

5

4

3

2

1

D

D

C

C

B

B

A

A

5

4

3

2

1

Common

J1



SS-7188-NF

K1



DS4E-S-DC48V

D1
DIODE

+

1

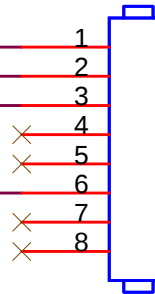
2

J4

70553-0001

Power In

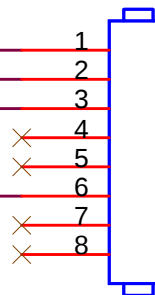
J2



SS-7188-NF

Power Off

J3

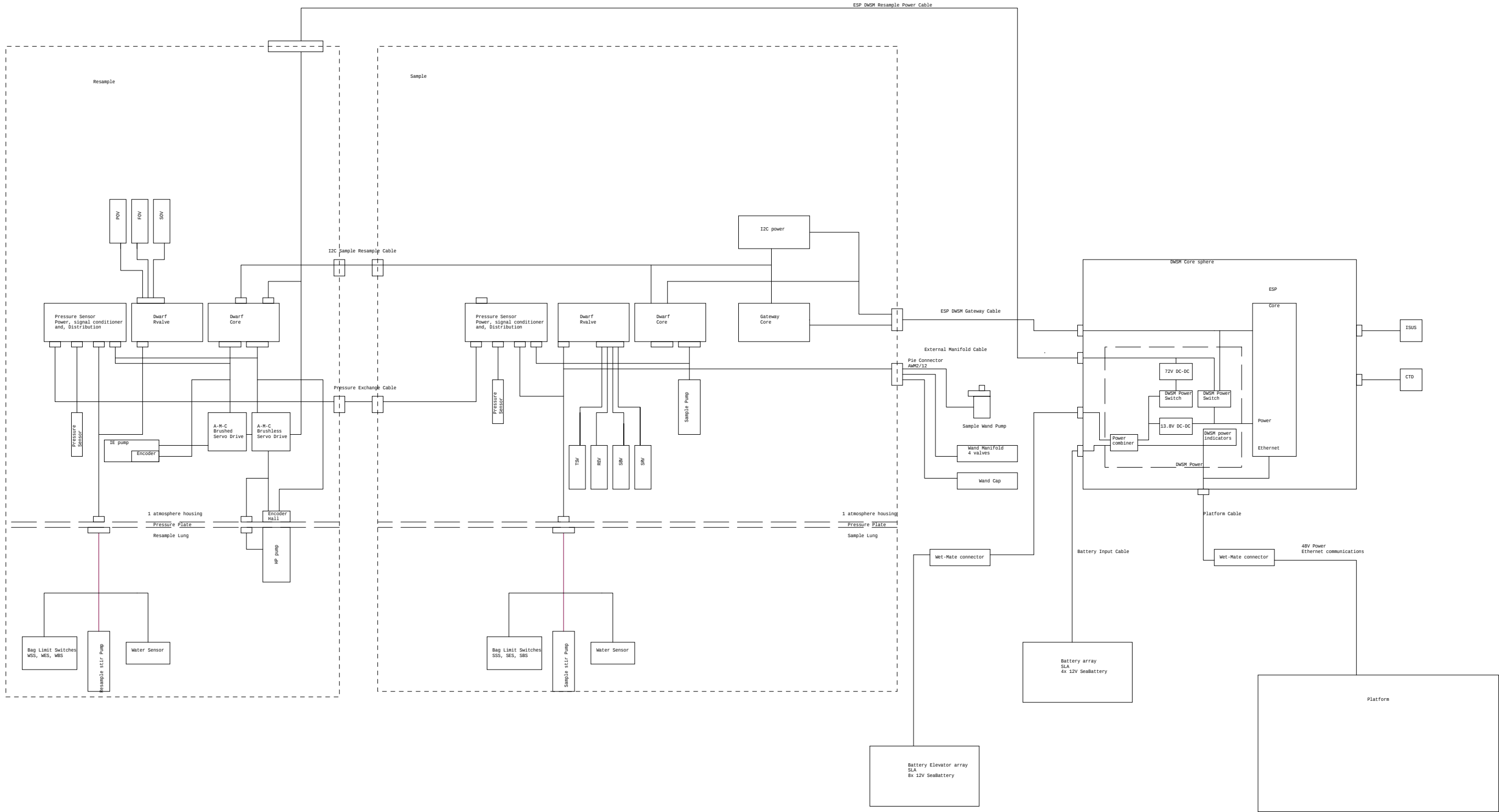


SS-7188-NF

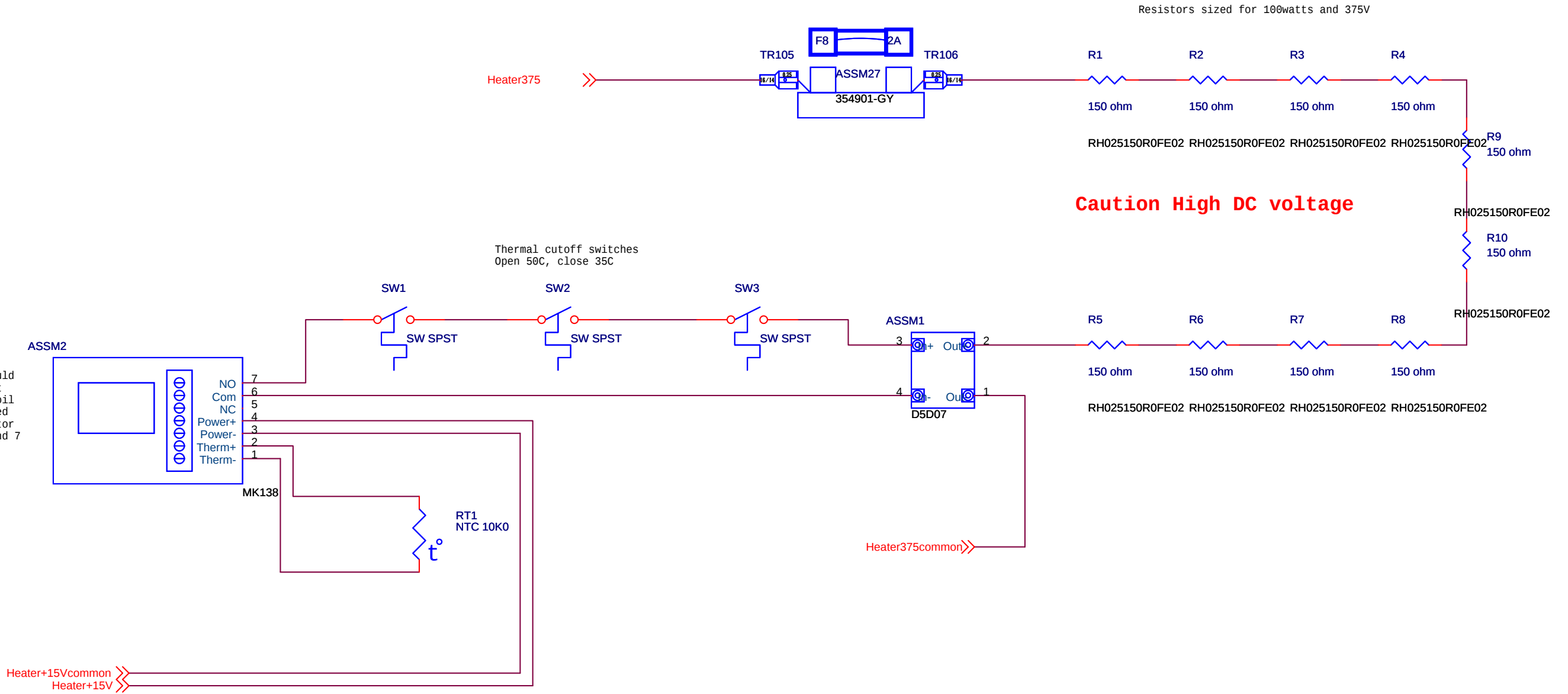
Power On

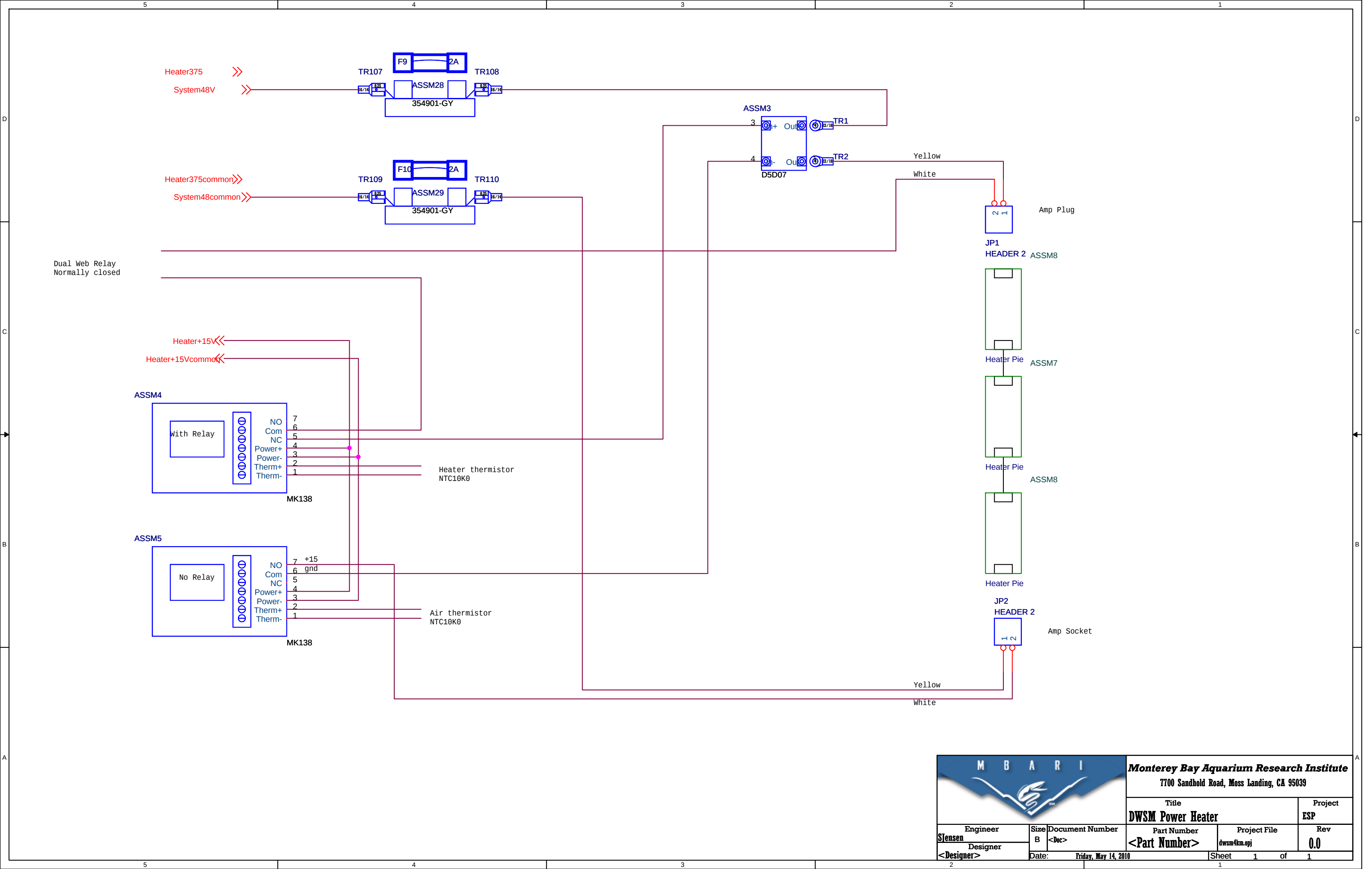
Datasheet Links

RJ-45 <http://www.belfuse.com/Data/Datasheets/CT710006.pdf>Relay http://pewa.panasonic.com/pcsd/product/sign/pdf_cat/ds.pdfConnector <http://www.molex.com/catalog/pdf/MX70066c.pdf>

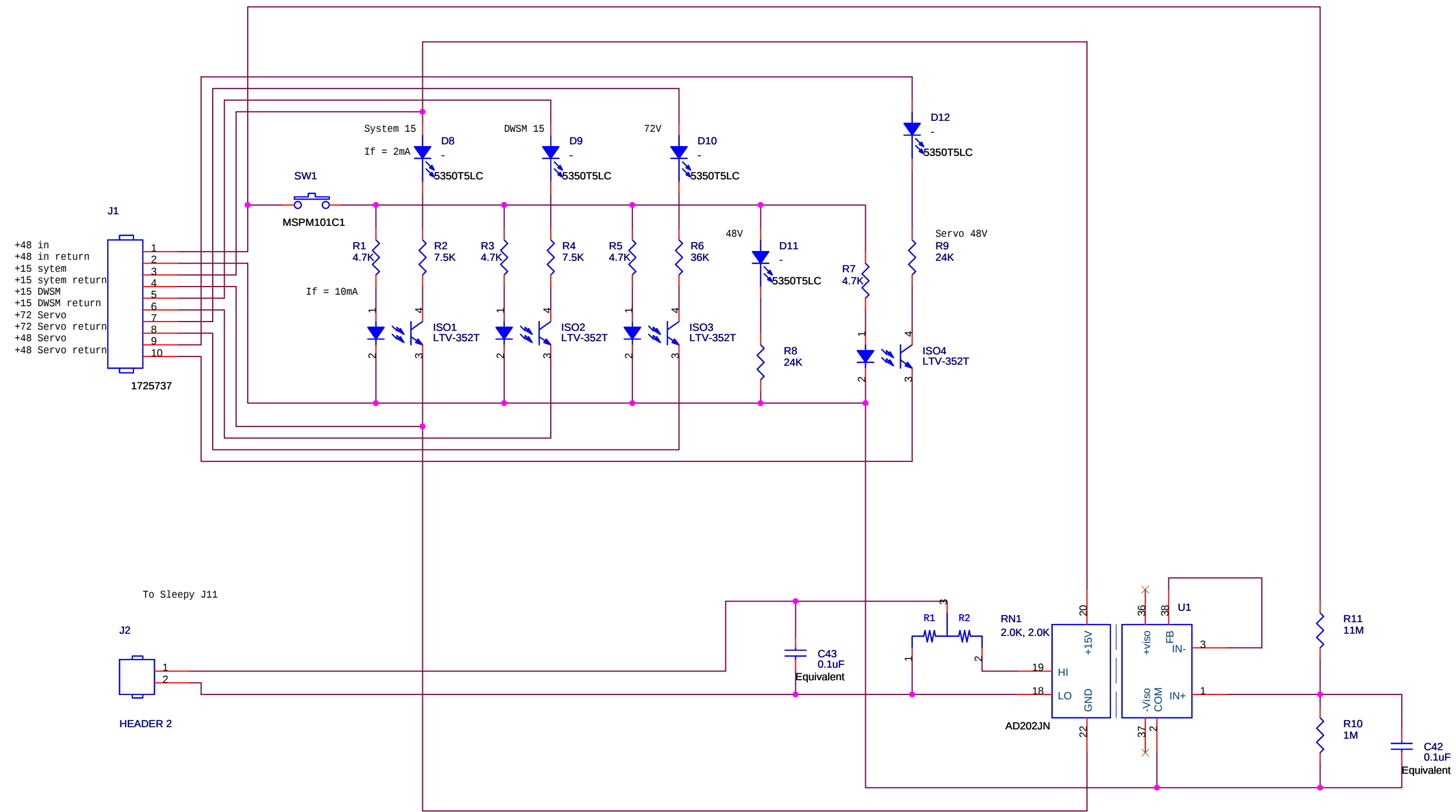


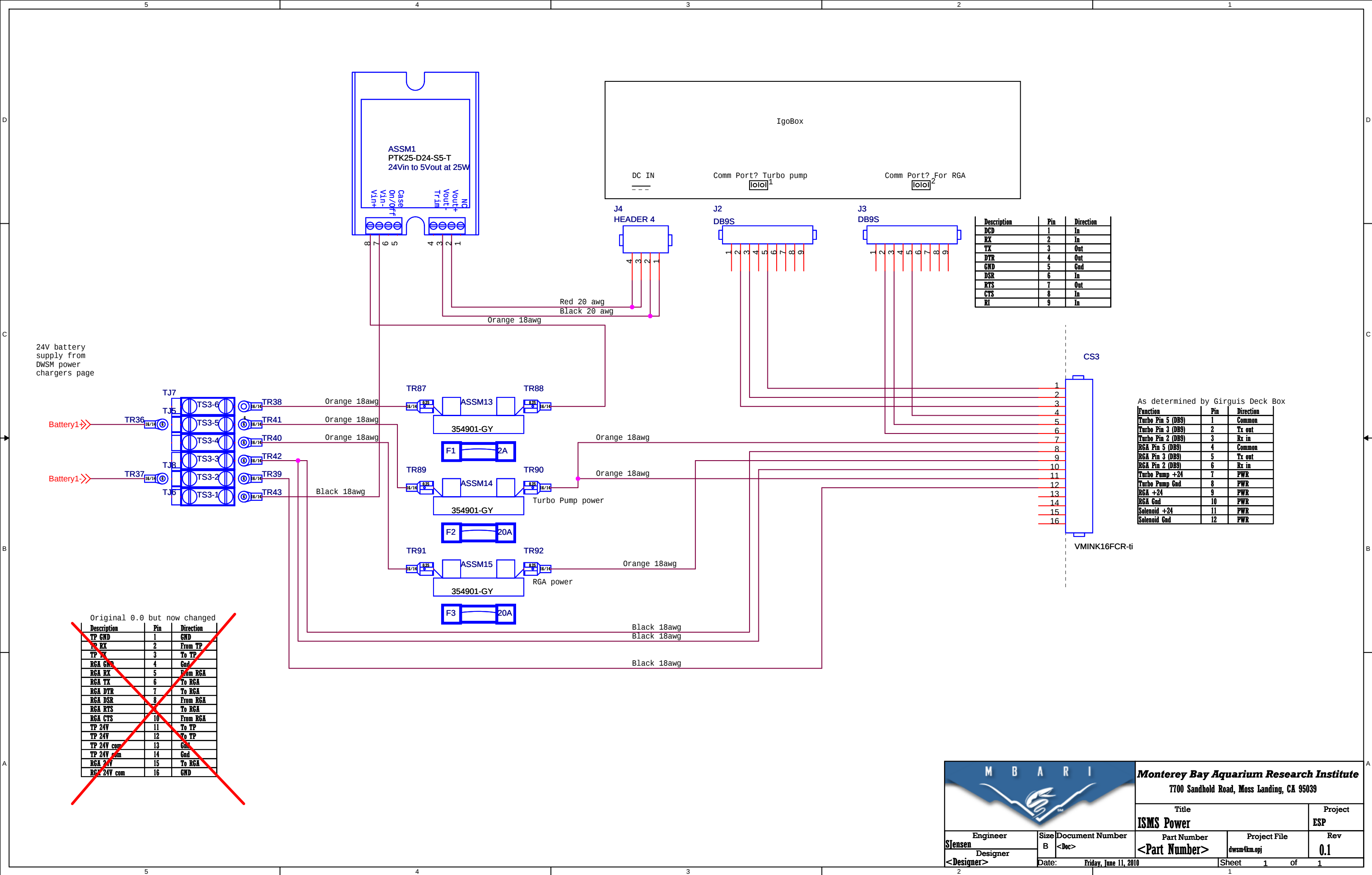
MK138 kit should have relay not stuffed and coil voltage applied across connector pins 6 (V-) and 7 (V+)

