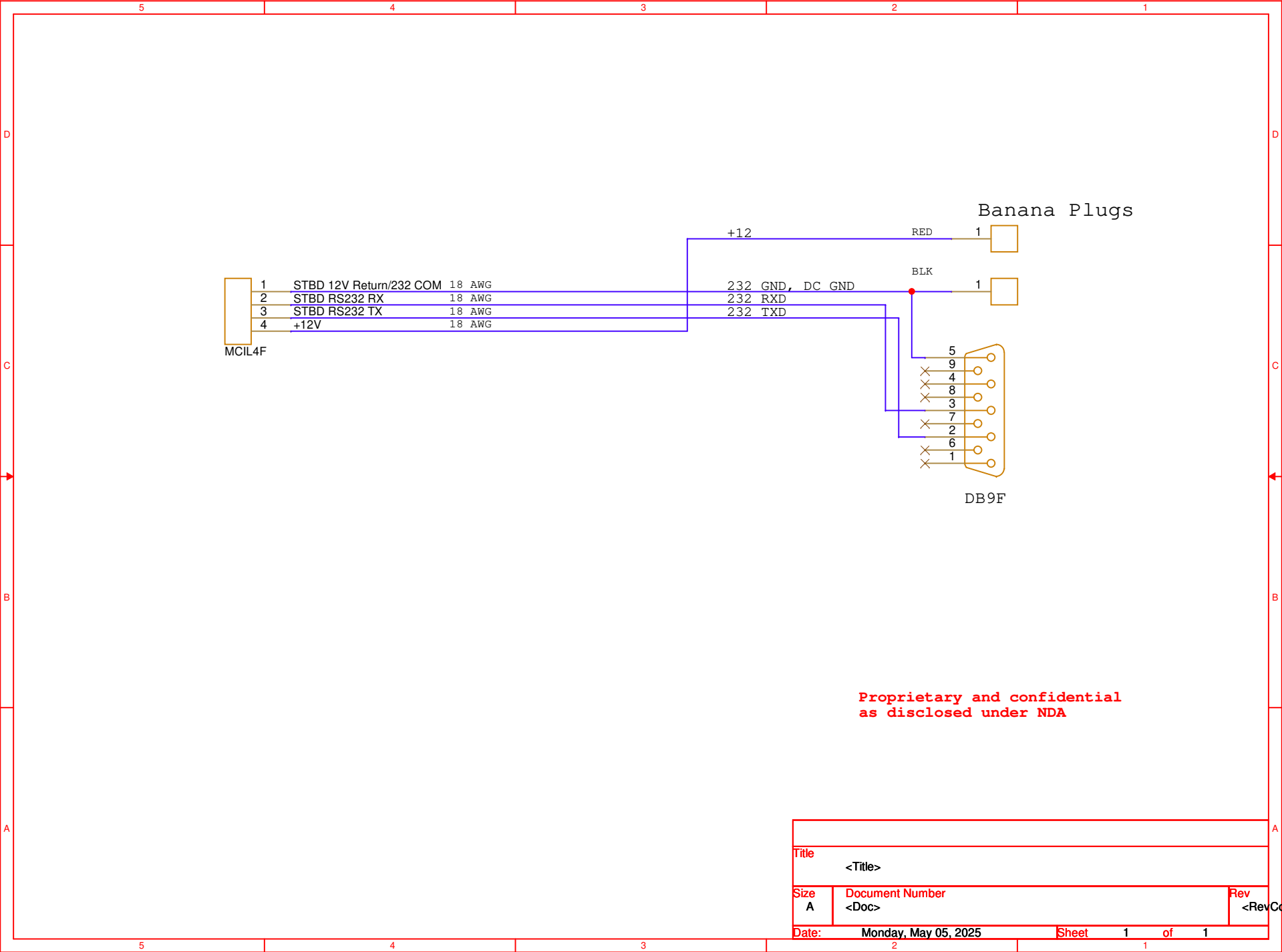


Subconn
MCBH4M Ti

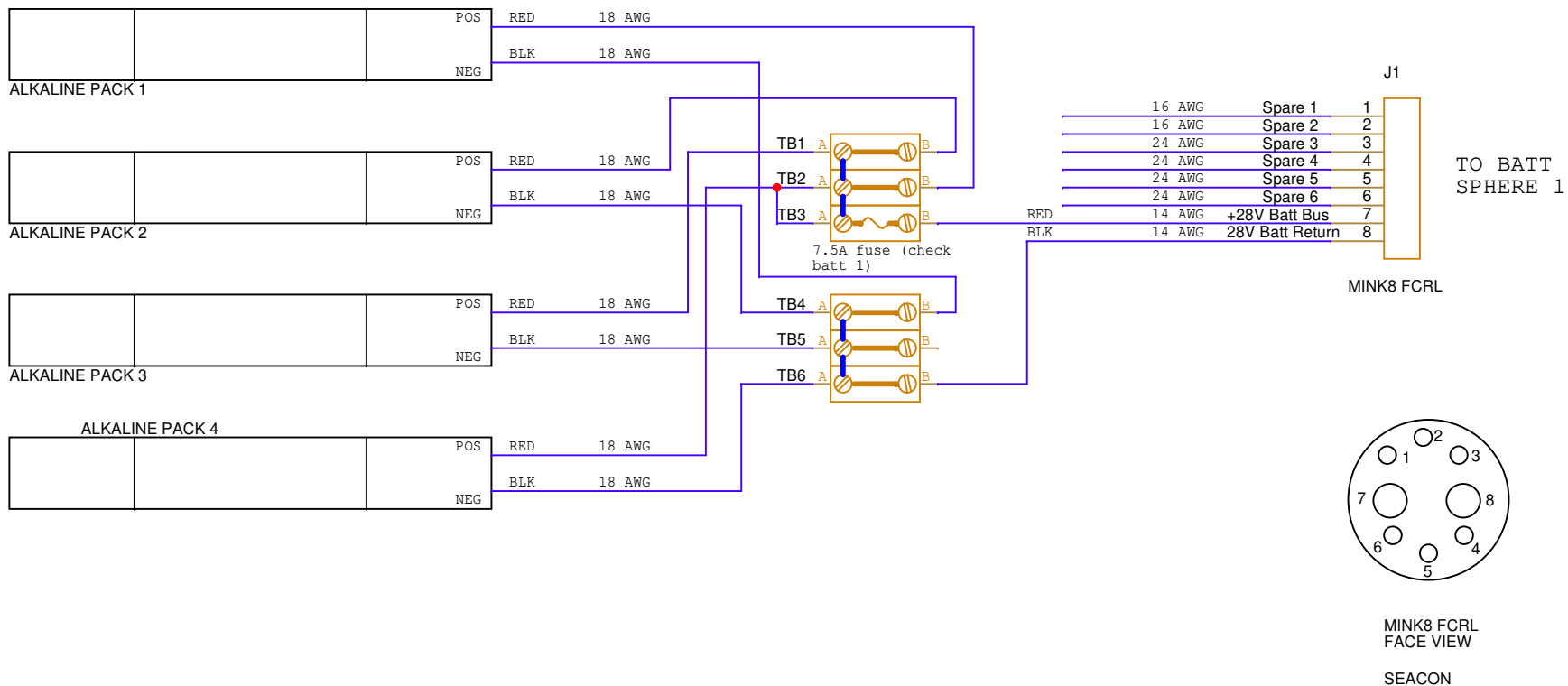
Note this connector
is a short stub

Proprietary and confidential
as disclosed under NDA

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Date:	Monday, May 05, 2025	Sheet 1 of 1