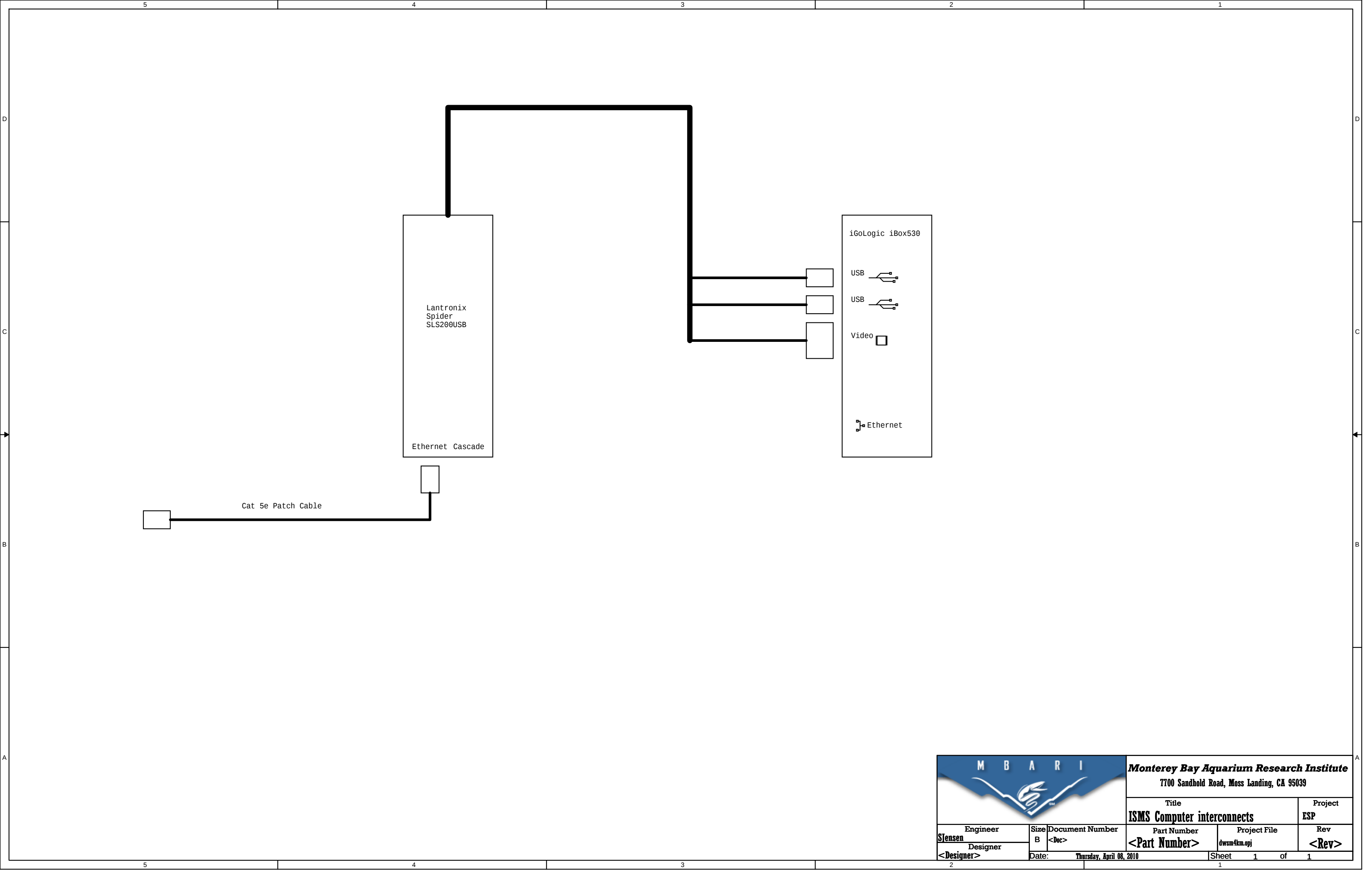




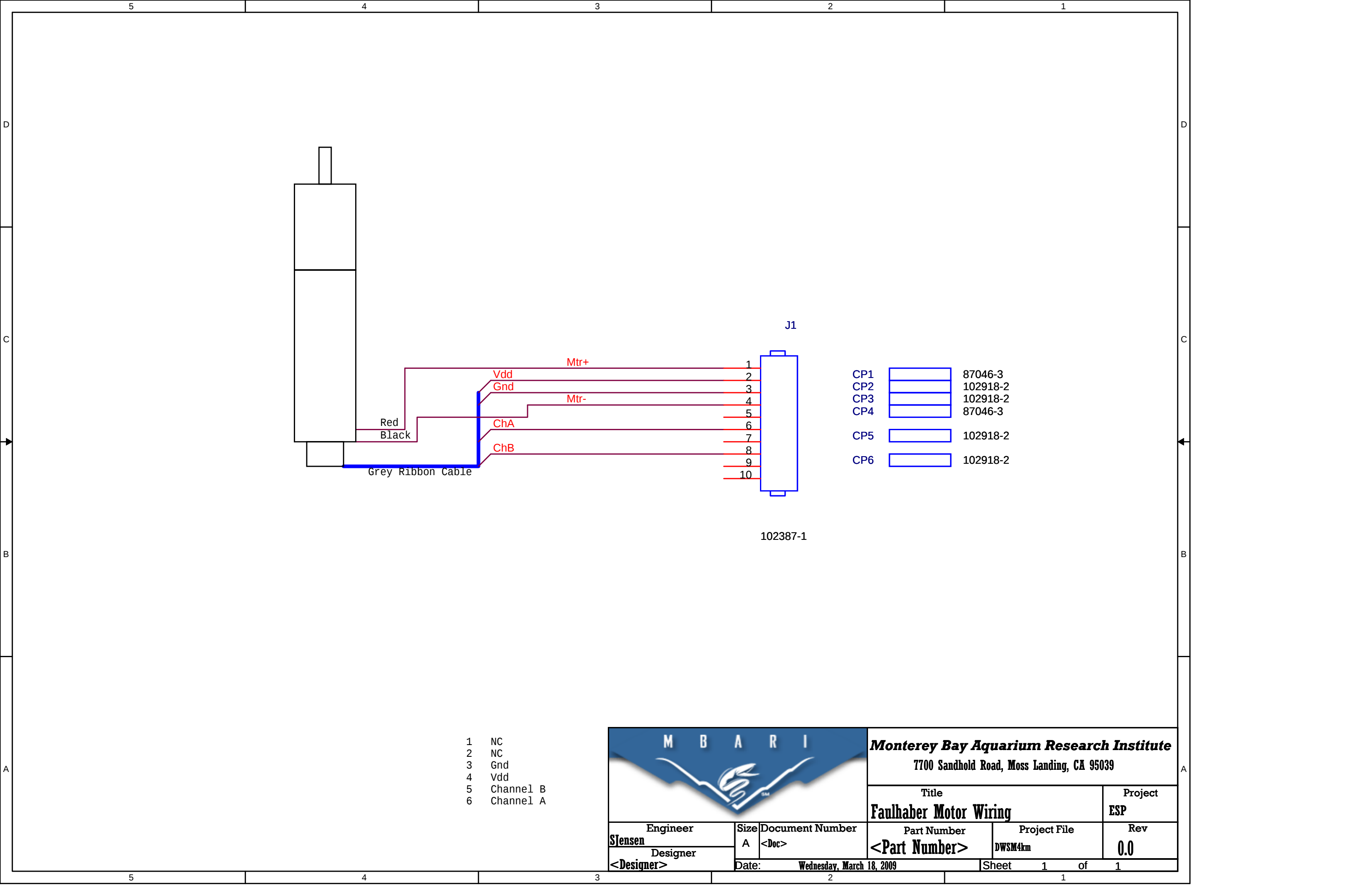
	Monterey Bay Aquarium Research Institute 7700 Sandhold Road, Moss Landing, CA 95039			
	Title DWSM Power Heater			Project ESP
Engineer SJensen	Size B	Document Number <Doc>	Part Number <Part Number>	Project File dwsm4km.opj
Designer <Designer>	Date: Friday, May 14, 2010	Sheet 1	of 1	Rev 0.0







		Monterey Bay Aquarium Research Institute 7700 Sandhold Road, Moss Landing, CA 95039			
		Title ISMS Computer interconnects			Project ESP
Engineer SJensen	Size B	Document Number <Doc>	Part Number <Part Number>	Project File dwsm4km.opj	Rev <Rev>
Designer <Designer>	Date: Thursday, April 08, 2010			Sheet 1 of 1	

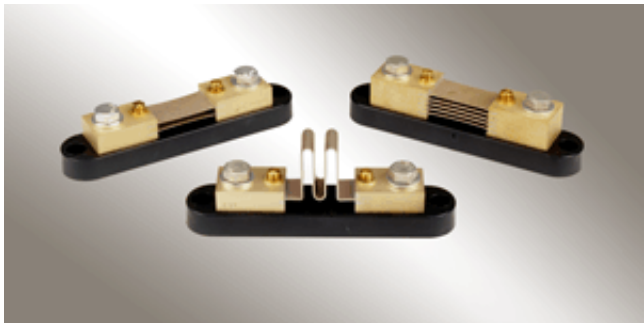


- 1 NC
- 2 NC
- 3 Gnd
- 4 Vdd
- 5 Channel B
- 6 Channel A

		Monterey Bay Aquarium Research Institute 7700 Sandhold Road, Moss Landing, CA 95039			
		Title Faulhaber Motor Wiring		Project ESP	
Engineer Slensen	Size A	Document Number <Doc>	Part Number <Part Number>	Project File DWSM4km	Rev 0.0
Designer <Designer>		Date: Wednesday, March 18, 2009			
			Sheet 1 of 1		

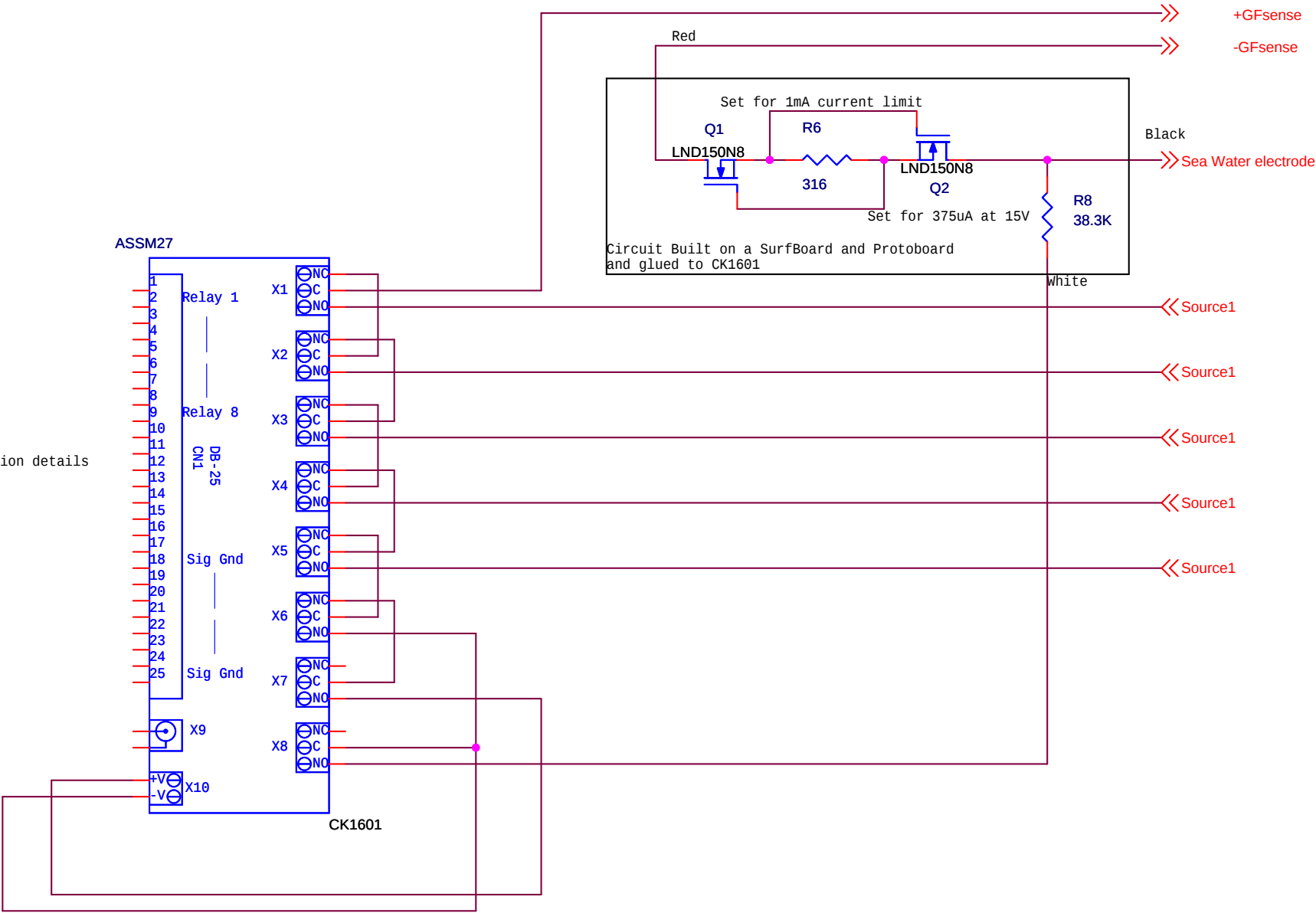
**** Caution ****
Pinout to match FOCE
input configuration

Pin No.	Description
1	Reserved
2	Reserved
3	RX+
4	RX-
5	1 PPS+
6	1 PPS-
7	TX+
8	TX-
9	375 VDC+
10	375 VDC-
11	48 VDC+
12	48 VDC-



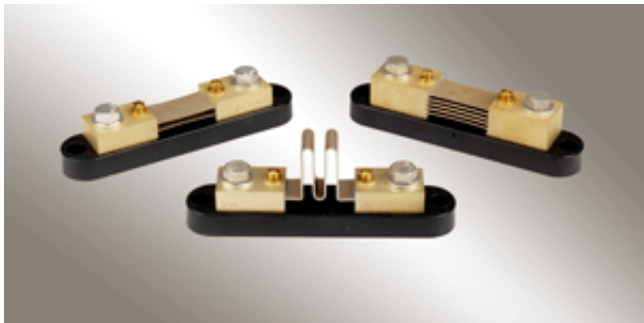
			Monterey Bay Aquarium Research Institute 7700 Sandhold Road, Moss Landing, CA 95039		
			Title DWSM Power Platform Interface		Project ESP
Engineer SJensen	Size B	Document Number <Doc>	Part Number <Part Number>	Project File DWSM4km	Rev 0.1
Designer <Designer>			Date: Friday, May 14, 2010		Sheet 1 of 5

See Acquisition Page for connection details

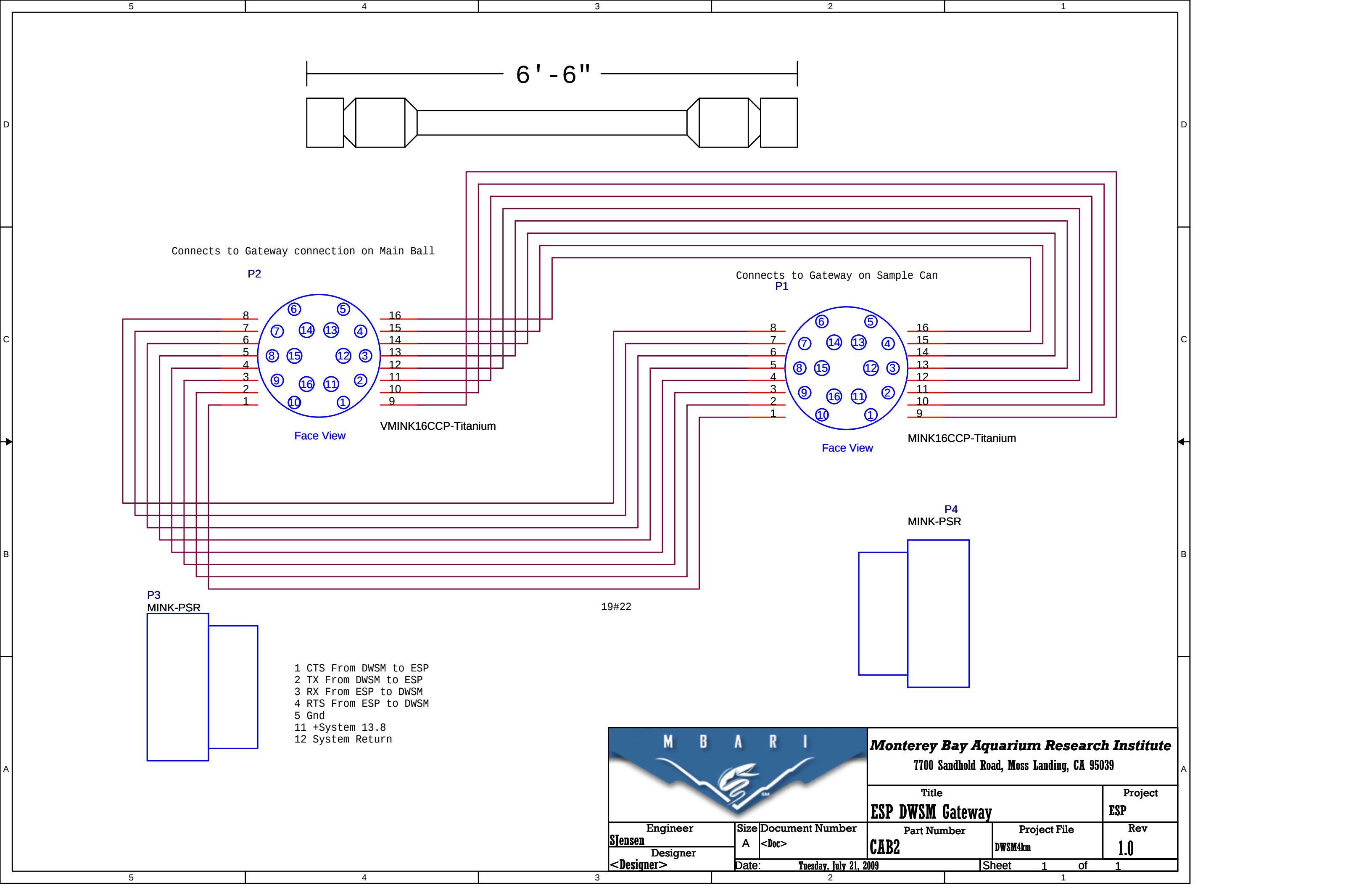


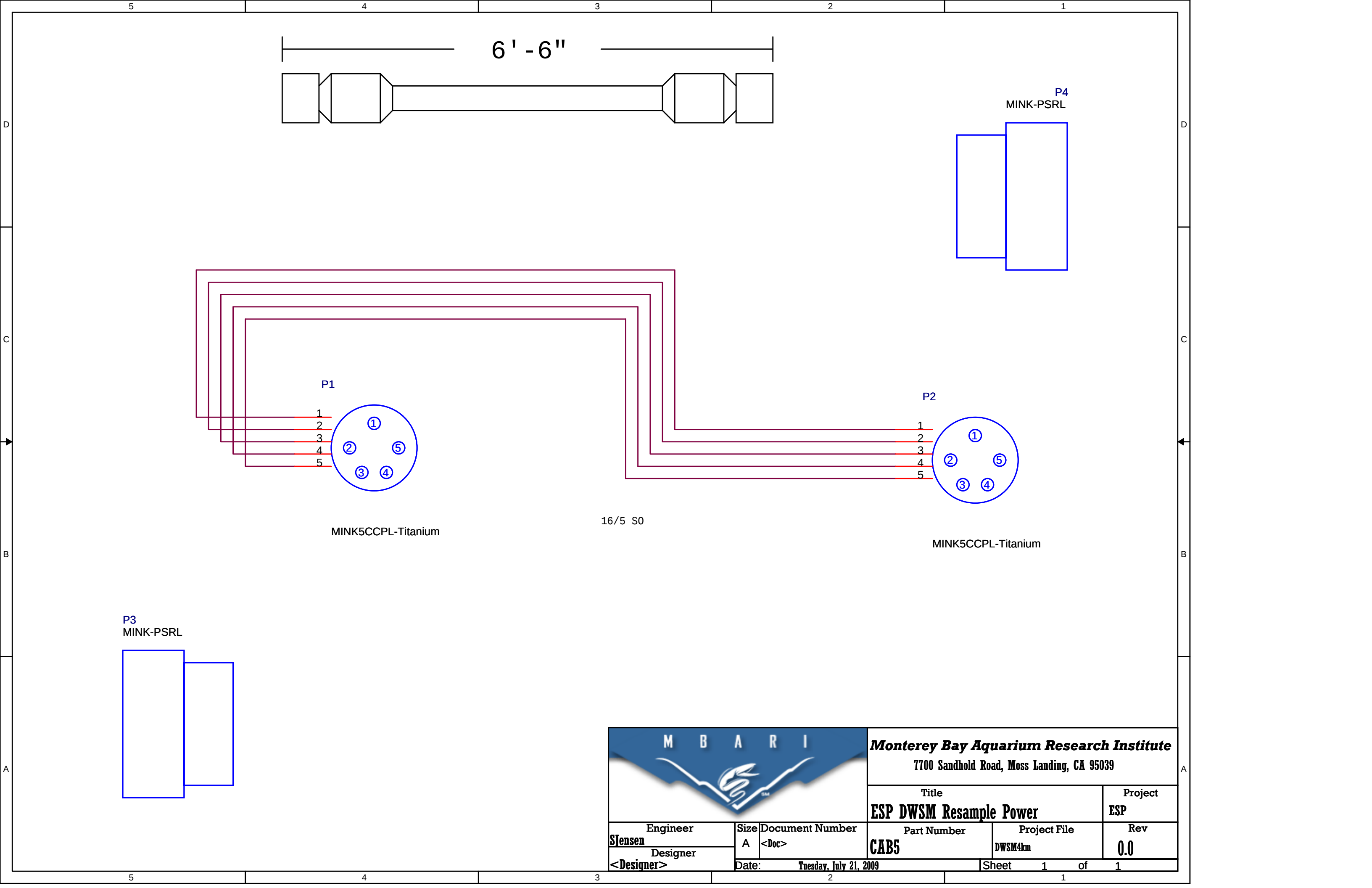
**** Caution ****
Pinout to match MARS
input configuration

Pin No.	Description
1	Reserved
2	Reserved
3	RX+
4	RX-
5	1 PPS+
6	1 PPS-
7	TX+
8	TX-
9	375 VDC+
10	375 VDC-
11	48 VDC+
12	48 VDC-

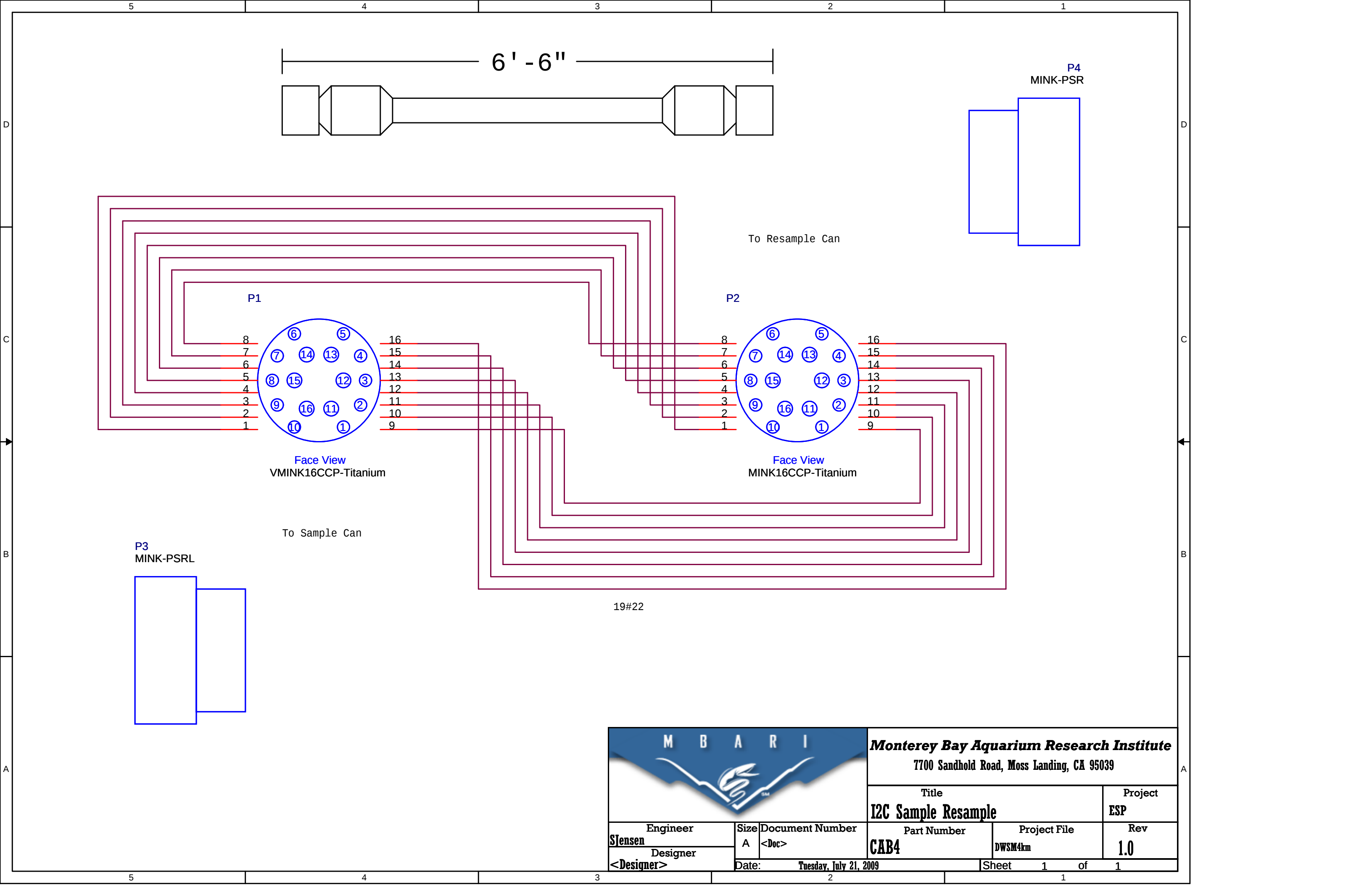


			Monterey Bay Aquarium Research Institute		
			7700 Sandhold Road, Moss Landing, CA 95039		
			Title DWSM Power Platform Interface		Project ESP
Engineer SJensen	Size B	Document Number <Doc>	Part Number <Part Number>	Project File DWSM4km	Rev 0.1
Designer <Designer>	Date: Thursday, January 14, 2010			Sheet 1 of 5	

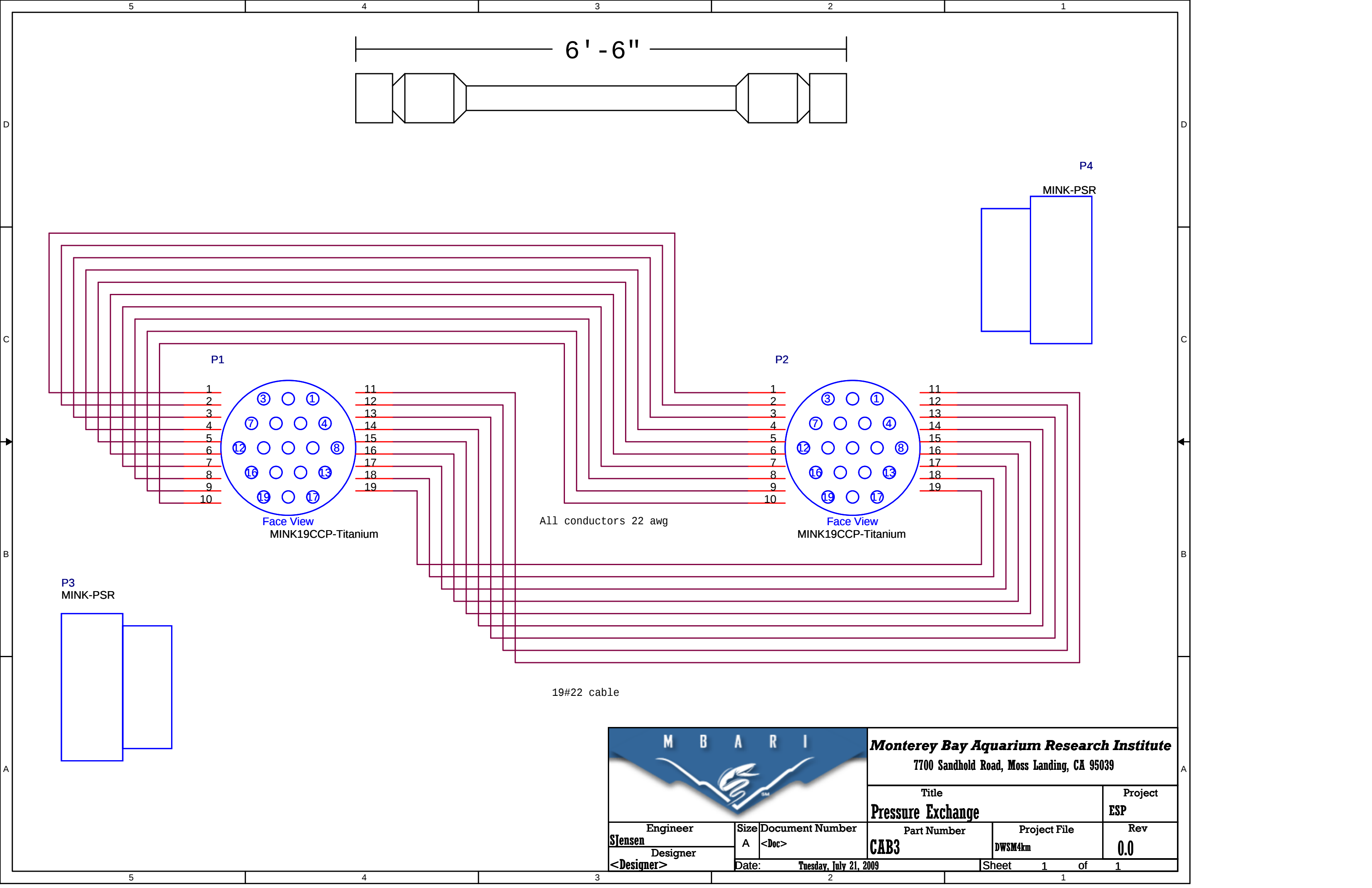




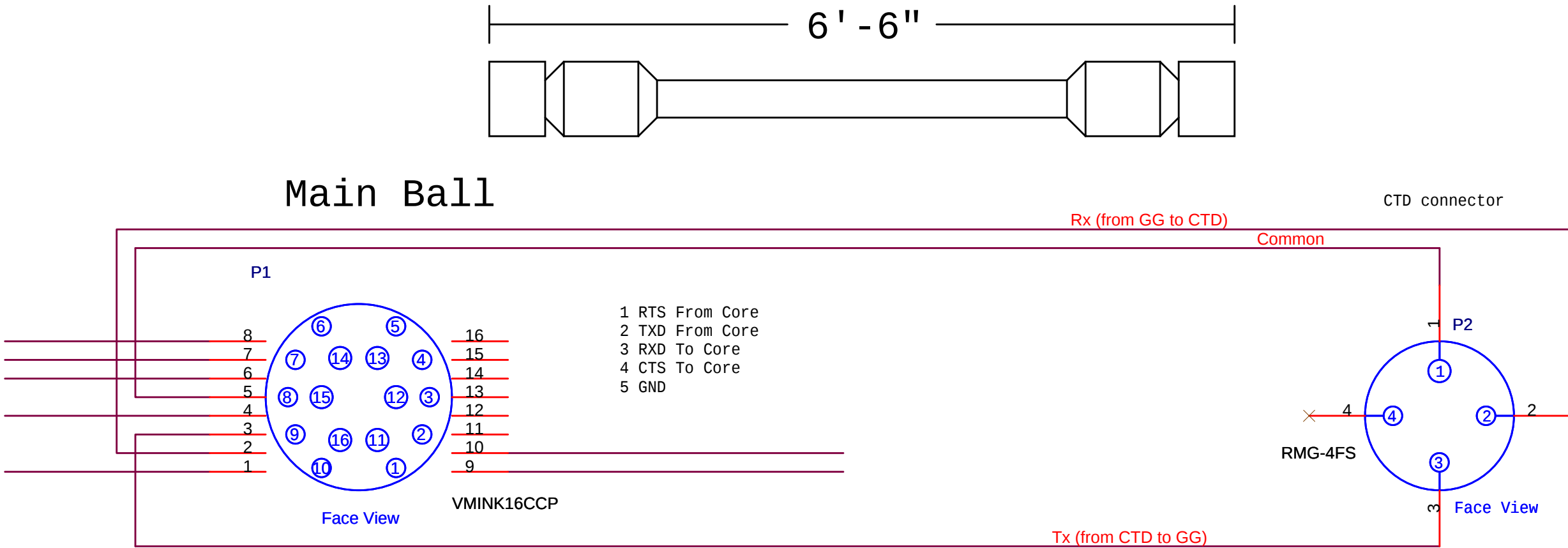
Monterey Bay Aquarium Research Institute 7700 Sandhold Road, Moss Landing, CA 95039					
Title ESP DWSM Resample Power				Project ESP	
Engineer Stensen		Size A	Document Number <Doc>	Part Number CAB5	Project File DWSM4km
Designer <Designer>		Date: Tuesday, July 21, 2009		Sheet 1	of 1
				Rev 0.0	