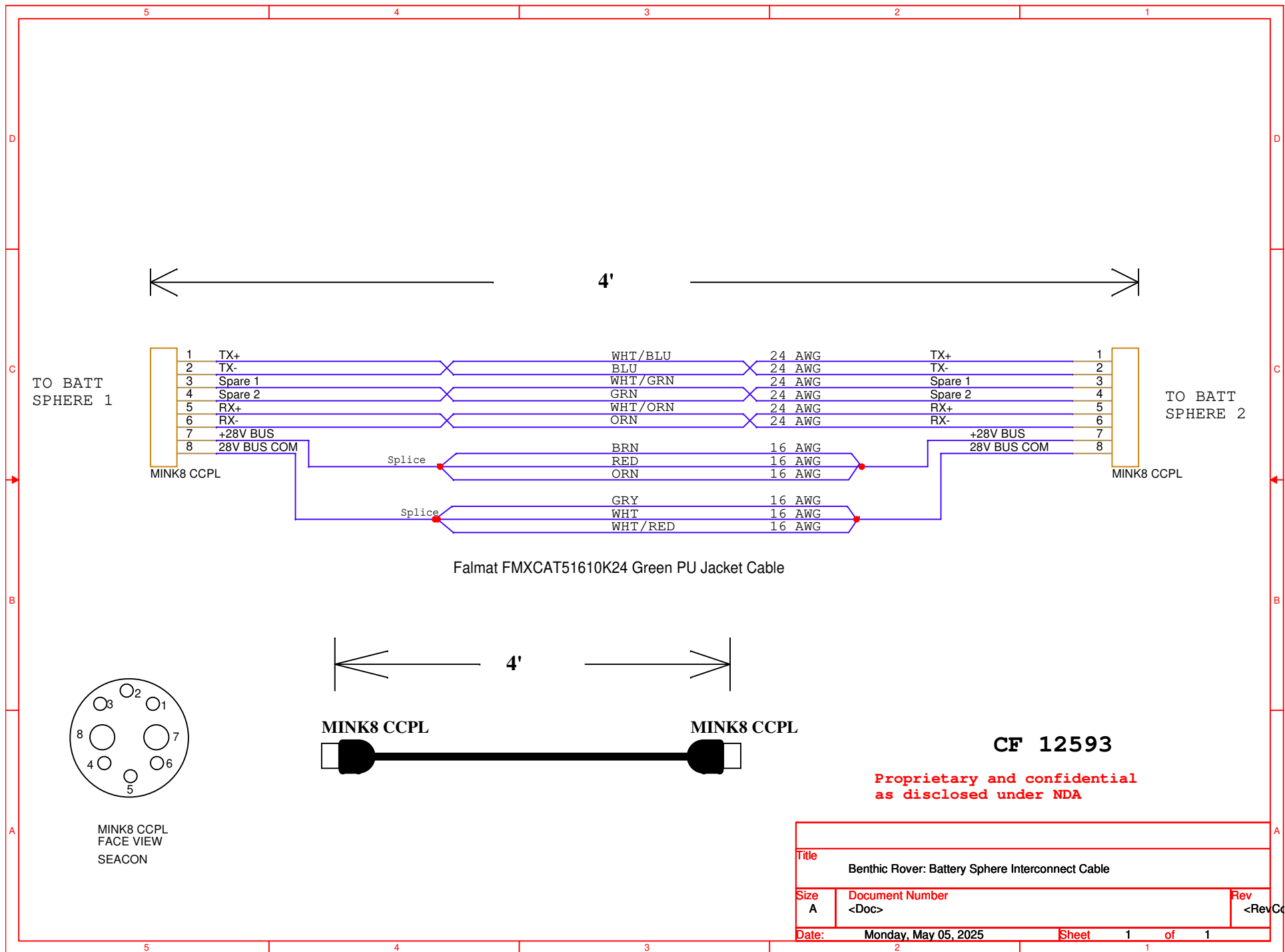


Battery Packs
Contain Diodes
Internally

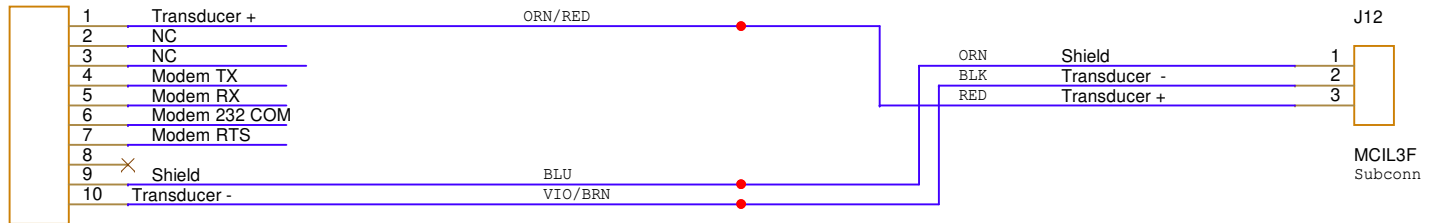


Proprietary and confidential
as disclosed under NDA

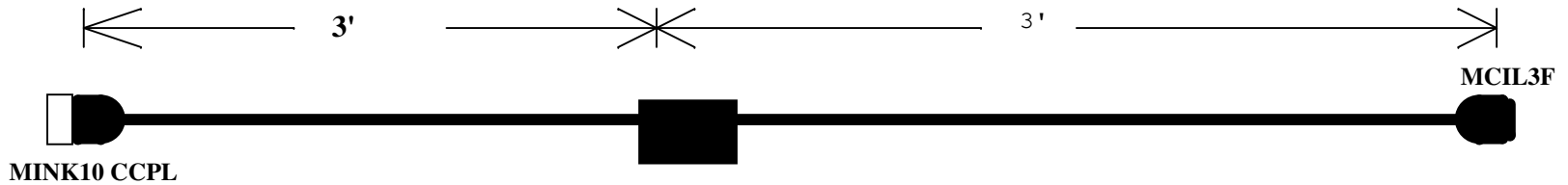
Engineer A. Sherman		
Title Benthic Rover: Battery Sphere 2		
Size A	Document Number 1003148	Rev 1.0.0
Date: Monday, May 05, 2025	Sheet 1 of 1	



Battery
Sphere



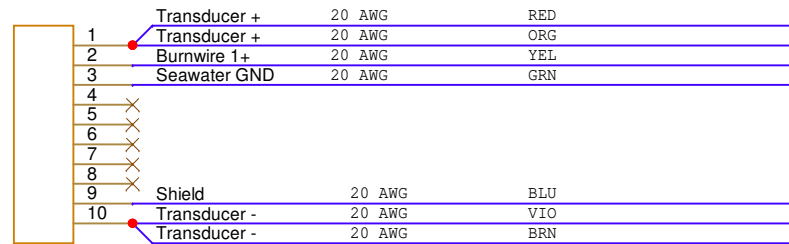
Seacon
MINK10 CCPL Ti
Male



Proprietary and confidential
as disclosed under NDA

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Size	Document Number	Rev
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Date:	Monday, May 05, 2025	Sheet 1 of 1

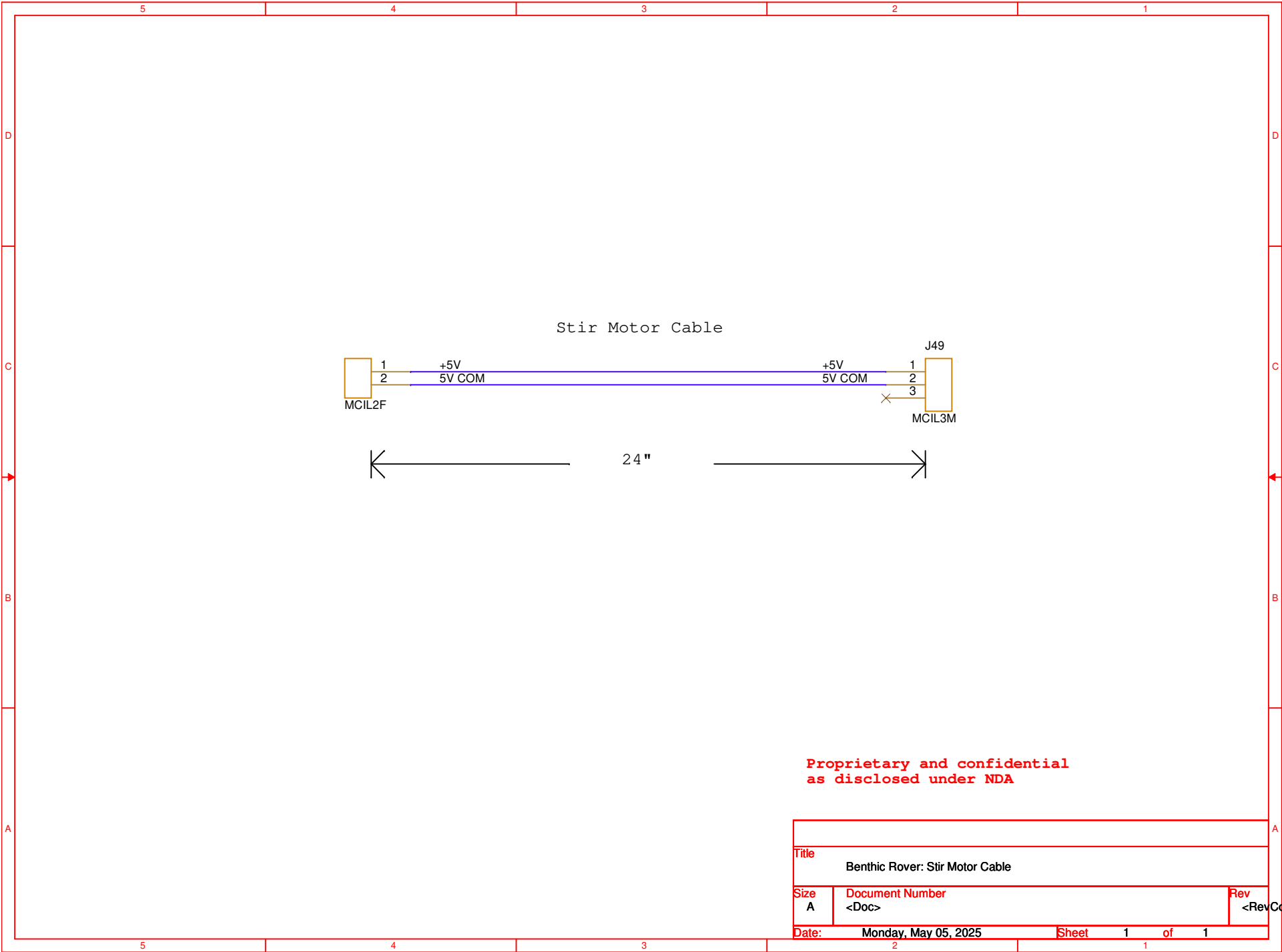
To
Battery
Sphere

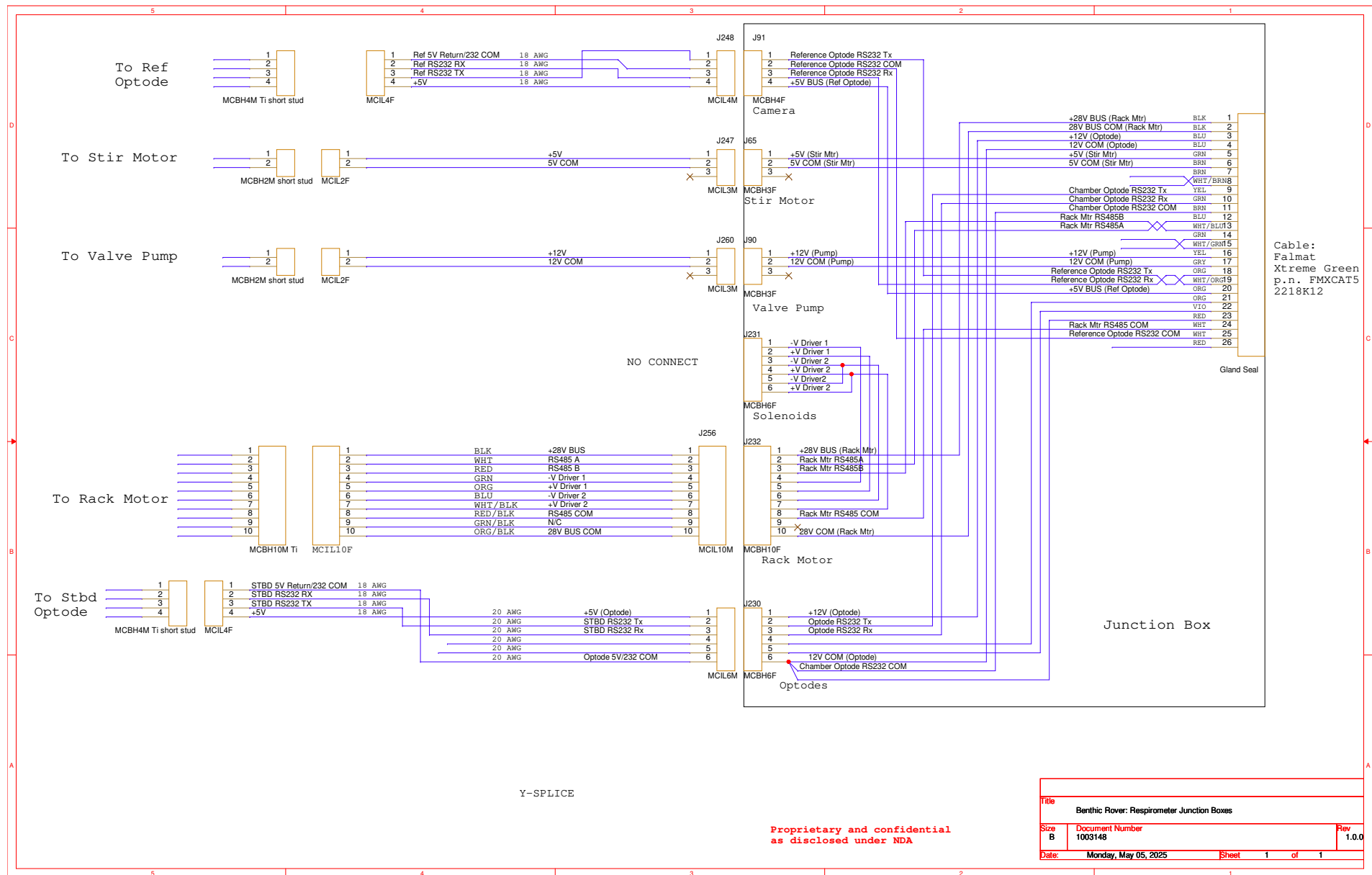


Seacon
MINK10 CCPL Ti Falmat FM012-694-X Orange PU Jacket Cable
Male

Proprietary and confidential
as disclosed under NDA

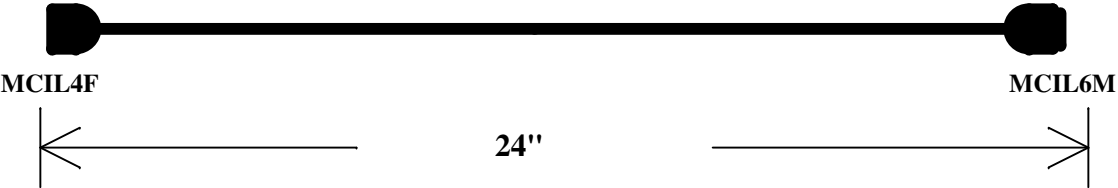
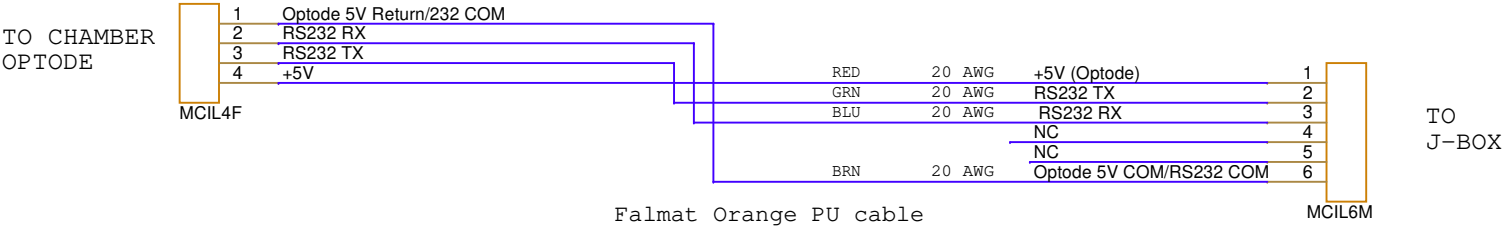
Engr.: Alana Sherman x1780		
Title Benthic Rover: Seacon LF modem cable		
Size A	Document Number <Doc>	Rev 1.0.0
Date:	Monday, May 05, 2025	Sheet 1 of 1



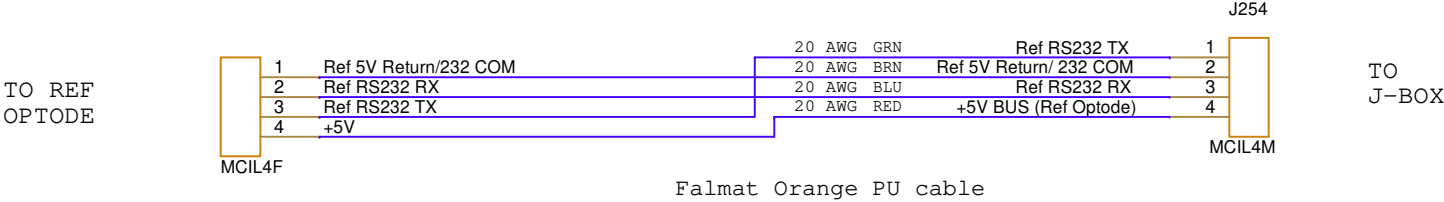


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Benthic Rover: Respirometer Junction Boxes			
Size	Document Number	Rev	
B	1003148	1.0.0	
Date:	Monday, May 05, 2025	Sheet	1 of 1

Chamber Optode Cable

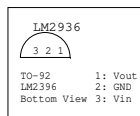
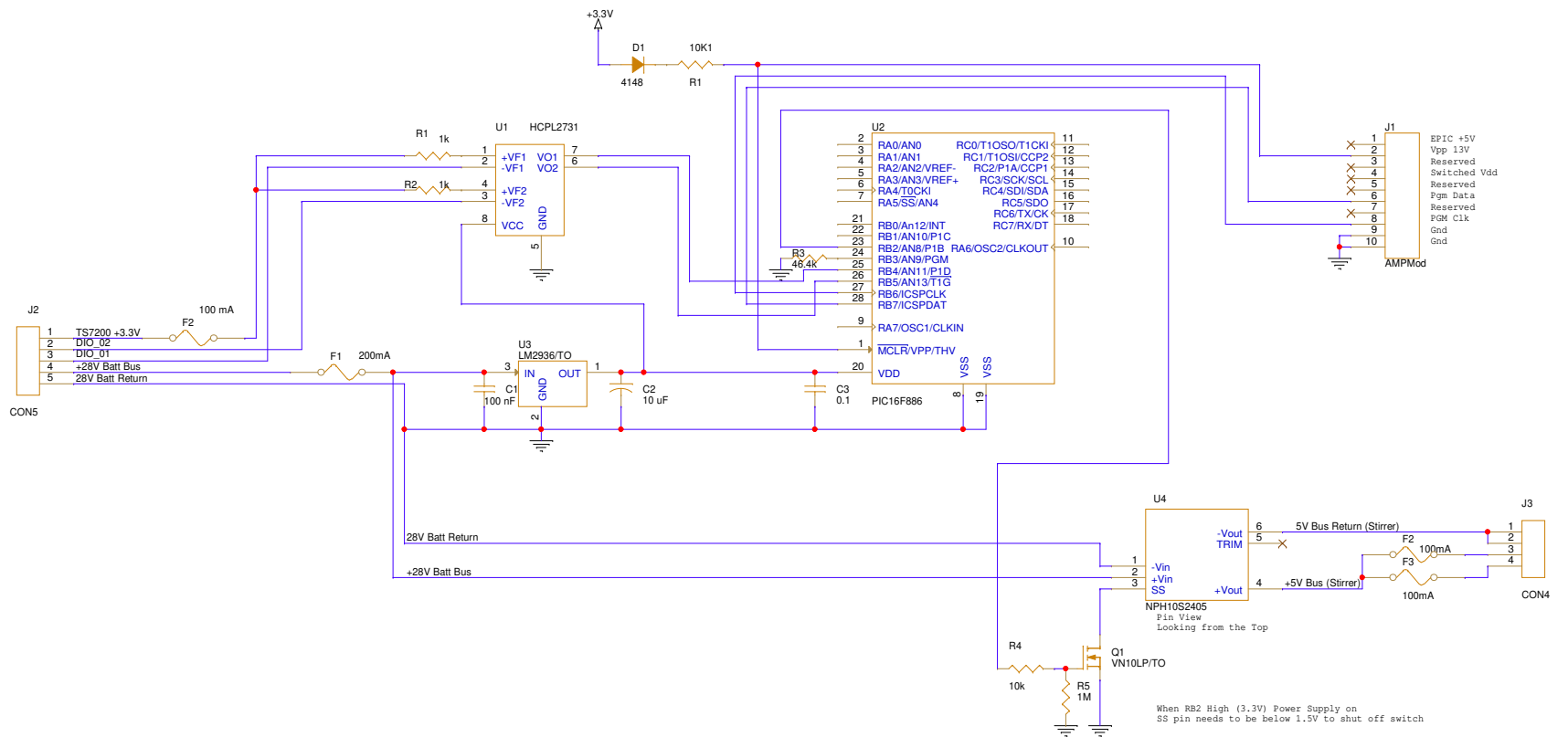