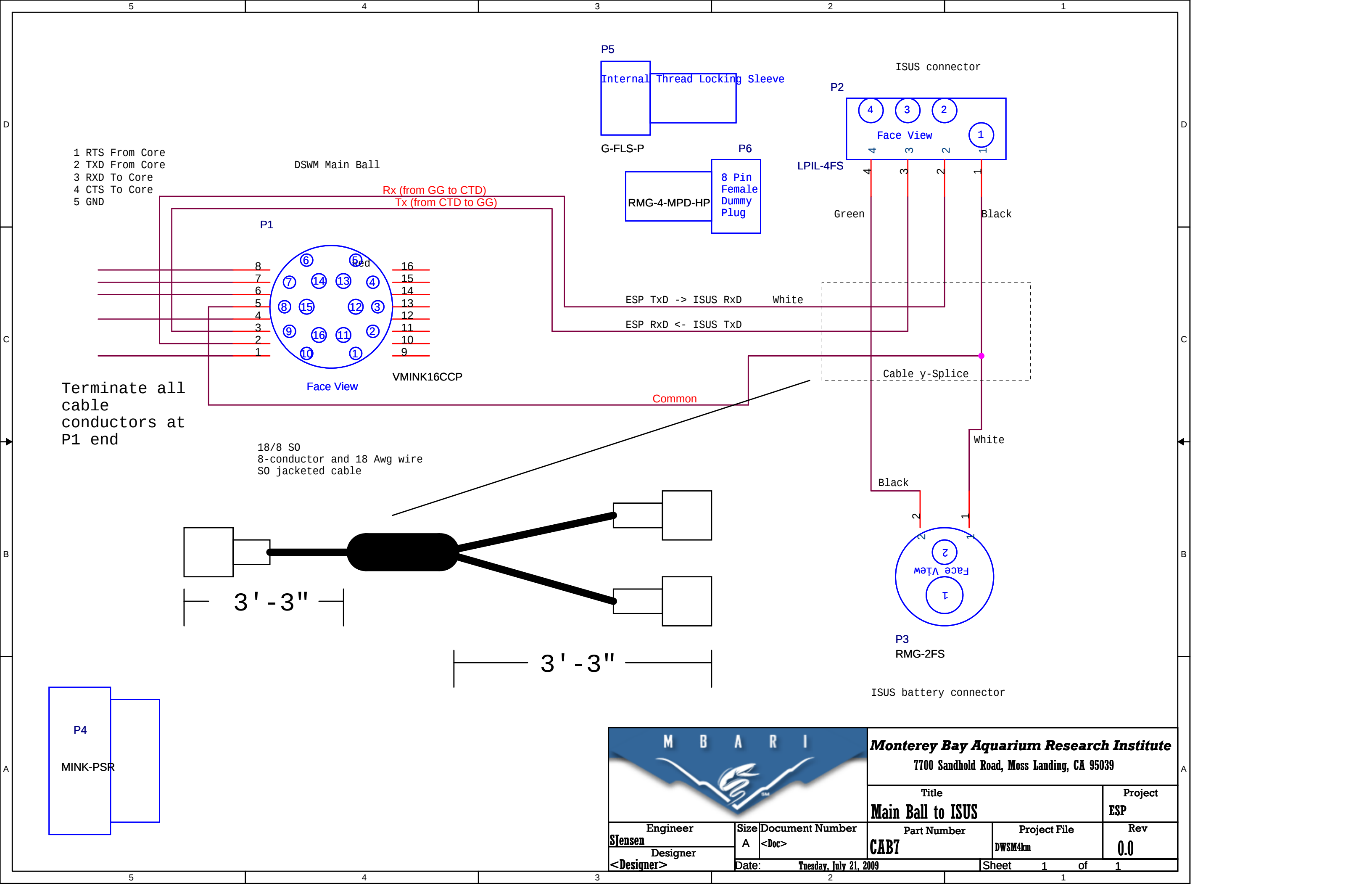


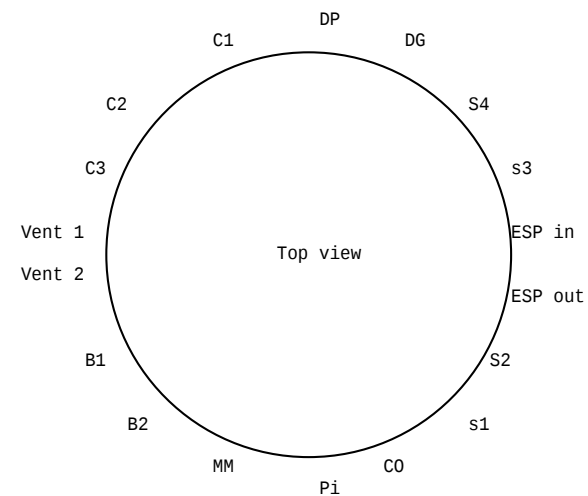
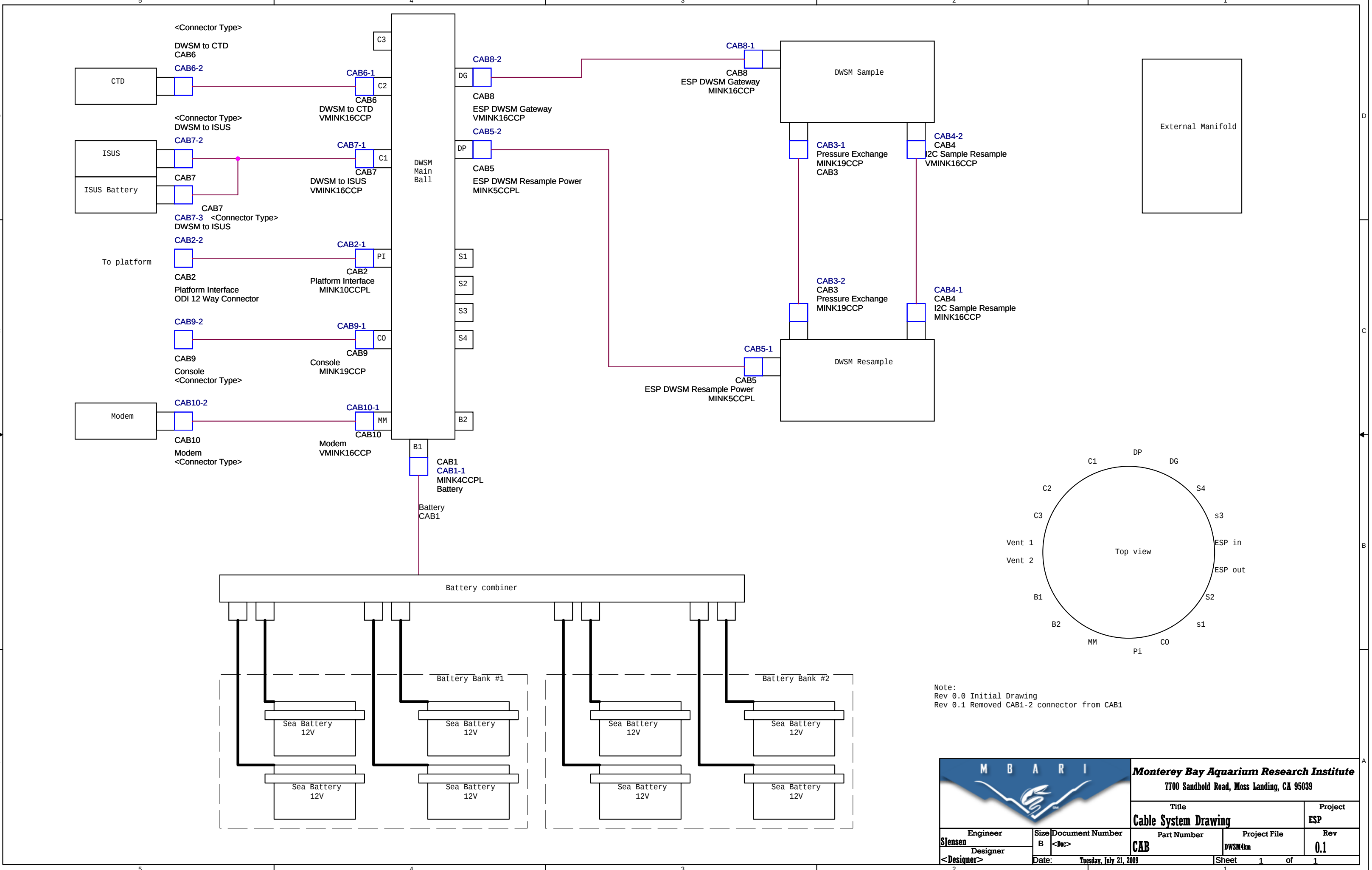
Monterey Bay Aquarium Research Institute				
7700 Sandhold Road, Moss Landing, CA 95039				
Title			Project	
I2C Sample Resample			ESP	
Part Number		Project File		Rev
CAB4		DWSM4km		1.0
009		Sheet 1 of 1		



Monterey Bay Aquarium Research Institute 7700 Sandhold Road, Moss Landing, CA 95039				
Title Pressure Exchange			Project ESP	
Part Number CAB3		Project File DWSM4km		Rev 0.0
009		Sheet 1 of 1		

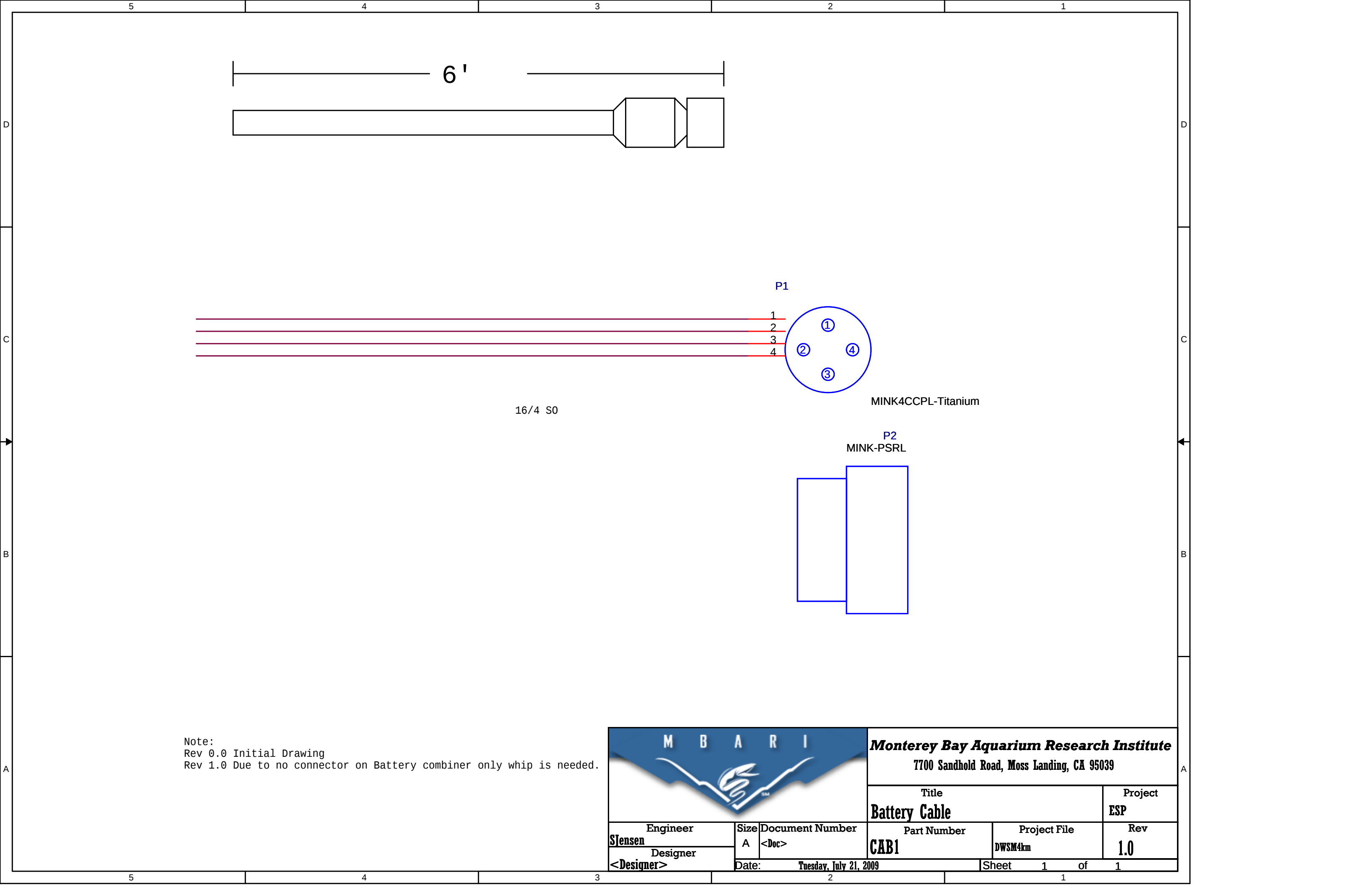






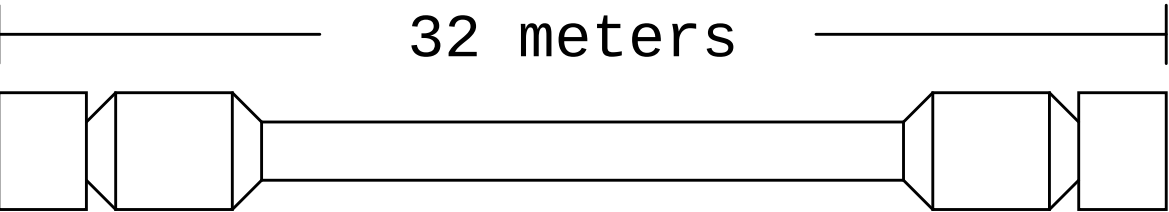
Note:
Rev 0.0 Initial Drawing
Rev 0.1 Removed CAB1-2 connector from CAB1

		Monterey Bay Aquarium Research Institute 7700 Sandhold Road, Moss Landing, CA 95039			
		Title Cable System Drawing		Project ESP	
Engineer SJensen	Size B	Document Number <Doc>	Part Number CAB	Project File DWSM4km	Rev 0.1
Designer <Designer>		Date: Tuesday, July 21, 2009	Sheet 1 of 1		



Note:
Rev 0.0 Initial Drawing
Rev 1.0 Due to no connector on Battery combiner only whip is needed.

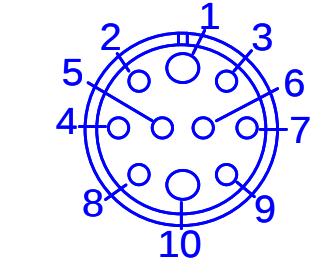
		Monterey Bay Aquarium Research Institute 7700 Sandhold Road, Moss Landing, CA 95039			
		Title Battery Cable		Project ESP	
Engineer Stensen	Size A	Document Number <Doc>	Part Number CAB1	Project File DWSM4km	Rev 1.0
Designer <Designer>	Date: Tuesday, July 21, 2009			Sheet 1 of 1	



32 Meter Cable (Orange)
Falmat PN# FM122203-1CP Rev A

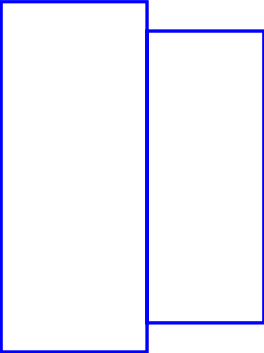
ODI 12 Way
Connector

MINK-10-CCP/L



MINK-10-CCP/L

P3
MINK-PSRL



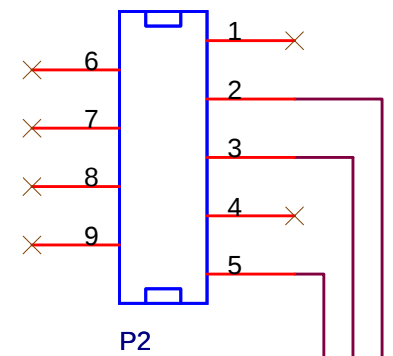
Monterey Bay Aquarium Research Institute
7700 Sandhold Road, Moss Landing, CA 95039

Title Platform Interface		Project ESP
------------------------------------	--	-----------------------

Engineer Stensen	Size A	Document Number <Doc>	Part Number CAB8	Project File DWSM4km	Rev 0.0
Designer <Designer>	Date: Tuesday, July 21, 2009	Sheet 1	of 1		

Console In

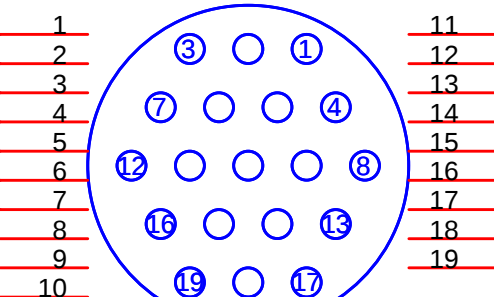
CONN DSUB 9-S



P2

All interconnector lengths from P1 are 6'

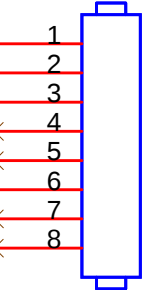
P1



MINK19CCP

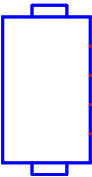
Auxiliary Ethernet Out

P4



RJ-45

P3

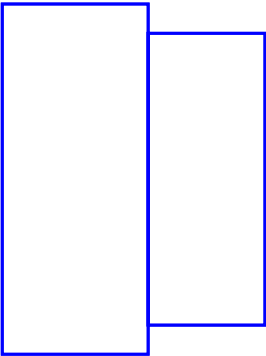


USB cable assembly

USB cable Assembly

CONEC 17-10000 and 17-10006 assembly

P3
MINK-PSR



Ball CO connector	Function	Direction
1	Sig Gnd	Gnd
2	RX	In
3	TX	Out
4	Vcc	Power
5	D-	I/O
6	D+	I/O
7	Gnd	Gnd
8	TBD	--
9	TBD	--
10	TBD	--
11	TBD	--
12	TBD	--
13	Eth Tx+	In
14	Eth Tx-	In
15	Eth Rx+	Out
16	Eth Rx-	Out
17	TBD	--
18	TBD	--
19	TBD	--



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Engineer
Stensen
Designer
<Designer>

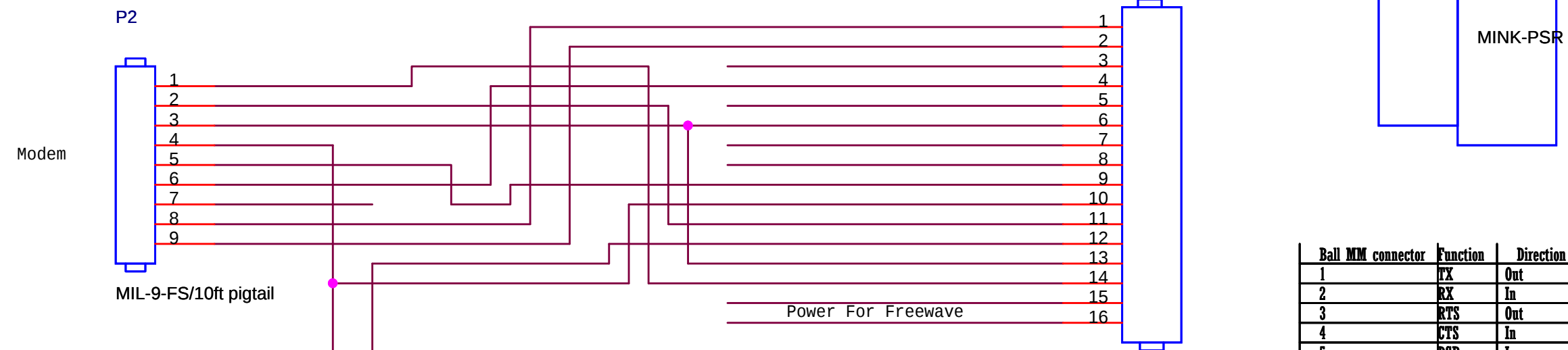
Size
A
Document Number
<Doc>
Date: Tuesday, July 21, 2009

Part Number
CAB9

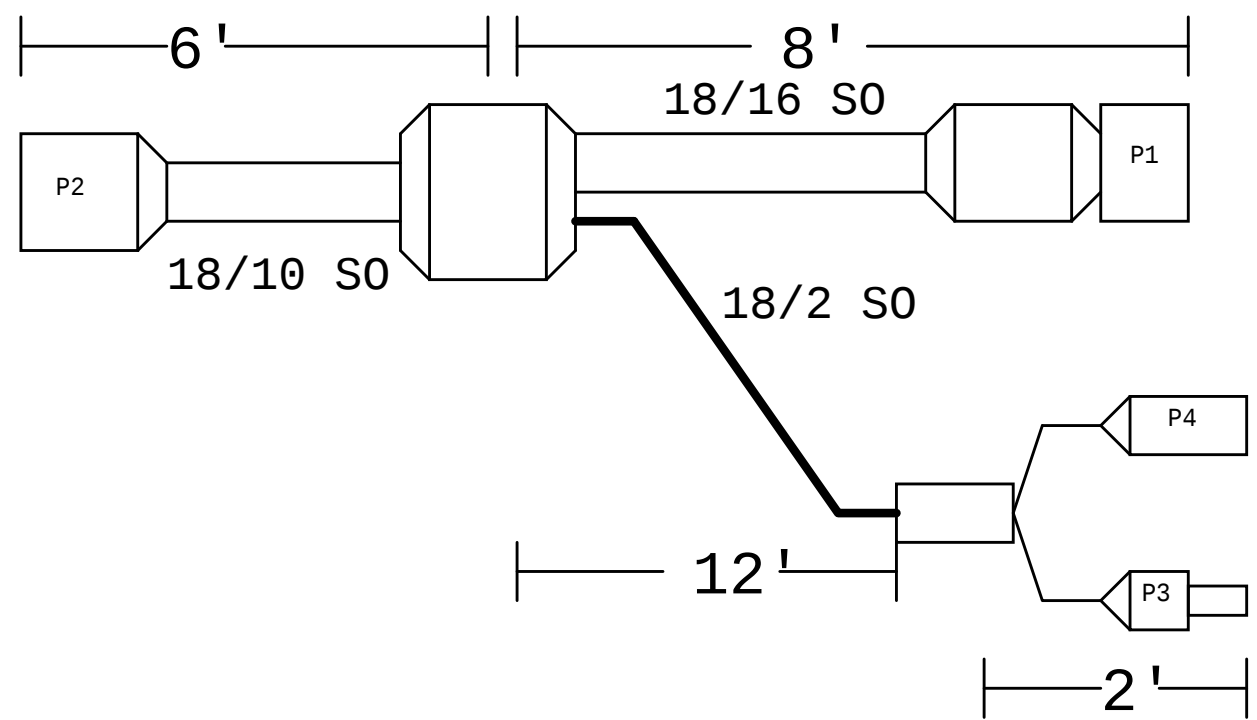
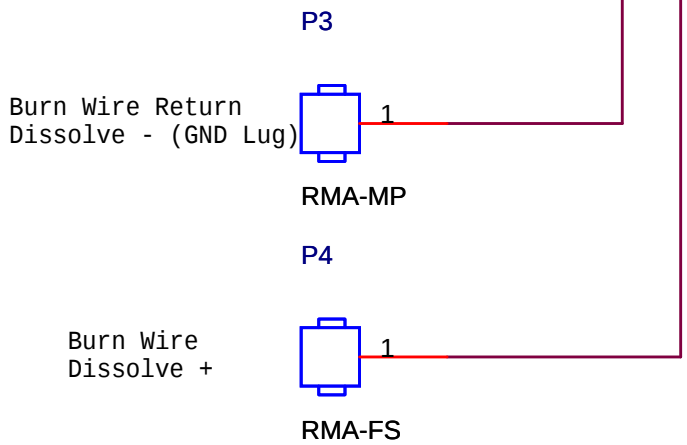
Project File
DWSM4km