Ref Optode Cable



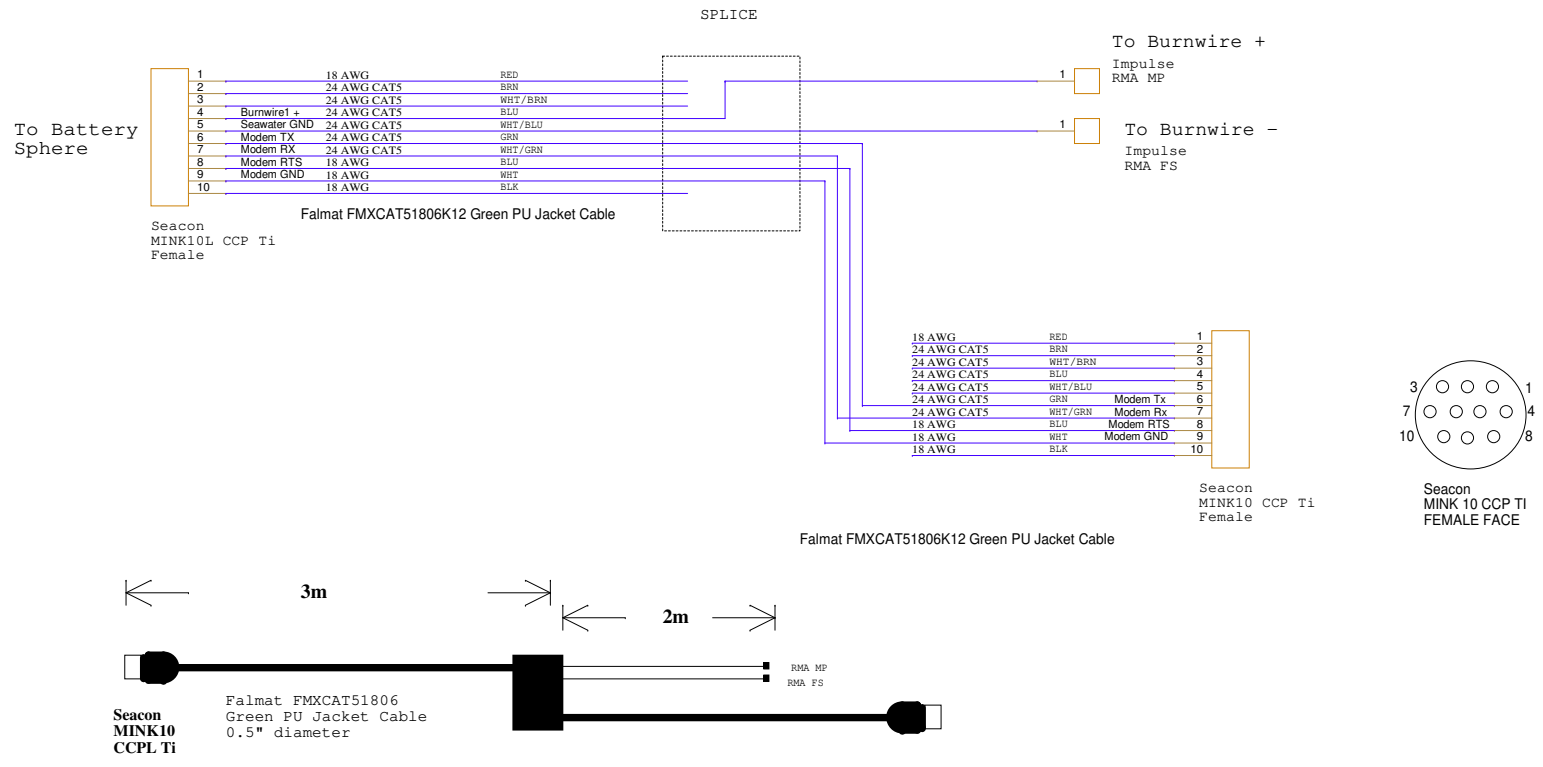
Proprietary and confidential
as disclosed under NDA

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Size	Document Number	Rev
A	<Doc>	<RevC>
Date:	Monday, May 05, 2025	Sheet 1 of 1



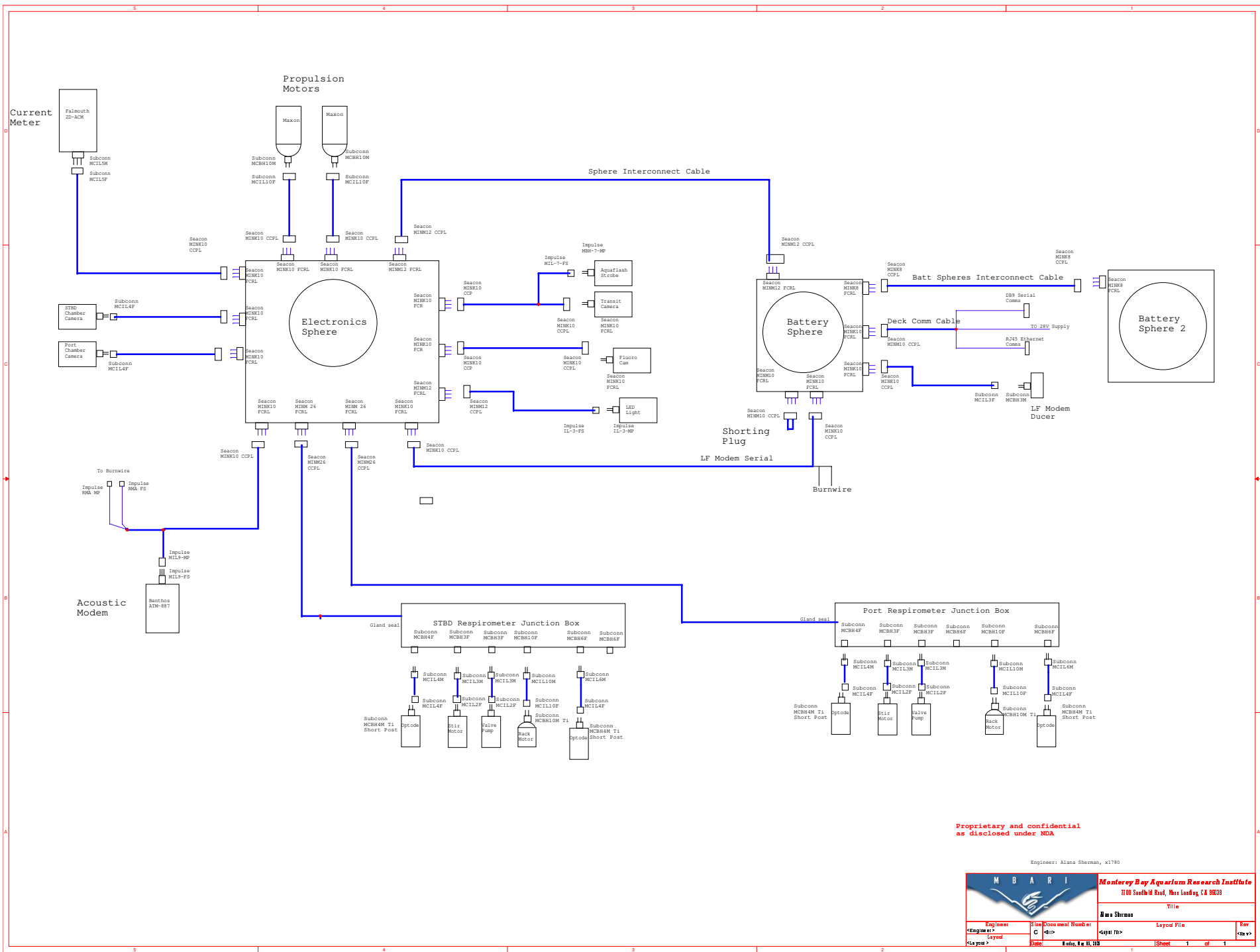
Proprietary and confidential
as disclosed under NDA

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Date:	Monday, May 05, 2025	Sheet 1 of 47



Proprietary and confidential
as disclosed under NDA

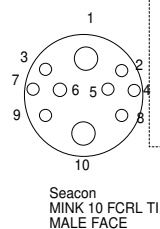
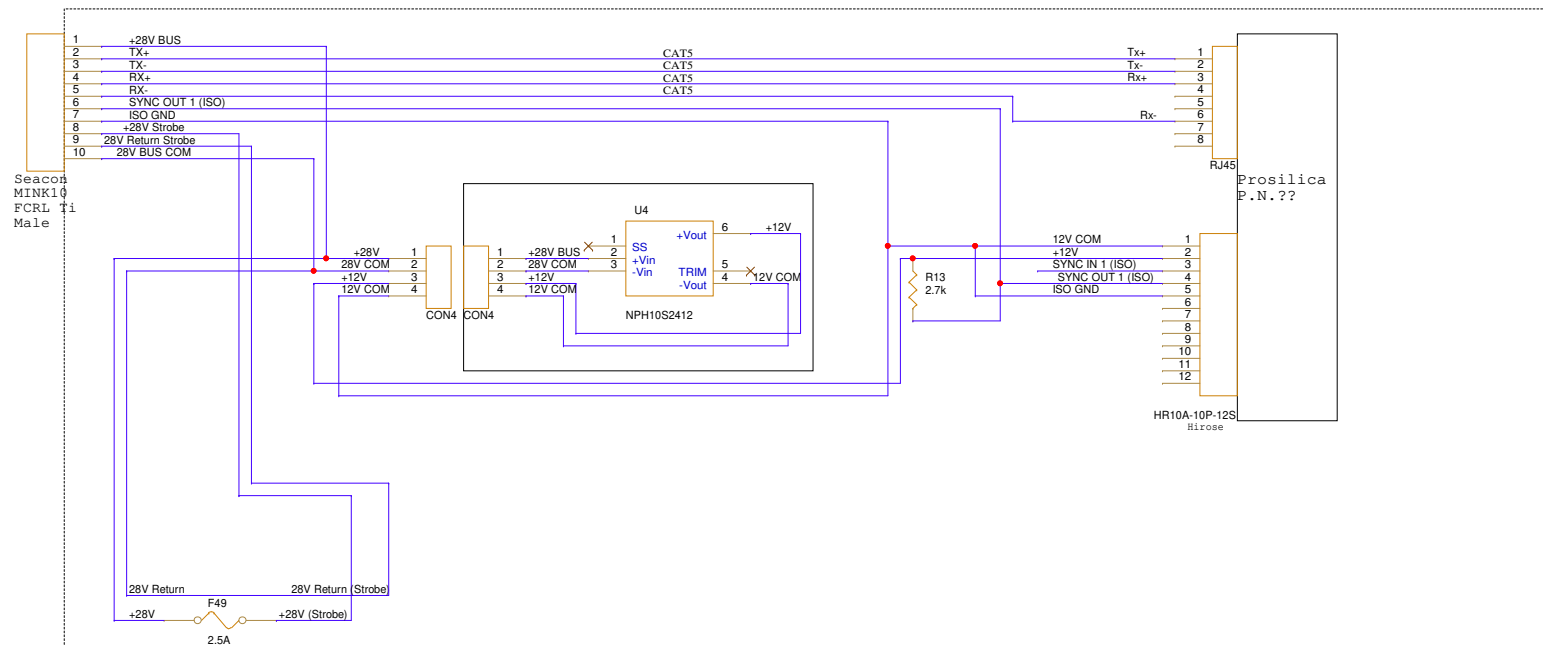
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Size	Document Number	Rev
B	<Doc>	<Rev/Code>
Date: Monday, May 05, 2025		
Sheet 1 of 1		