Project
ESP
Rev
0.2

Sheet 1 of 1



Ball MM connector	Function	Direction
1	TX	Out
2	RX	In
3	RTS	Out
4	CTS	In
5	DSR	In
6	Gnd	Gnd
7	CD	In
8	DTR	Out
9	DE	In
10	Burn Rtn	--
11	Brn Src	--
12	Burn Sns	--
13	Ext. Gnd	Out
14	EXT. PWR	Out
15	Sys Pwr	Out
16	Sys Gnd	Gnd

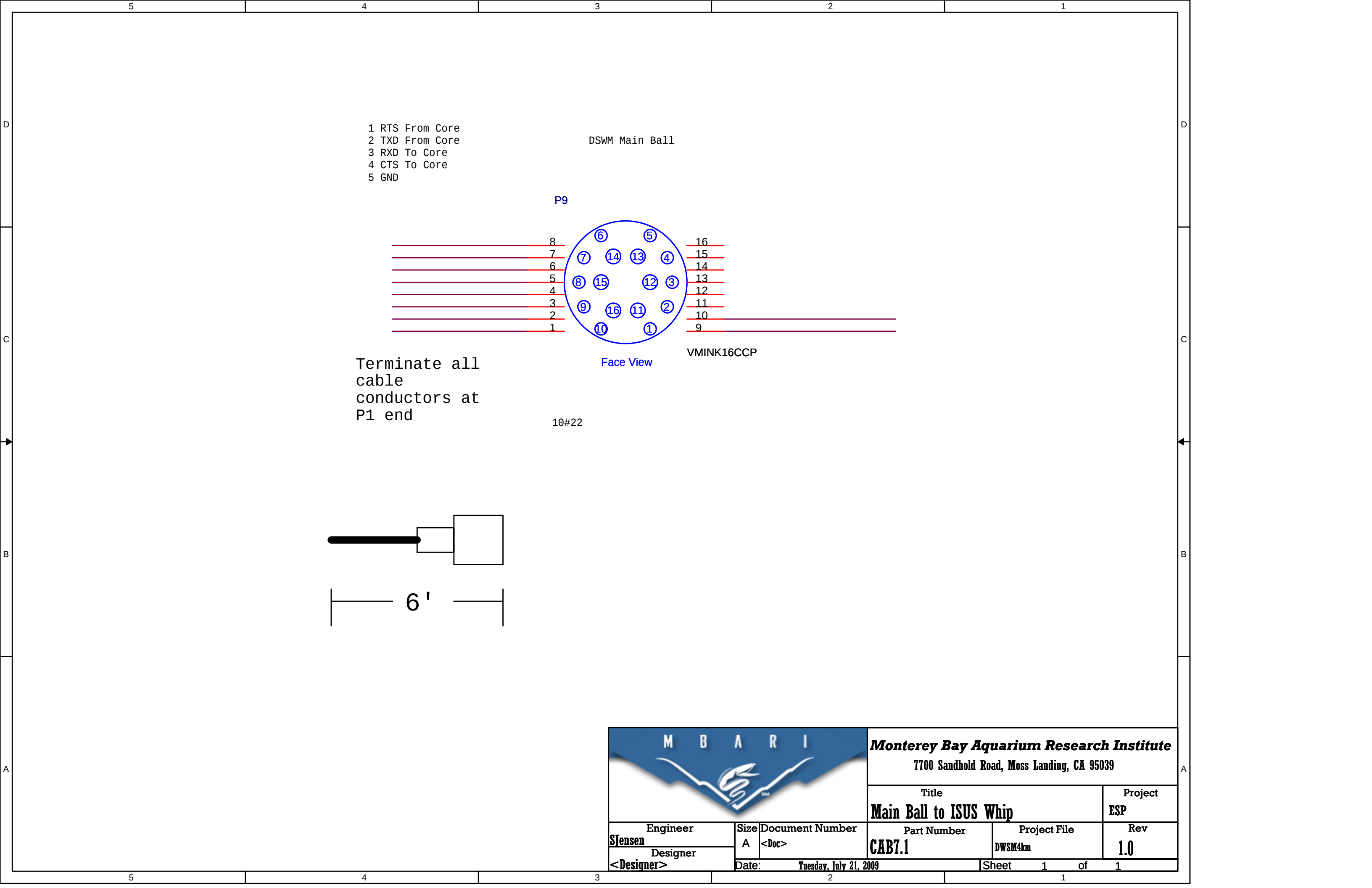


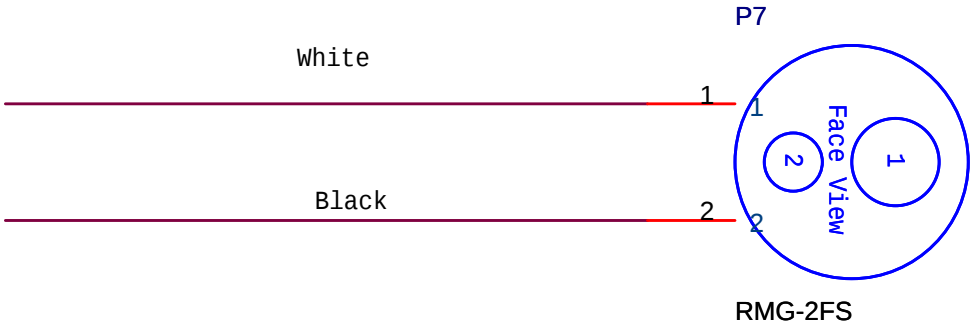
ATM-887 Modem	Function	Direction
1	Power	To Modem
2	Dissolve+	From Modem
3	GND	Gnd
4	Dissolve-	From Modem
5	DE	Modem to Host
6	RTS	Modem to Host
7	TX(-) (422)	Modem to Host
8	RXD	Host to Modem
9	TXD	Modem to host



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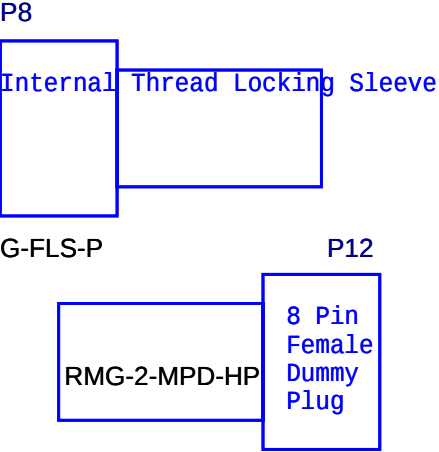
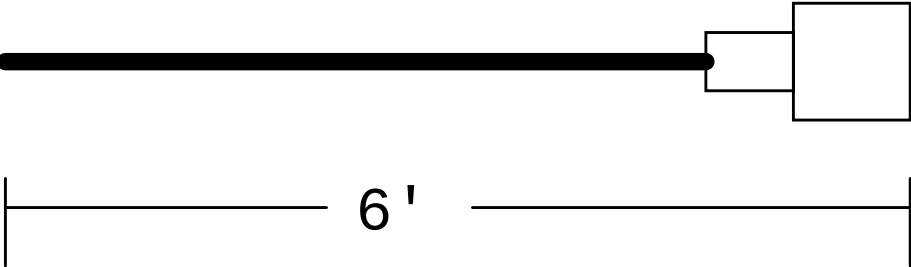
Title Modem Cable		Project ESP	
Engineer Stensen	Size A	Document Number <Doc>	Part Number CAB10
Designer <Designer>		Project File dws4km.opj	Rev 0.5
Date: Monday, June 07, 2010		Sheet 1 of 1	



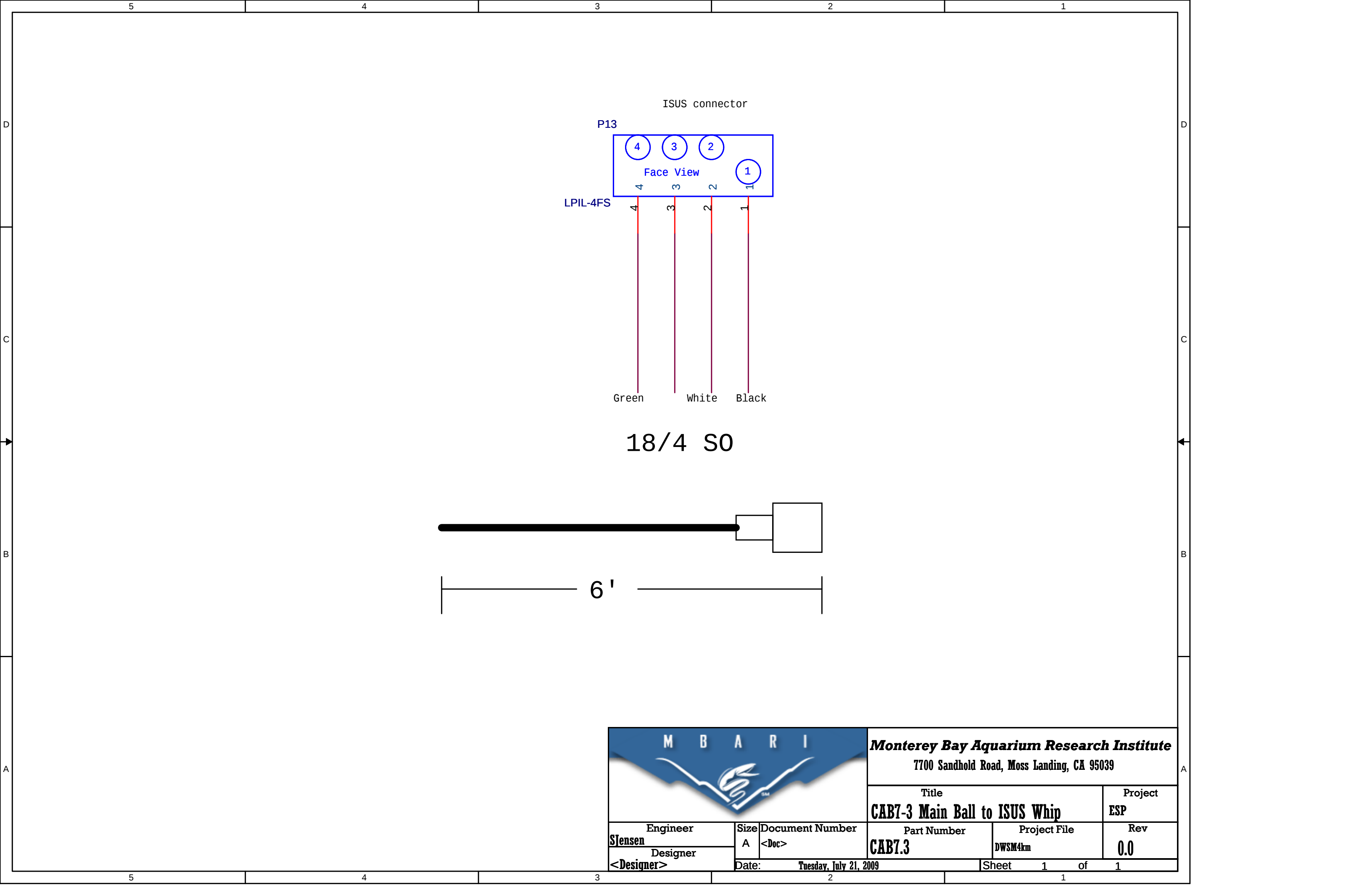


18/2 S0

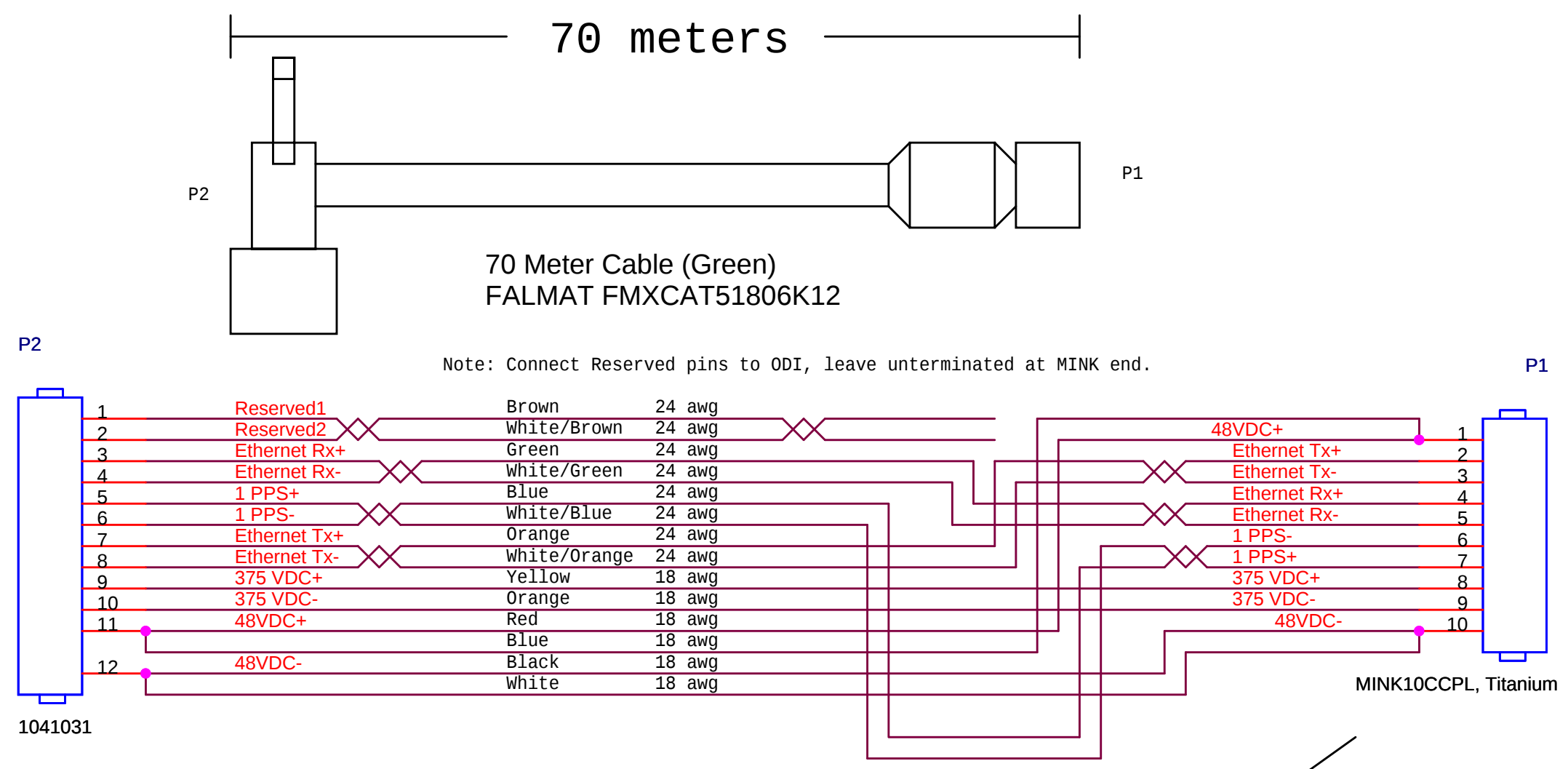
ISUS battery connector



		Monterey Bay Aquarium Research Institute 7700 Sandhold Road, Moss Landing, CA 95039			
		Title CAB7-2 Main Ball to ISUS Whip		Project ESP	
Engineer Stensen	Size A	Document Number <Doc>	Part Number CAB7.2	Project File DWSM4km	Rev 1.0
Designer <Designer>		Date: Tuesday, July 21, 2009		Sheet 1 of 1	

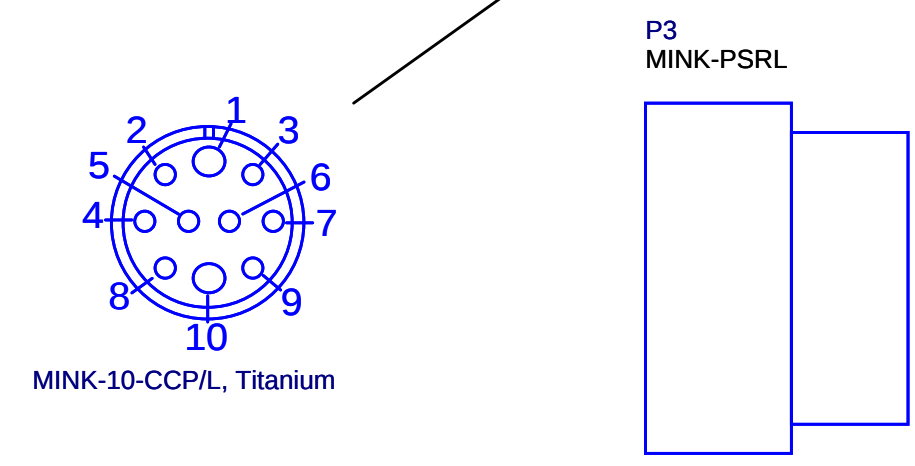


Monterey Bay Aquarium Research Institute 7700 Sandhold Road, Moss Landing, CA 95039			
Title CAB7-3 Main Ball to ISUS Whip			Project ESP
Part Number CAB7.3		Project File DWSM4km	Rev 0.0
009		Sheet 1 of 1	

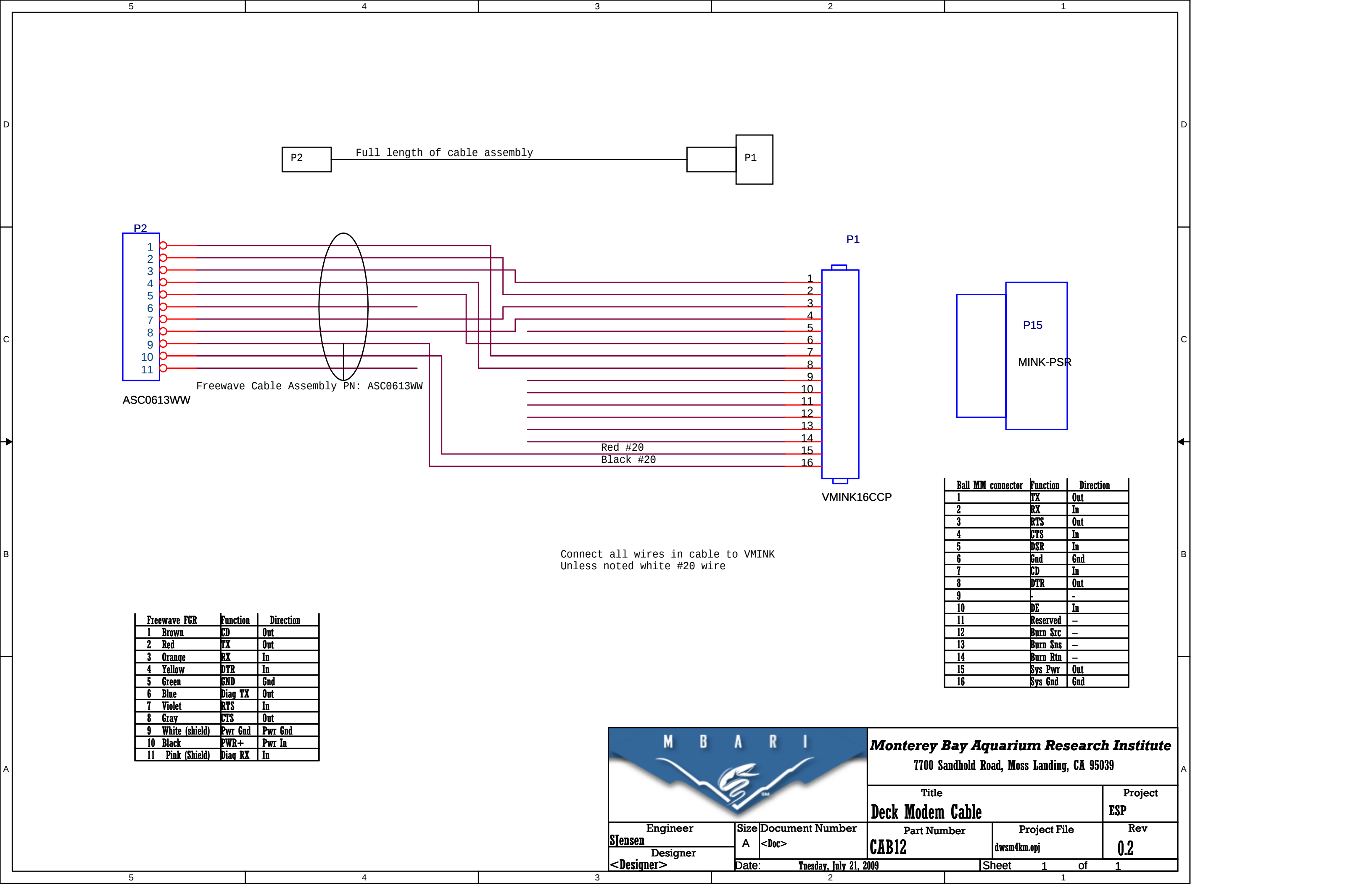


MARS ODI connector

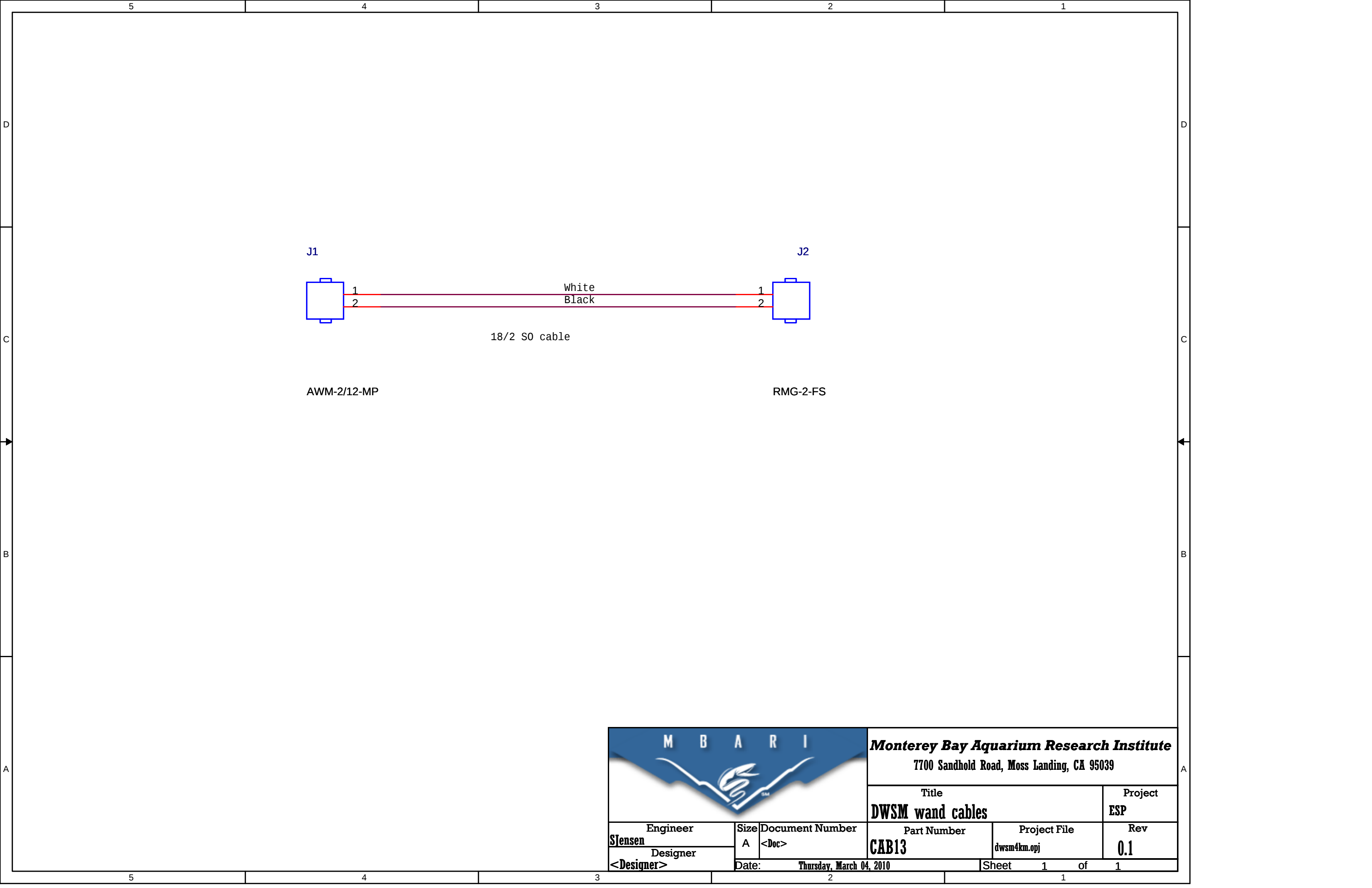
Pin No.	Description
1	Reserved
2	Reserved
3	RX+
4	RX-
5	1 PPS+
6	1 PPS-
7	TX+
8	TX-
9	375 VDC+
10	375 VDC-
11	48 VDC+
12	48 VDC-



		Monterey Bay Aquarium Research Institute 7700 Sandhold Road, Moss Landing, CA 95039			
		Title DWSM MARS Platform Interface		Project ESP	
Engineer Stensen	Size A	Document Number 10020316	Part Number CAB11	Project File DWSM4km	Rev 0.1
Designer <Designer>		Date: Tuesday, July 21, 2009			
			Sheet 1 of 1		



Monterey Bay Aquarium Research Institute					
7700 Sandhold Road, Moss Landing, CA 95039					
Title				Project	
Deck Modem Cable				ESP	
Engineer		Size	Document Number	Part Number	Project File
Stensen		A	<Doc>	CAB12	dwsm4km.opj
Designer		Date:		Rev	
<Designer>		Tuesday, July 21, 2009		0.2	
Sheet			1	of	1





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

Title

DWSM wand cables

Project

ESP

Engineer

Stensen

Size

A

Document Number

<Doc>

Part Number

CAB13

Project File

dwsm4km.opj

Rev

0.1

Designer

<Designer>

Date:

Thursday, March 04, 2010

Sheet

1

of

1

These still need to be defined by Girguis lab

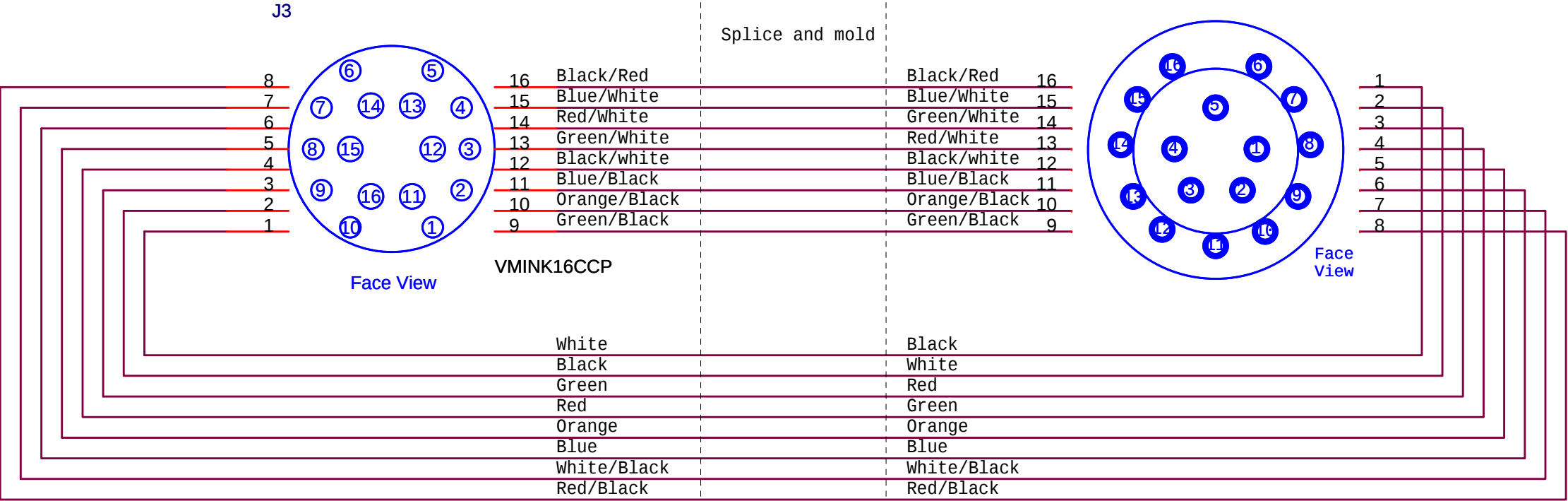
Function	Pin	Direction
24VDC Turbo and Misc	1	In
RS-232 Common	2	Common
Unused	3	-
RGA RS-232 Pin 2	4	?
RGA -RS-232 Pin 3	5	?
Sea Water Pump ctrl	6	Out
Turbo RS-232 Pin 2	7	?
Turbo RS-232 pin 3	8	?
24VDC RGA and Rough	9	In
24VDC Common	10	Common

Seacon 10' whip of 18/16 SOJ cable

Subconn 2' whip of 20 awg 16 conductor SOJ cable

P16
MCIL16M

Splice and mold



Function	Pin	Direction
RS-232 Common	1	Common
TXD Turbo	2	Out
RXD Turbo	3	In
Unused	4	-
Unused	5	-
Seawater Pump ctrl	6	In
Unused	7	-
RXD MS	8	In
TXD MS	9	Out
RS-232 Common	10	Common
24VDC Common	11	Common
24VDC MS	12	Out
Unused	13	-
Unused	14	-
24VDC Turbo	15	Out
24VDC Common	16	Common

From ISMS Power rev 0.0			
Description	Pin	Direction	
TP GND	1	GND	
TP RX	2	From TP	
TP TX	3	To TP	
RGA GND	4	Gnd	
RGA RX	5	From RGA	
RGA TX	6	To RGA	
RGA DTR	7	To RGA	
RGA DSR	8	From RGA	
RGA RTS	9	To RGA	
RGA CTS	10	From RGA	
TP 24V	11	To TP	
TP 24V	12	To TP	
TP 24V com	13	Gnd	
TP 24V com	14	Gnd	
RGA 24V	15	To RGA	
RGA 24V com	16	GND	

As determined by Girguis Deck Box

Function	Pin	Direction
Turbo Pin 5 (DB9)	1	Common
Turbo Pin 3 (DB9)	2	Tx out
Turbo Pin 2 (DB9)	3	Rx in
RGA Pin 5 (DB9)	4	Common
RGA Pin 3 (DB9)	5	Tx out
RGA Pin 2 (DB9)	6	Rx in
Turbo Pump +24	7	PWR
Turbo Pump Gnd	8	PWR
RGA +24	9	PWR
RGA Gnd	10	PWR
Solenoid +24	11	PWR
Solenoid Gnd	12	PWR



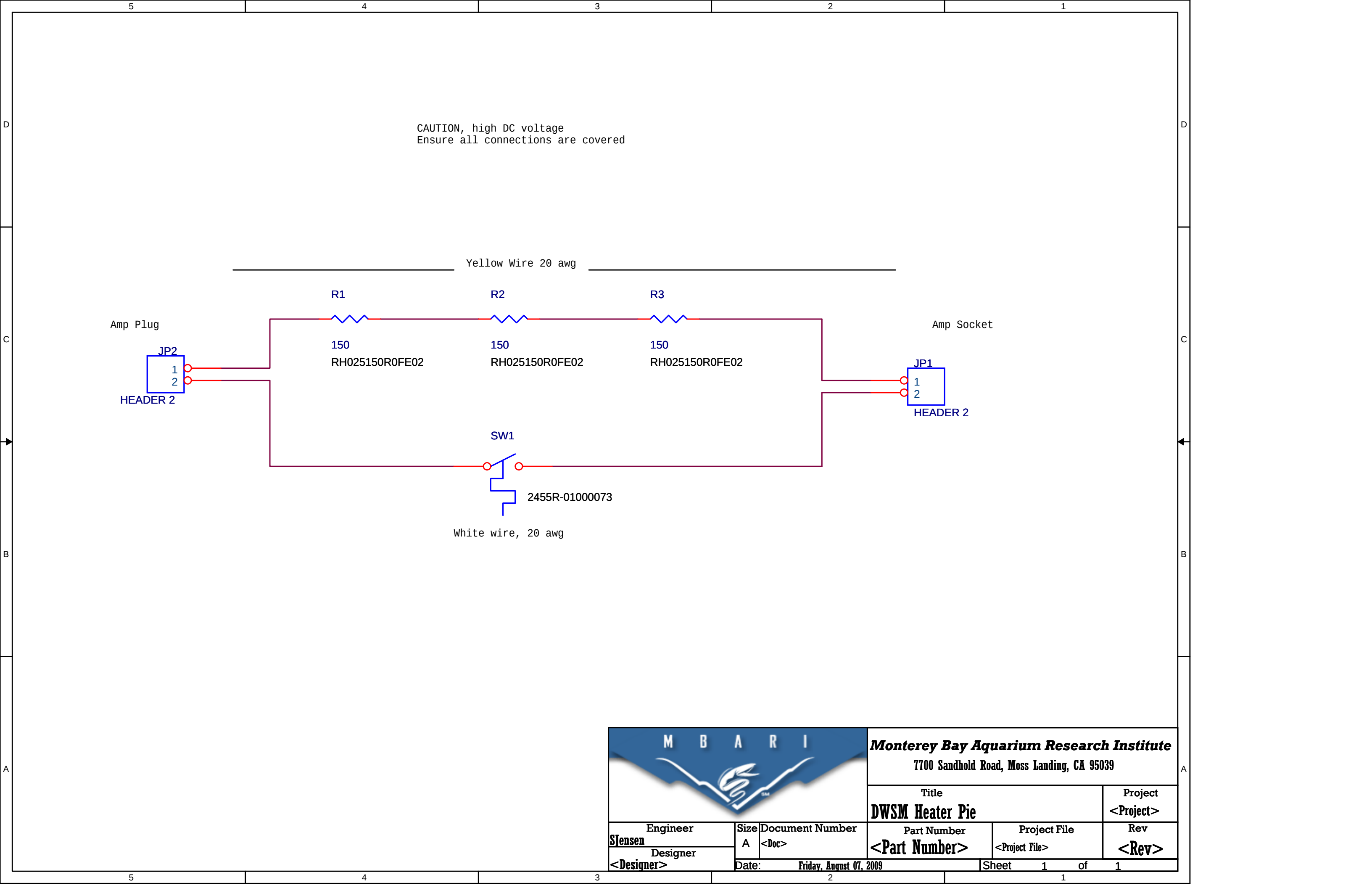
Monterey Bay Aquarium Research Institute
7700 Sandhold Road, Moss Landing, CA 95039