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as disclosed under NDA

Engineer: Alana Sherman, a1780

		Monterey Bay Aquarium Research Institute 7100 South Rd, Moss Landing, CA 95039			
		Alana Sherman			
Engineer	Doc	Doc Number	Layout File	Rev	
C	410				
Layout	Doc	Info, Rev H, 1/18	Sheet 1 of 1		

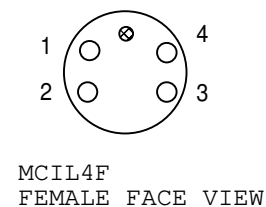
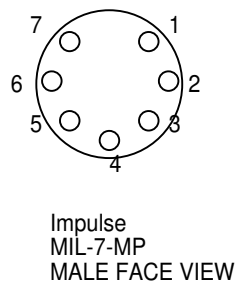
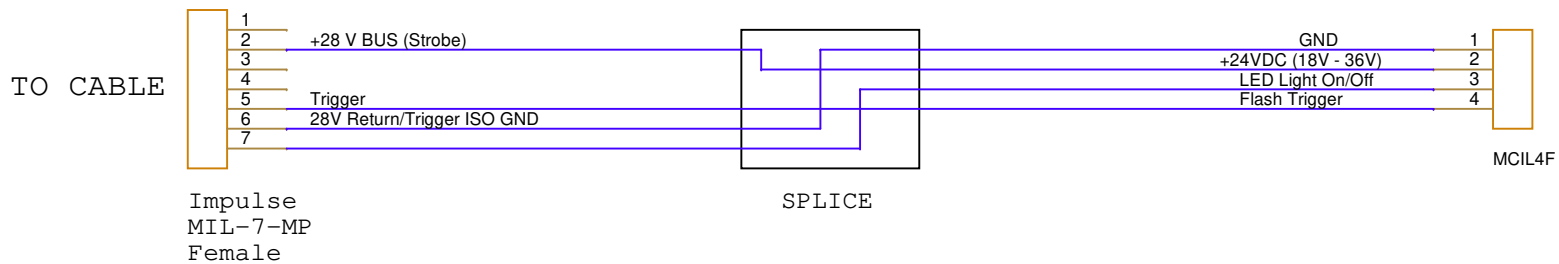


Proprietary and confidential
as disclosed under NDA



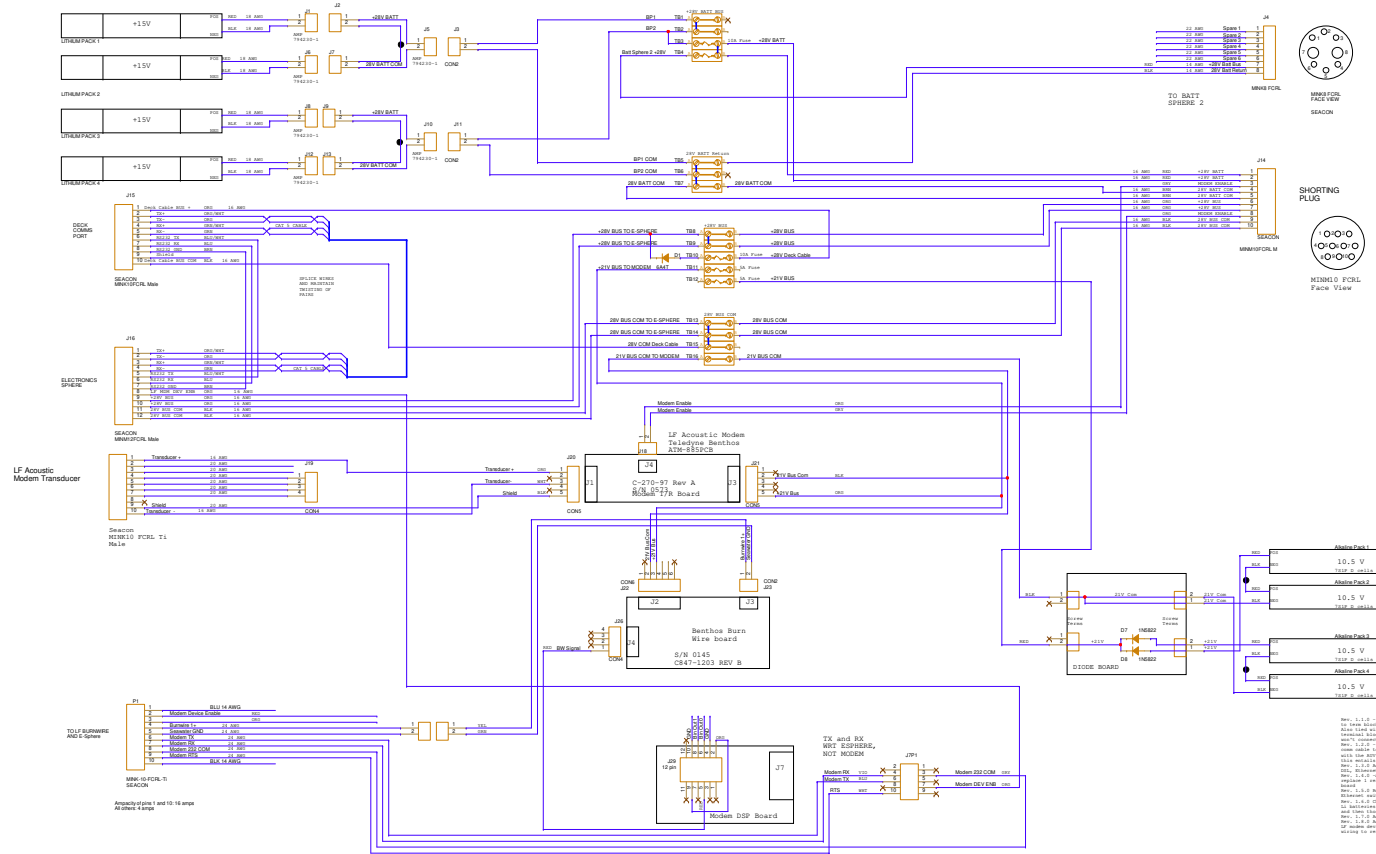
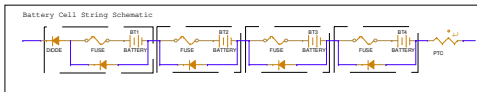
Monterey Bay Aquarium Research Institute
7700 Sandhold Road, Moss Landing, CA 95033

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Layout <Layout>		Date:	Monday, May 8, 2001	Sheet	1 of 1	

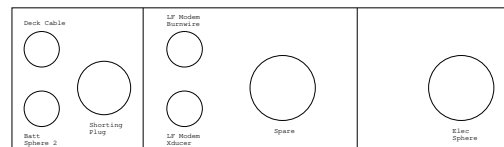


Proprietary and confidential
as disclosed under NDA

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		Title Alana Sherman	
Engineer <Engineer>	Size A	Document Number <Doc>	Layout File <Layout File>
Layout <Layout>	Date: Monday, May 05, 2025	Sheet 1 of 1	Rev <Rev>



Battery 1 Sphere Connectors Layout



Rev. 1.1.0 - Disconnected deck charge port power lines to keep battery from overcharging and self-heating. Disconnected battery terminals from the ground plane. Rev. 1.1.1 - Changed the pin out of the deck charge cable to be more standard. Rev. 1.1.2 - Added a 10k pull-up resistor to the TX and RX lines. Rev. 1.1.3 - Added a 10k pull-up resistor to the TX and RX lines. Rev. 1.1.4 - Added a 10k pull-up resistor to the TX and RX lines. Rev. 1.1.5 - Added a 10k pull-up resistor to the TX and RX lines. Rev. 1.1.6 - Added a 10k pull-up resistor to the TX and RX lines. Rev. 1.1.7 - Added a 10k pull-up resistor to the TX and RX lines. Rev. 1.1.8 - Added a 10k pull-up resistor to the TX and RX lines. Rev. 1.1.9 - Added a 10k pull-up resistor to the TX and RX lines. Rev. 1.1.10 - Added a 10k pull-up resistor to the TX and RX lines.

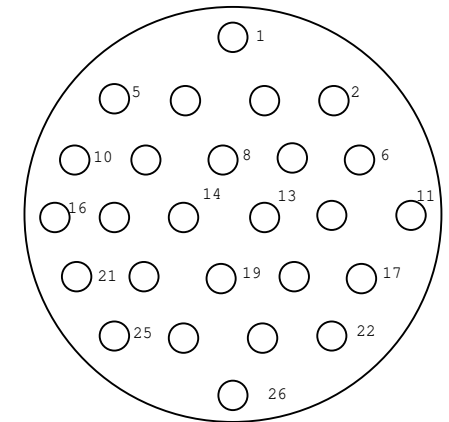
Proprietary and confidential
as disclosed under NDA

		Naval Air Warfare Research and Development 1111 11th St, Suite 1111, San Diego, CA 92161	
Project C-212-27 Rev A	Contract Number N00019-01-1-0001	Builder Name: Battery Sphere #1 1111	Rev 1.1.10
Contract N00019-01-1-0001	Rev 1.1.10	Rev Number 1.1.10	Rev 1.1.10

+28V BUS (Rack Mtr)	BLK	1
28V BUS COM (Rack Mtr)	WHT	2
+12V (Optode)	RED	3
12V COM (Optode)	RED	4
+6V (Stir Mtr)	BLK	5
6V COM (Stir Mtr)	WHT	6
Spare	BRN	7
Spare	WHT/BRN	8
Chamber Optode RS232 Tx	GRY	9
Chamber Optode RS232 Rx	GRY	10
Chamber Optode RS232 COM	GRN	11
Rack Mtr RS485A	BLU	12
Rack Mtr RS485B	WHT/BLU	13
Spare	GRN	14
Spare	WHT/GRN	15
+12V (Pump)	YEL	16
12V COM (Pump)	GRN	17
Reference Optode RS232 Tx	ORG	18
Reference Optode RS232 Rx	WHT/ORG	19
+5V BUS (Ref Optode)	ORG	20
Chamber Optode Spare	YEL	21
Chamber Optode Spare	BRN	22
12V COM (Optode)	BRN	23
Rack Mtr RS485 COM	BLU	24
Reference Optode RS232 COM	ORN	25
Spare	BLU	26

Falmat Xtreme Net p/n FM022208-11M04

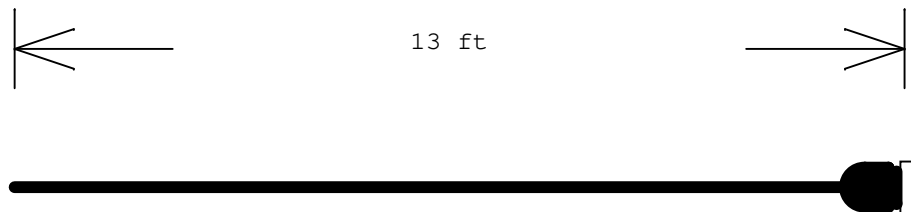
Seacon MINM26 CCP



Face View Of
Seacon MINM26 CCP

18 22 AWG
4 UTP 24 AWG

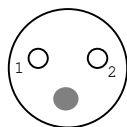
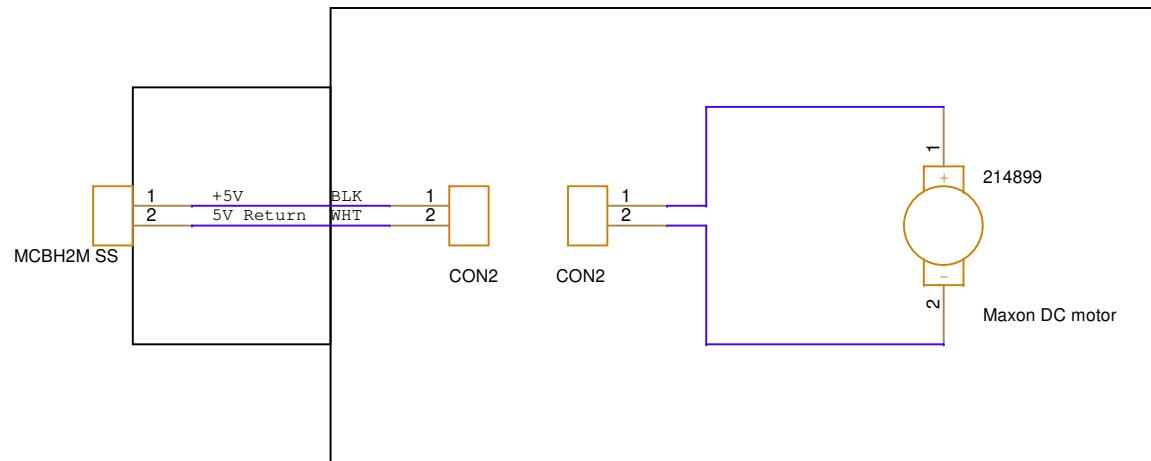
Note: Wire color assignments changed in 2014 to make cable construction easier. This new style is installed on Rover stbd rack, with old style on port rack as of Oct 2014.



Seacon
MINM2610 CCPL Ti

Proprietary and confidential
as disclosed under NDA

Engineer: Alana Sherman, modified by Paul McGill		
Title Benthic Rover: Respirometer JBox Cable		
Size A	Document Number 1003148	Rev 1.0.0
Date: Monday, May 05, 2025	Sheet 1 of 1	



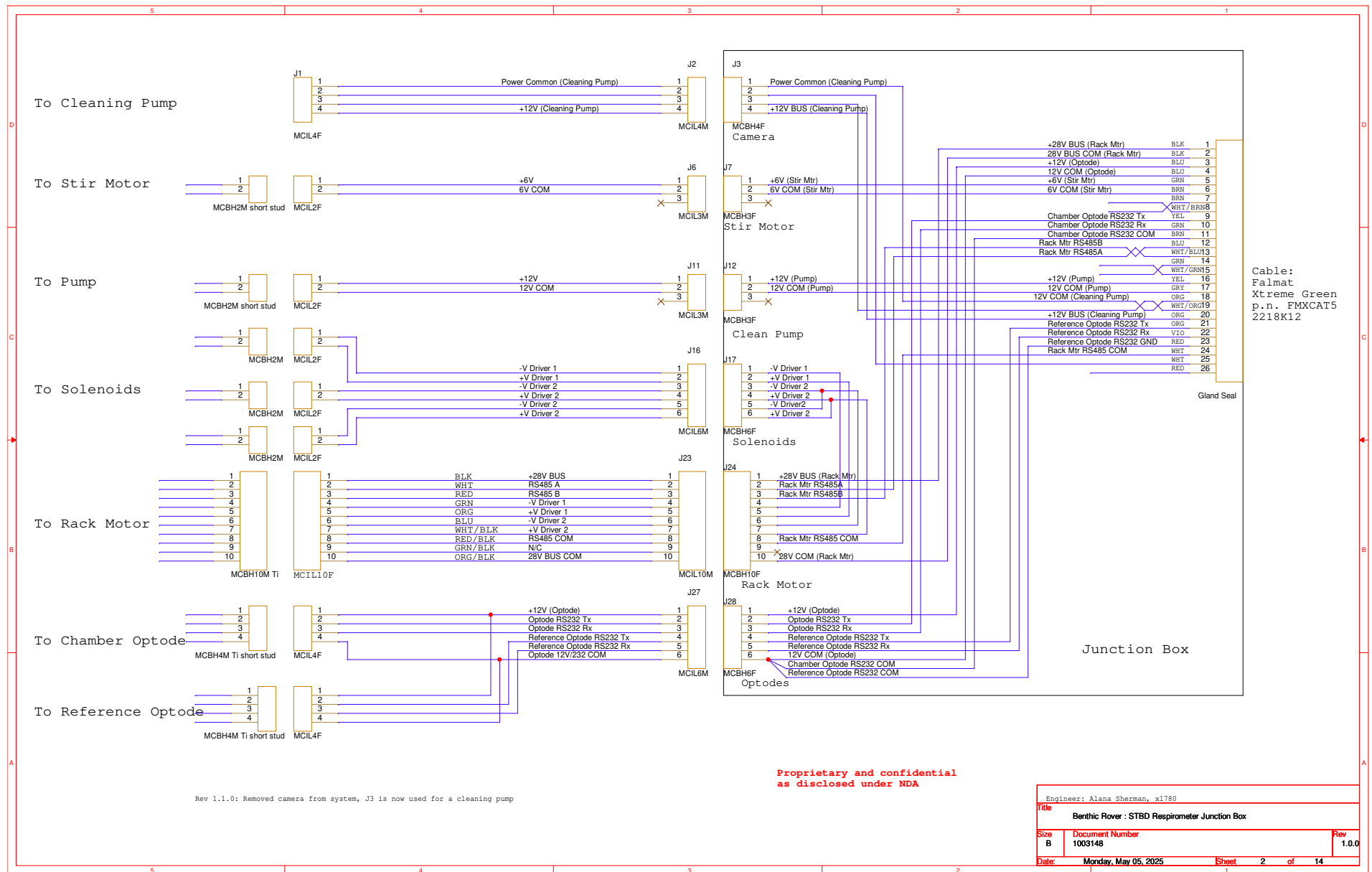
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Face View