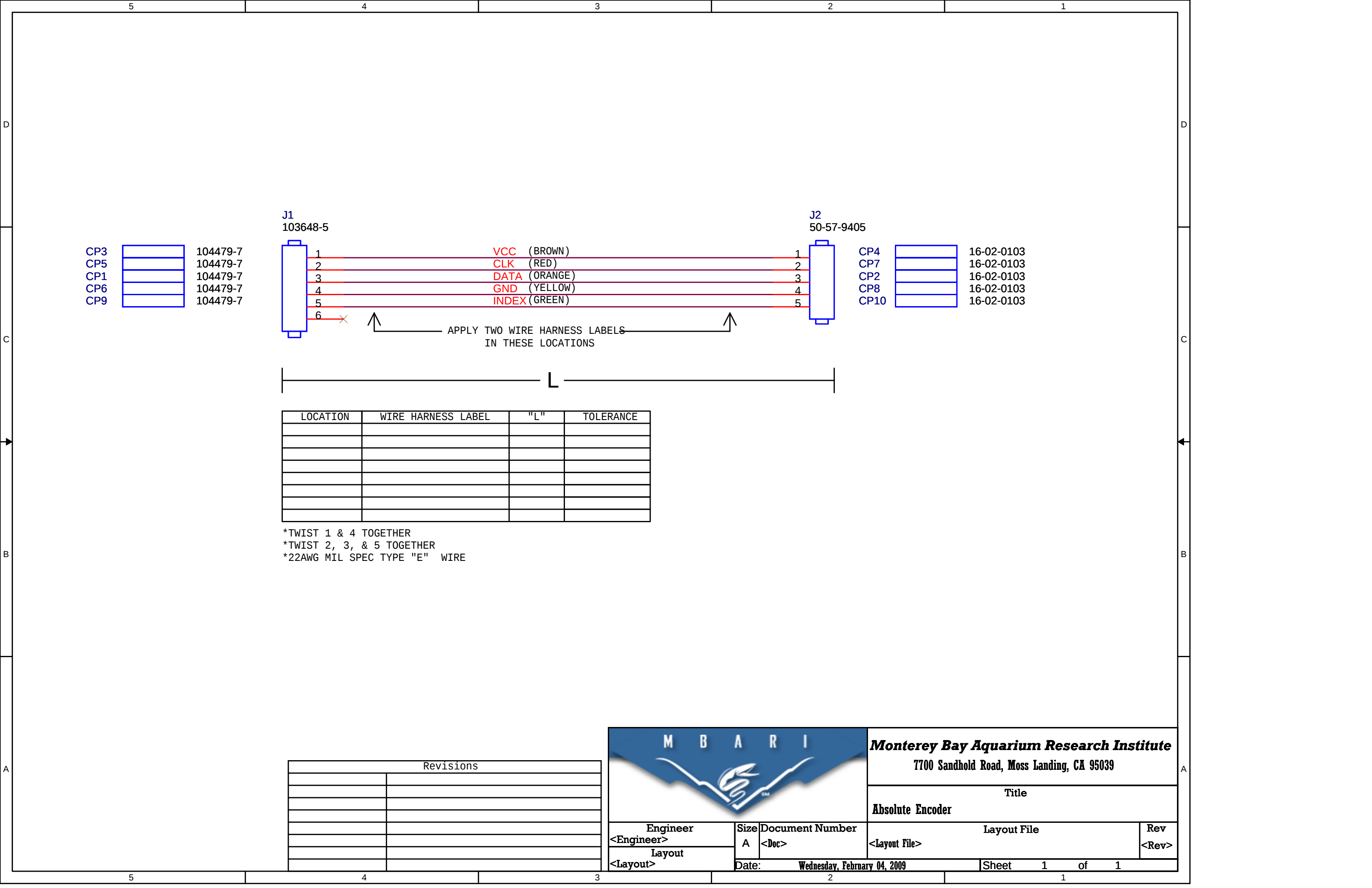
Title
CAB 14 Sphere to ISMS

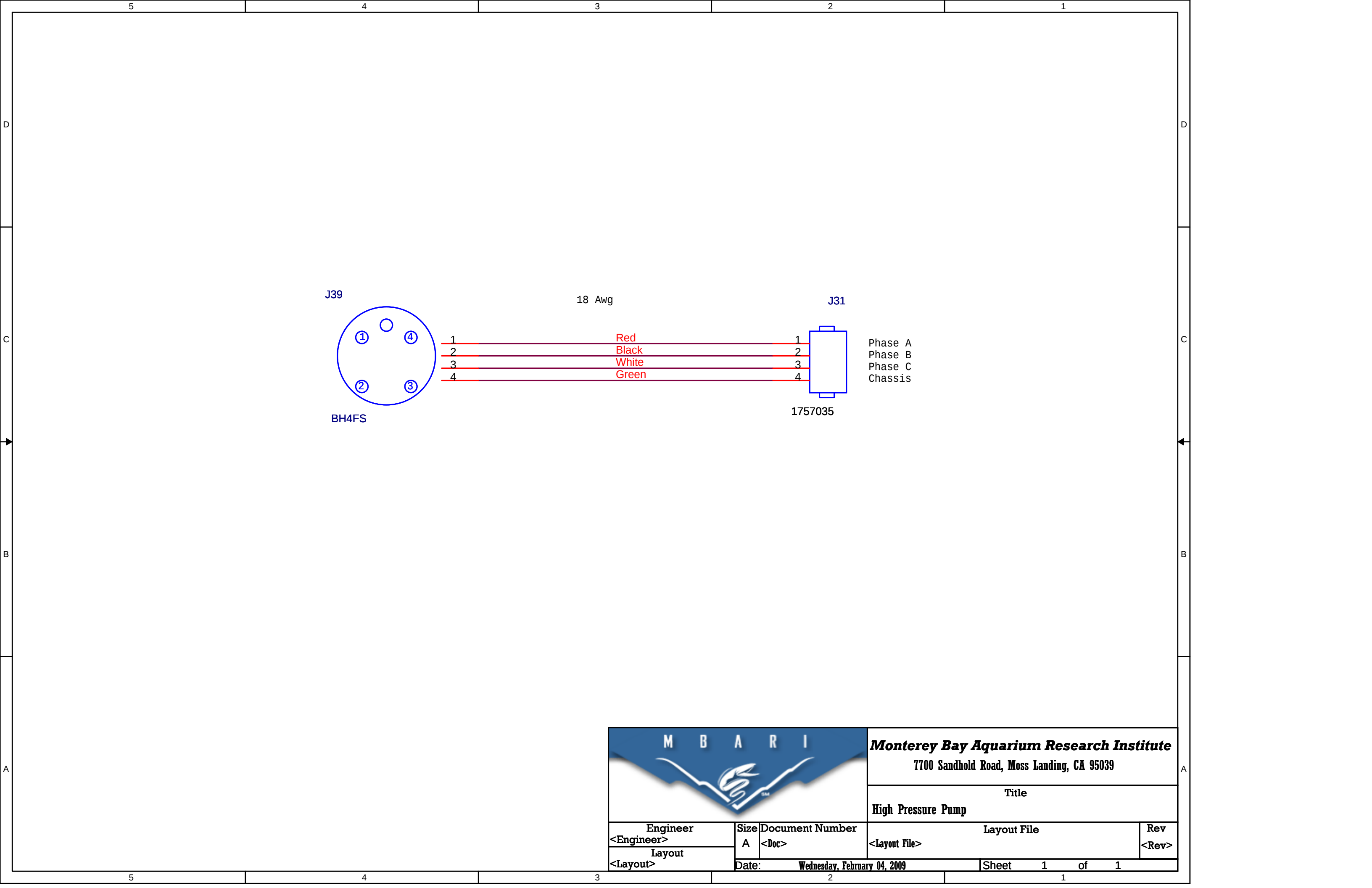
Project
ESP

Engineer Stensen	Size A	Document Number <Doc>	Part Number <Part Number>	Project File dwsm4km.opj	Rev 0.2
Designer <Designer>	Date: Friday, June 11, 2010		Sheet 1 of 1		

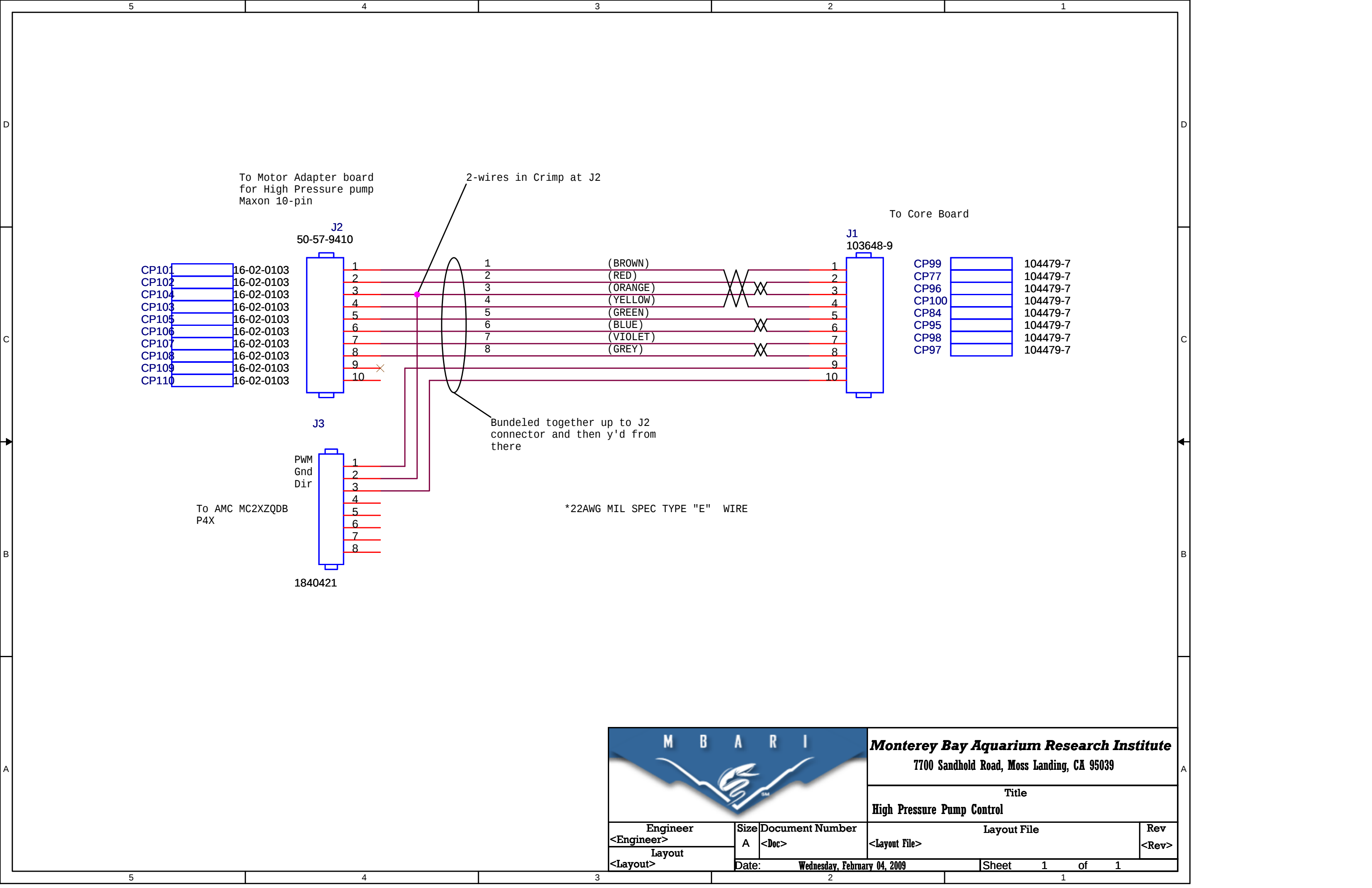
Rev 0.1 color error in 0.0 VMINK16 Black and white swapped



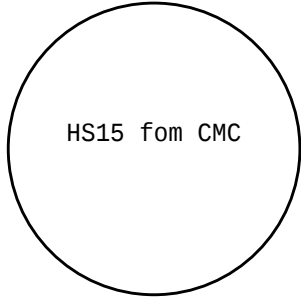




Monterey Bay Aquarium Research Institute 7700 Sandhold Road, Moss Landing, CA 95039			
Title High Pressure Pump			
Engineer <Engineer>	Size A	Document Number <Doc>	Rev <Rev>
Layout <Layout>	Date: Wednesday, February 04, 2009		
Sheet 1 of 1		Layout File <Layout File>	

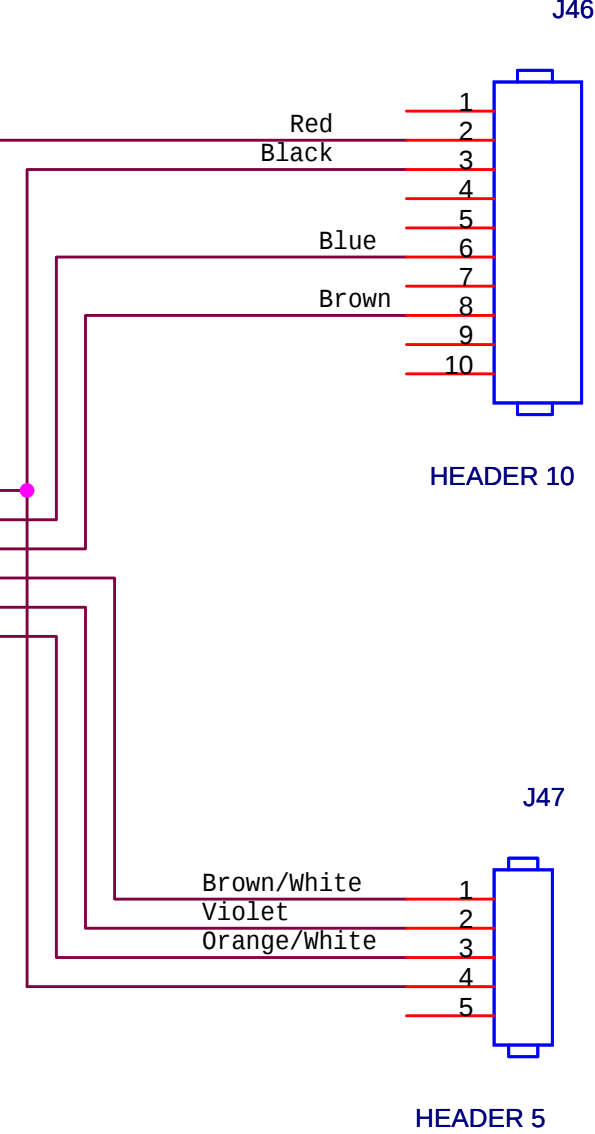


Monterey Bay Aquarium Research Institute 7700 Sandhold Road, Moss Landing, CA 95039			
Title High Pressure Pump Control			
Engineer <Engineer>	Size A	Document Number <Doc>	Layout File <Layout File>
Layout <Layout>	Date: Wednesday, February 04, 2009		
		Sheet 1 of 1	Rev <Rev>



- | | |
|--------------|----------|
| Red | +VDC |
| Black | Common |
| Brown | Out A |
| White | Out A' |
| Blue | Out B |
| Green | Out B' |
| Orange | Out Z |
| Yellow | Out Z' |
| Violet | Out U |
| Gray | Out U' |
| Brown/White | Out V |
| Red/White | Out V' |
| Orange/White | Out W |
| Yellow/White | Out W' |
| Black/White | Case Gnd |
| Bare wire | Shield |

- Red
Black
Blue
Brown
Brown/White
Violet
Orange/White



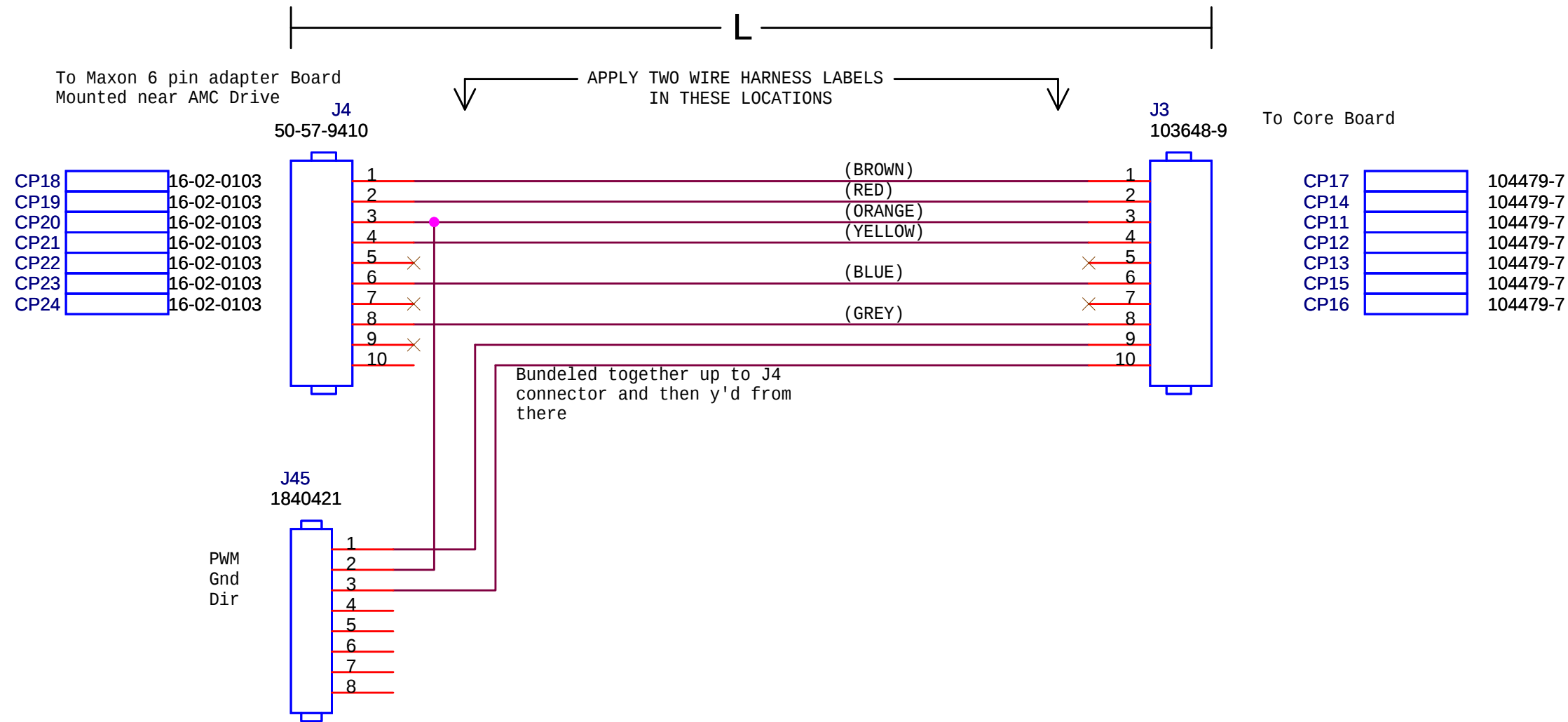
To Maxon 10 pin Adapter Board

To AMC MC2XZQD
P3X



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7700 Sandhold Road, Moss Landing, CA 95039

Engineer <Engineer>	Size A	Document Number <Doc>	Part Number <Part Number>	Project File <Project File>	Rev <Rev>
Designer <Designer>	Date: Wednesday, February 04, 2009			Sheet 1 of 1	



CP18	16-02-0103
CP19	16-02-0103
CP20	16-02-0103
CP21	16-02-0103
CP22	16-02-0103
CP23	16-02-0103
CP24	16-02-0103

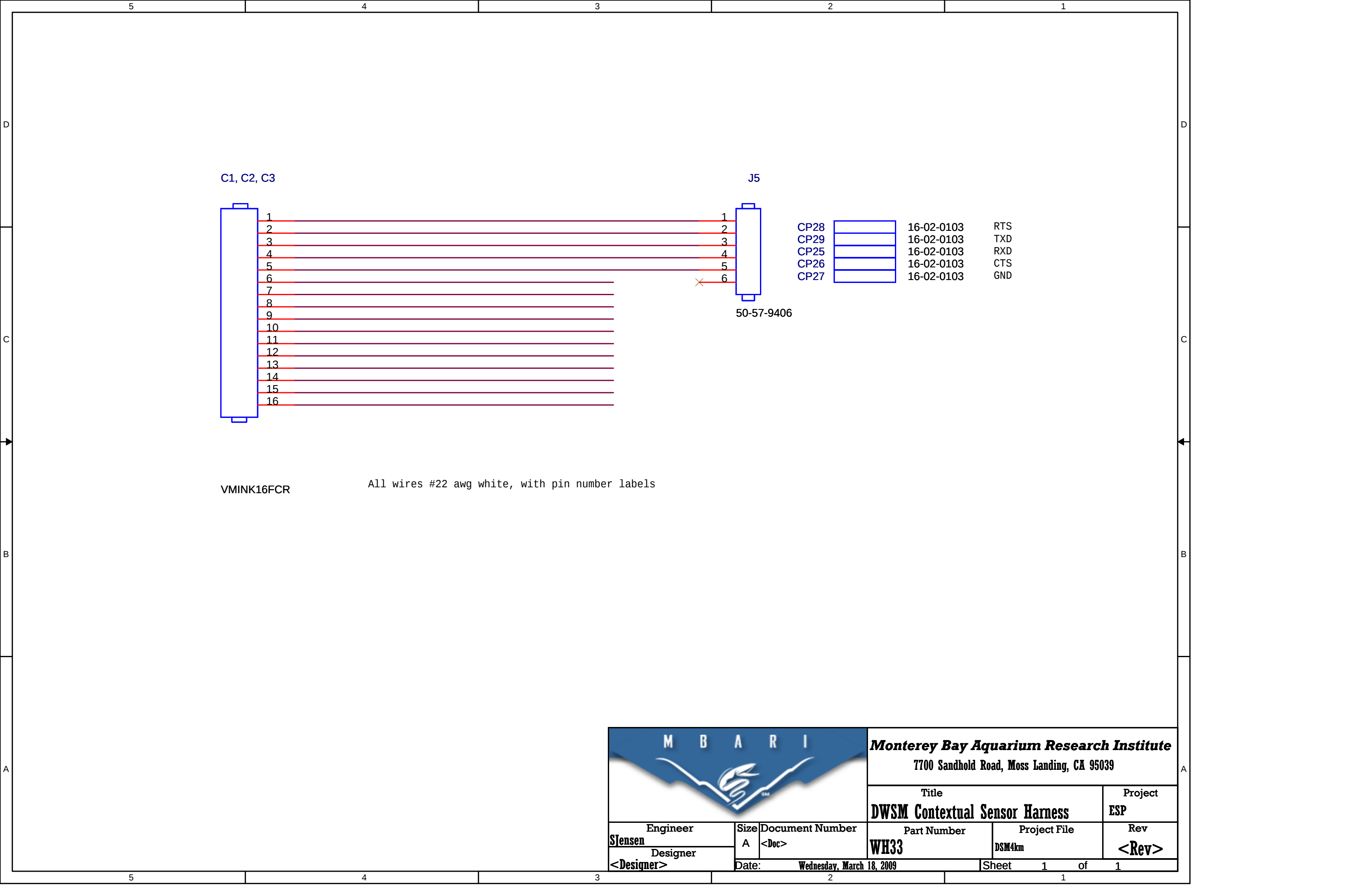
CP17	104479-7
CP14	104479-7
CP11	104479-7
CP12	104479-7
CP13	104479-7
CP15	104479-7
CP16	104479-7