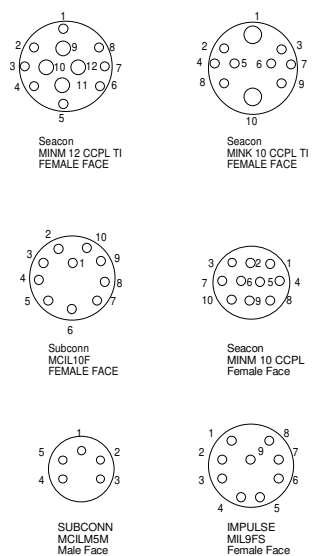
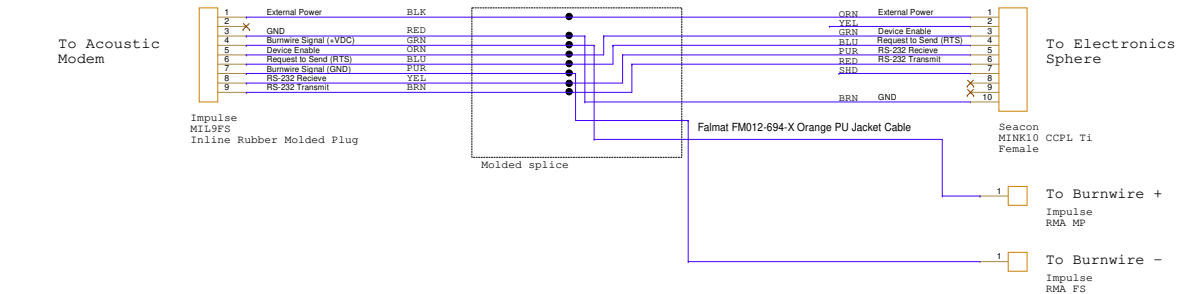
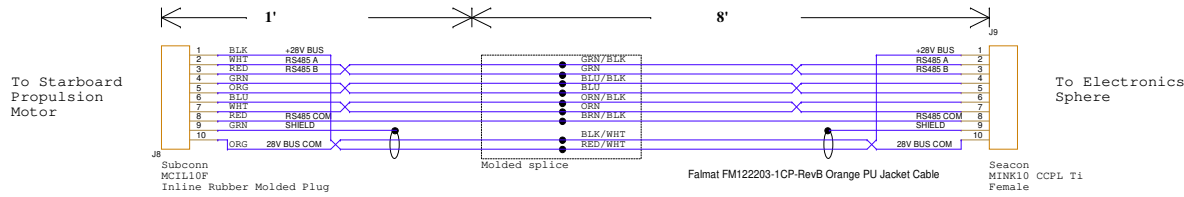
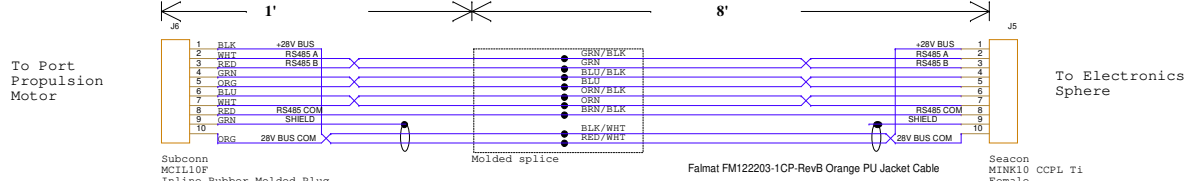
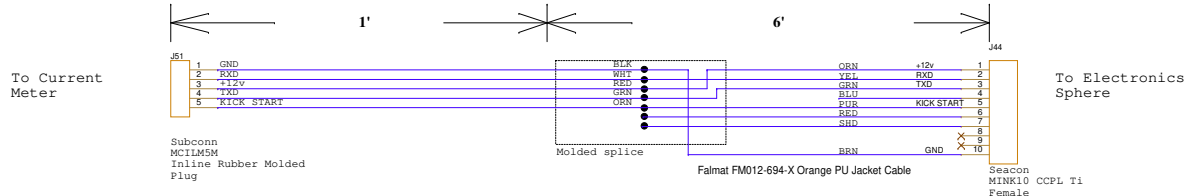
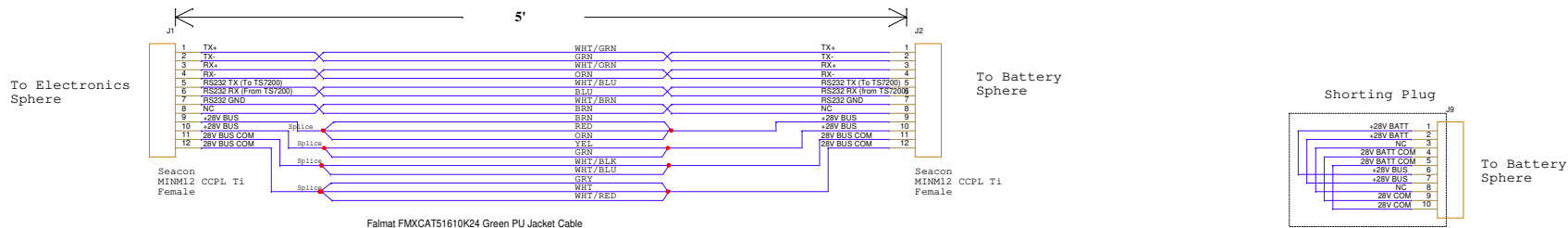
Proprietary and confidential
as disclosed under NDA

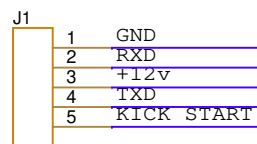


Monterey Bay Aquarium Research Institute
7700 Sandhold Road, Moss Landing, CA 95039

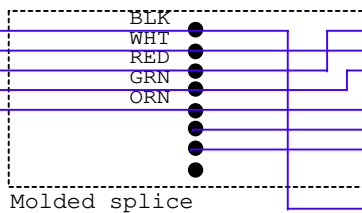
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Designer <Designer>		Date: Monday, May 05, 2025	Part Number <Part Number>	Project File <Project File>	Rev <Rev>
Sheet 1 of 1					



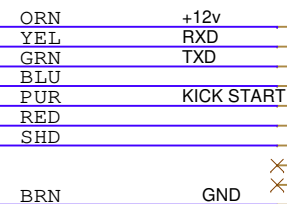




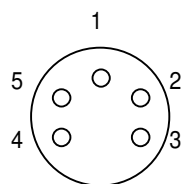
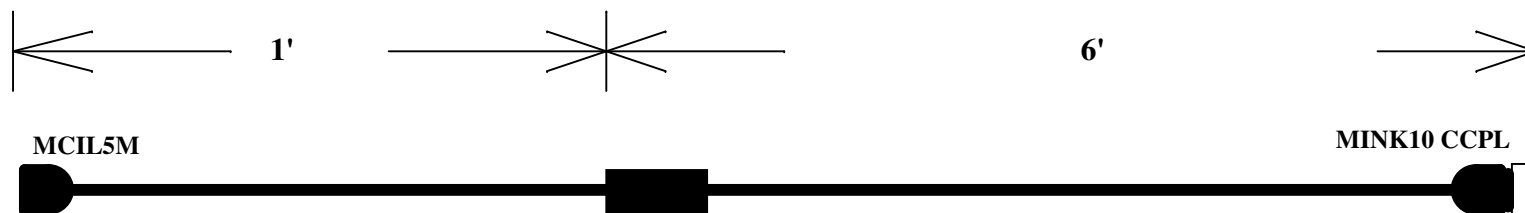
Subconn
MCILM5M
Inline Rubber Molded
Plug



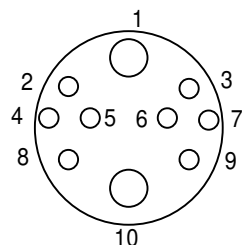
Falmat FM012-694-X Orange PU Jacket Cable



Seacon
MINK10 CCPL Ti
Female



SUBCONN
MCILM5M
Male Face



Seacon
MINK 10 CCPL TI
FEMALE FACE

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Title		
Benthic Rover: Current Meter Cable Assembly		
Size	Document Number	Rev
A	1003148	1.0.0
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The diagram illustrates the internal layout of a ship's hull, divided into six compartments (A-F) from Aft to Forward. Each compartment contains specific components represented by circles and text labels.

- Compartment A (Aft):** Contains two small circles on the left and one large circle on the right.
- Compartment B:** Labeled "Transit Cam" at the top left. Contains a small circle labeled "J11", another small circle labeled "J10" below it, and a large circle labeled "J13" on the right.
- Compartment C (Rack1):** Contains a large circle labeled "J6" in the center.
- Compartment D (Rack2):** Labeled "Video1" at the top left and "Video2" at the bottom left. Contains two small circles labeled "J9" and "J8", and a large circle labeled "J7" on the right.
- Compartment E:** Labeled "Modem" at the top left and "Current Meter" at the bottom left. Contains two small circles labeled "J4" and "J5", and a large circle labeled "Unused?" on the right.
- Compartment F (BOTTOM OF SPHERE):** Labeled "Starboard Prop. Motor" at the top left and "Port Prop. Motor" at the bottom left. Contains two small circles labeled "J2" and "J3", and a large circle labeled "J1" on the right, with the text "Battery Sphere Connection" below it.

Below the compartments, the labels "Aft", "Forward", and "BOTTOM OF SPHERE" are positioned under compartments A, D, and F respectively.

Deck Comm Port

Shorting Plug

Shorting Plug

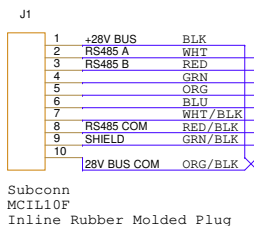
E-Sphere Connection

G H I J K L

Aft Forward

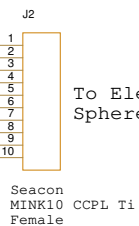
Title					A
Benthic Rover: Sphere Faces					
Size A	Document Number <Doc>			Rev <RevCo	A
Date:	Monday, May 05, 2025		Sheet	5 of 14	

To Port
Propulsion
Motor



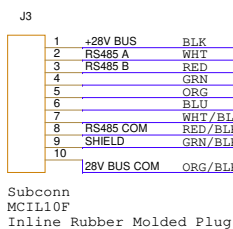
Molded splice

Falmat FM122203-1CP-RevB Orange PU Jacket Cable



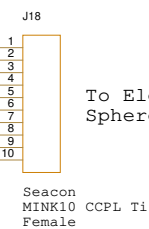
To Electronics
Sphere

To Starboard
Propulsion
Motor

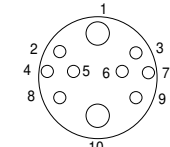


Molded splice

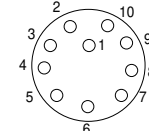
Falmat FM122203-1CP-RevB Orange PU Jacket Cable



To Electronics
Sphere



Seacon
MINK 10 CCPL TI
FEMALE FACE

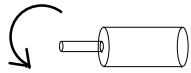


Subconn
MCIL10F
FEMALE FACE

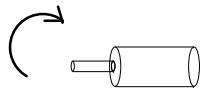
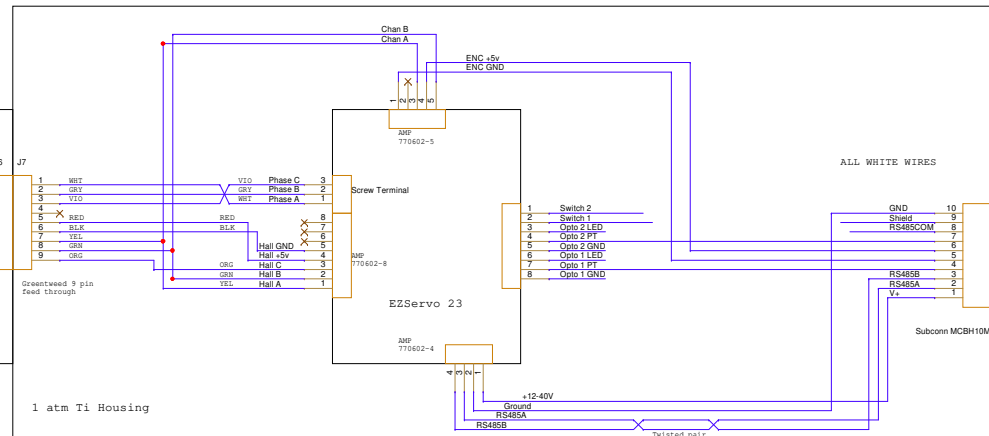
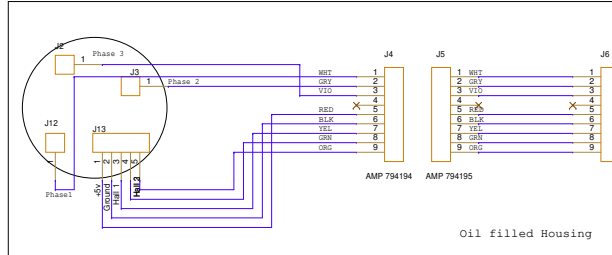
Rev 1.0.1- Fixed colors to match Seacon's work.

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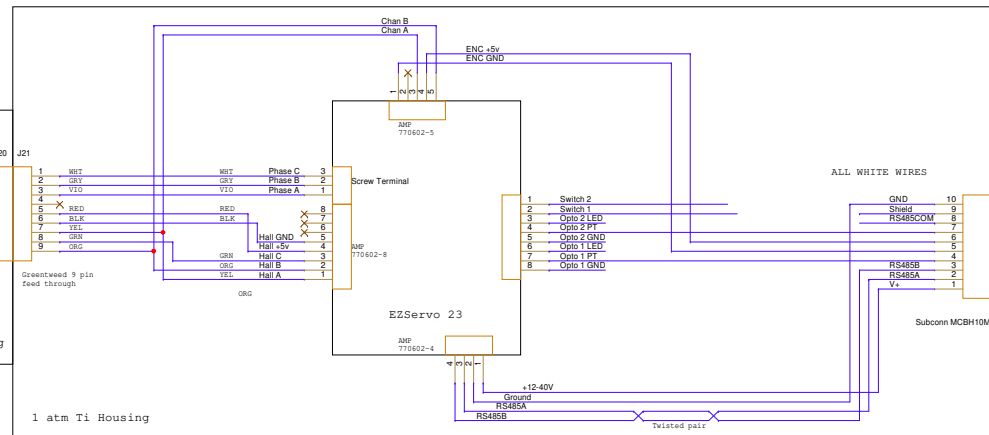
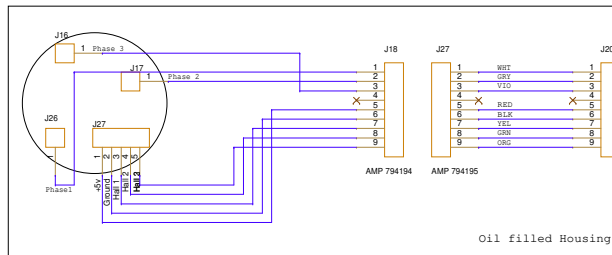
Engineer: Alana Sherman, x1780			
Title: Benthic Rover: Propulsion Motor Cables			
Size: B	Document Number: 1003148	Rev: 1.0.1	
Date: Monday, May 05, 2025	Sheet: 9	of 14	



Positive motion commands result in counter clockwise rotation when looking at the motor with this wiring

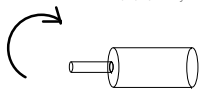


Positive motion commands results in clockwise rotation when looking at the motor with this wiring

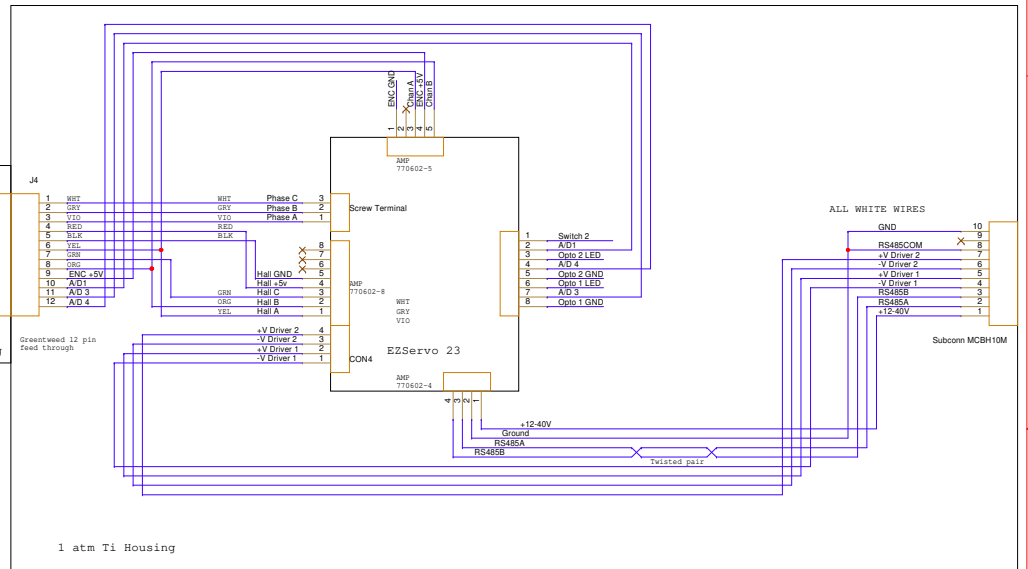
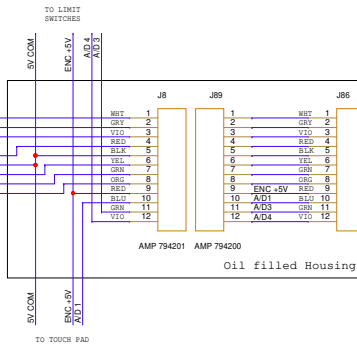
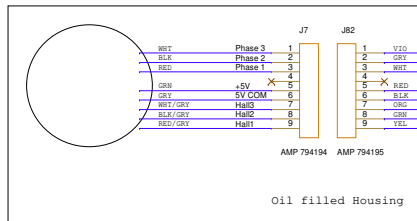


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Engineer: A. Sherman, x 1780			
File Benetic Rover: Propulsion Internal Cable			
Size	Document Number		Rev
C	1003146		1.0.0
Date:	Monday, May 05, 2025	Sheet	10 of 14

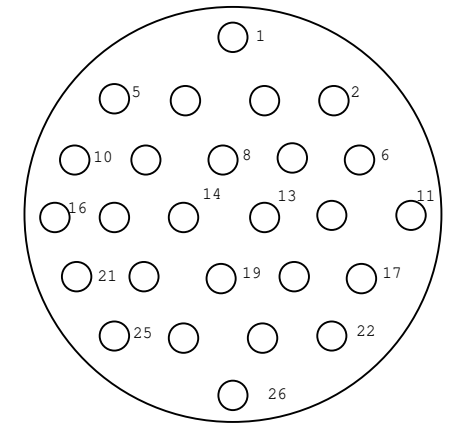
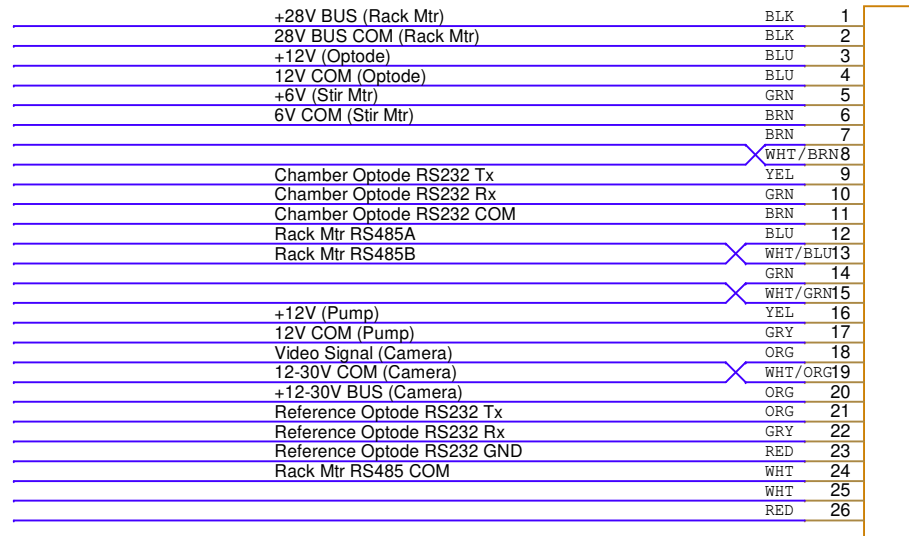


Positive motion commands
results in clockwise rotation
when looking at the motor
with this wiring



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File	Benthic Rover: Rack Motor Internal Cable		
Size	Document Number	Rev	
C	1003146	1.0.0	
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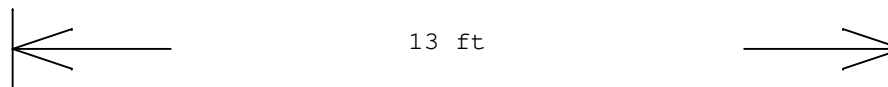


Face View Of
Seacon MINM26 CCP

Falmat Xtreme Green p.n. FMXCAT52218K12

Seacon MINM26 CCP

18 22 AWG
4 UTP 24 AWG



Seacon
MINM2610 CCPL Ti

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as disclosed under NDA

Engineer: Alana Sherman, x1780		
Title		
Benthic Rover: Respirometer JBox Cable		
Size A	Document Number 1003148	Rev 1.0.0
Date:	Monday, May 05, 2025	Sheet 12 of 14