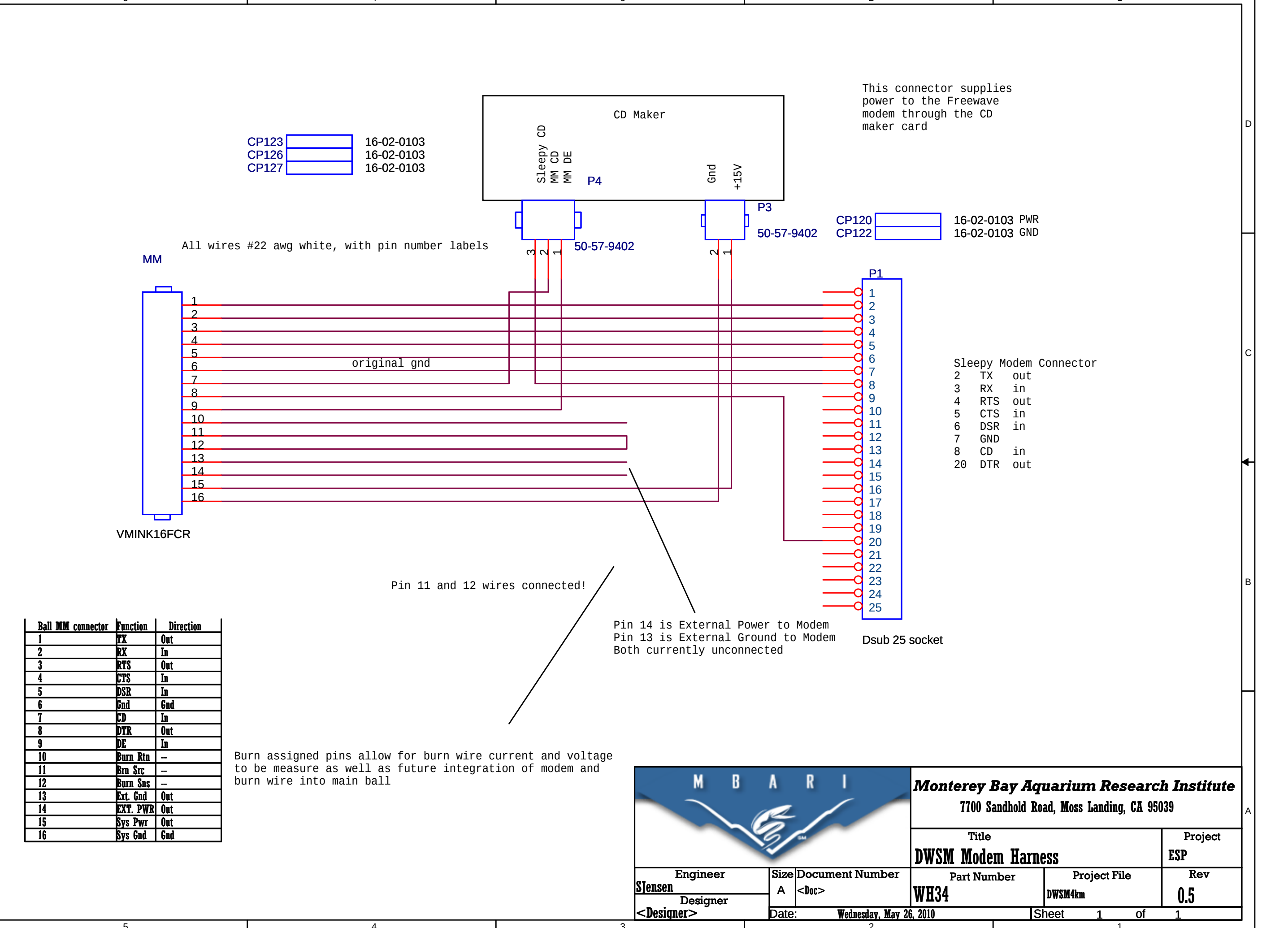
*22AWG MIL SPEC TYPE "E" WIRE
*TWIST WIRES 2 & 3 TOGETHER
**TWIST WIRES 1 & 4 TOGETHER
***TWIST WIRES 6, 8, & 10 TOGETHER



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Title <Title>		Project <Project>			
Engineer <Engineer>	Size A	Document Number <Doc>	Part Number <Part Number>	Project File <Project File>	Rev <Rev>
Designer <Designer>		Date: Wednesday, February 04, 2009			
		Sheet 1 of 1			



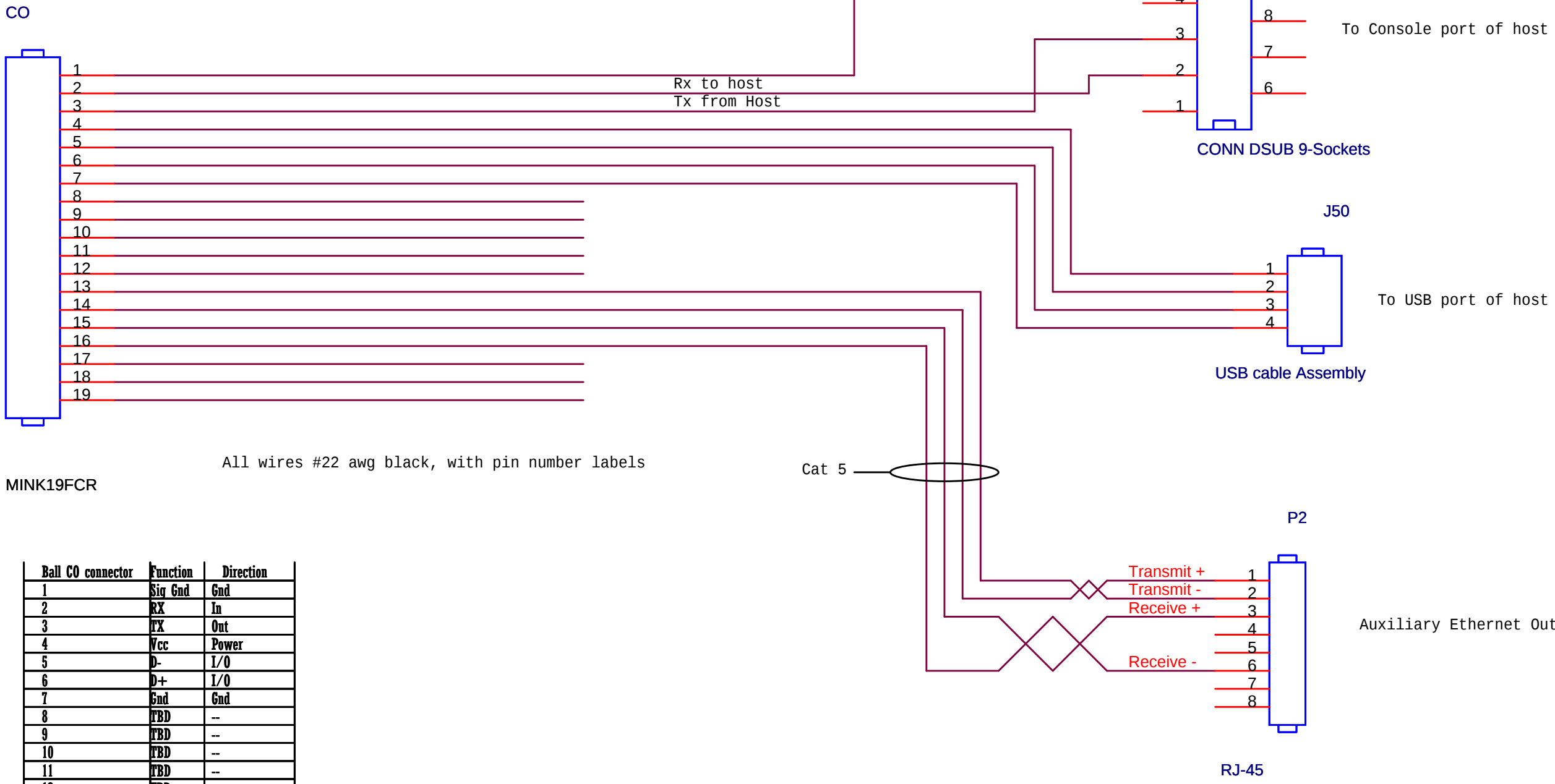


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Title
DWSM Modem Harness

Project
ESP

Engineer Slensen	Size A	Document Number <Doc>	Part Number WH34	Project File DWSM4km	Rev 0.5
Designer <Designer>	Date: Wednesday, May 26, 2010				
			Sheet	1	of 1



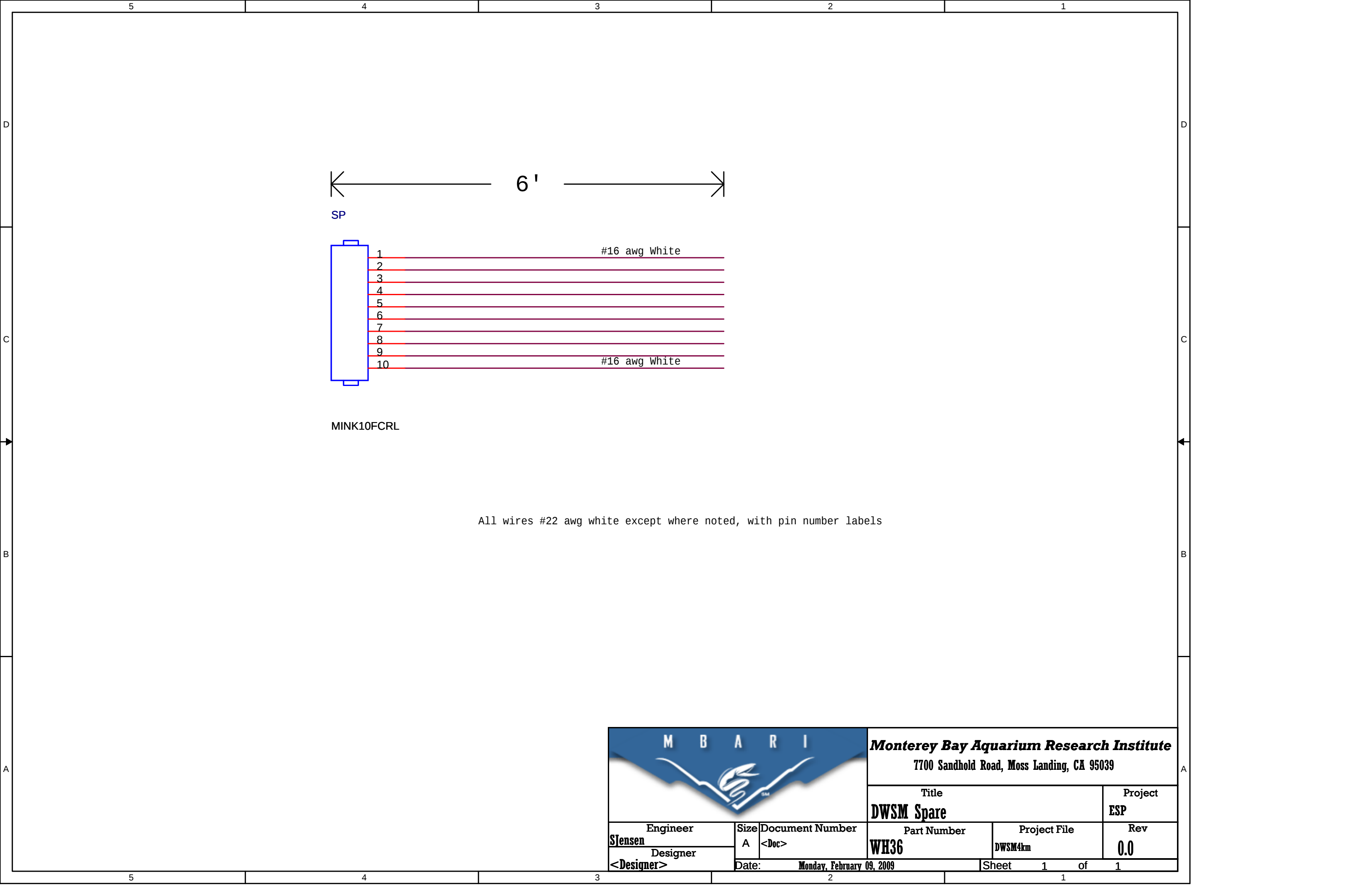
MINK19FCR

Ball CO connector	Function	Direction
1	Sig Gnd	Gnd
2	RX	In
3	TX	Out
4	Vcc	Power
5	D-	I/O
6	D+	I/O
7	Gnd	Gnd
8	TBD	--
9	TBD	--
10	TBD	--
11	TBD	--
12	TBD	--
13	Eth Tx+	In
14	Eth Tx-	In
15	Eth Rx+	Out
16	Eth Rx-	Out
17	TBD	--
18	TBD	--
19	TBD	--

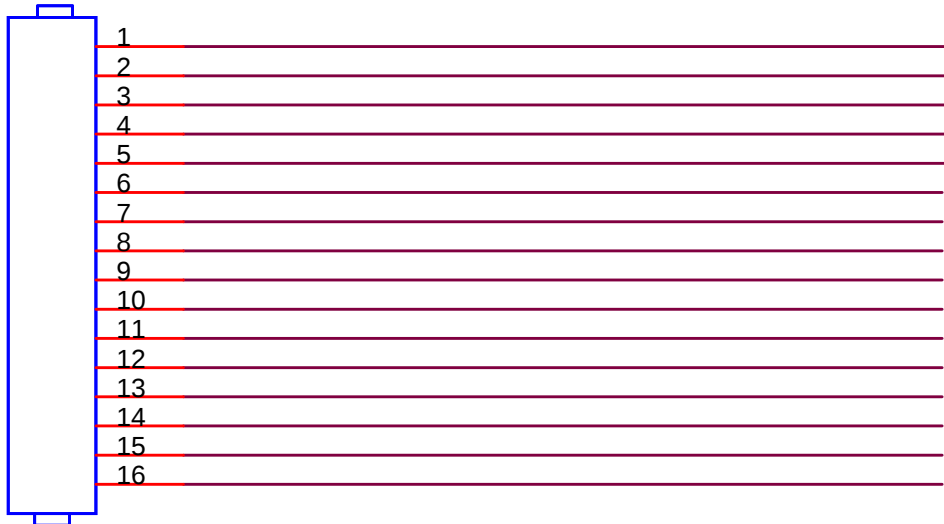


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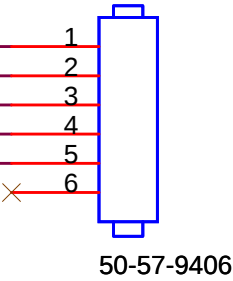
Engineer	Size	Document Number	Part Number	Project File	Rev
SJensen	A	<Doc>	WH35	DWSM4km	0.1
Designer	Date: Friday, May 15, 2009			Sheet 1 of 1	
<Designer>					



DG



J6



CP33		16-02-0103	RTS
CP34		16-02-0103	TXD
CP30		16-02-0103	RXD
CP32		16-02-0103	CTS
CP31		16-02-0103	GND

VMINK16FCR

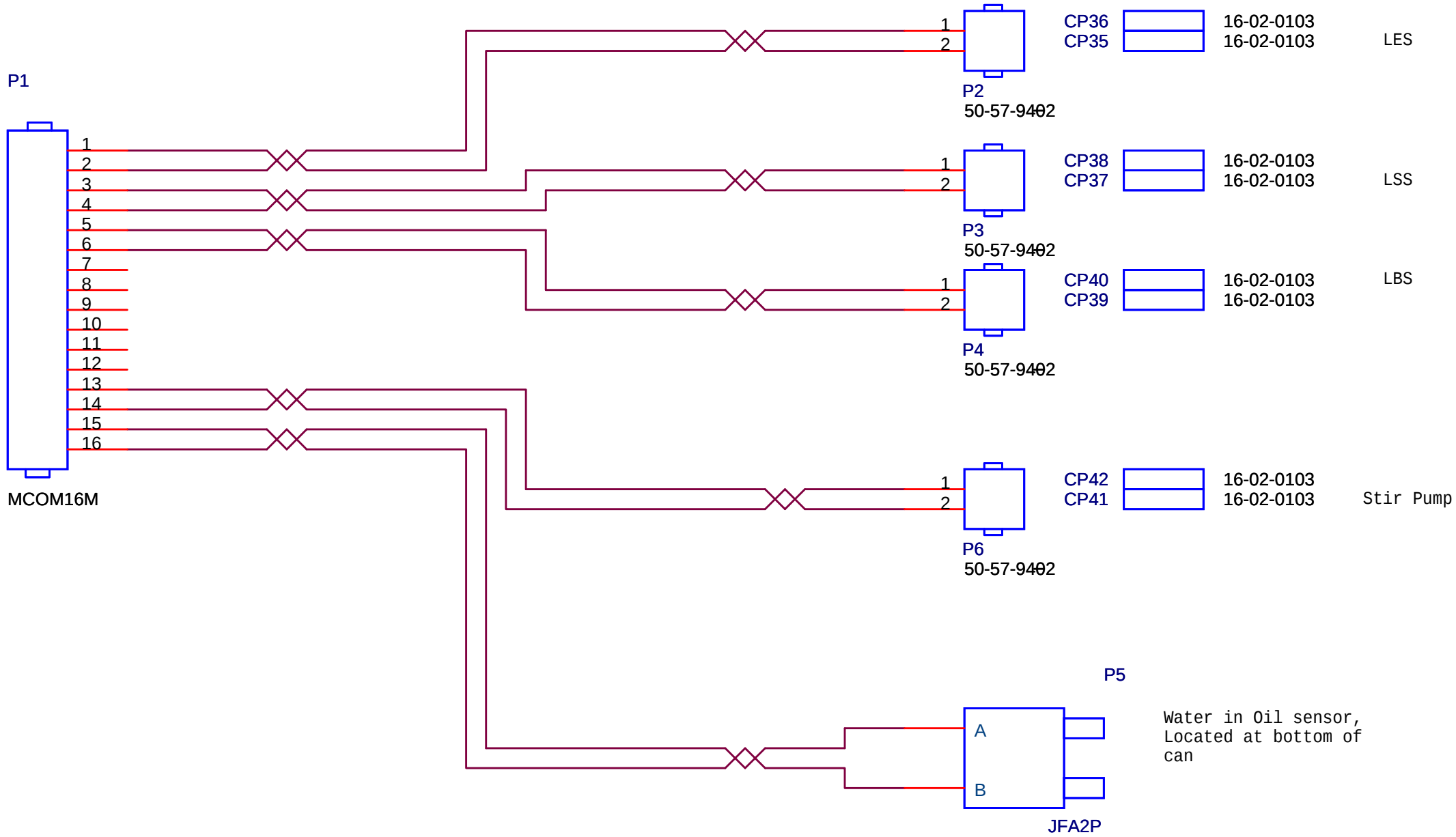
All wires #22 awg white, with pin number labels



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Title	Project
External Sampler Harness	ESP

Engineer	Size	Document Number	Part Number	Project File	Rev
Slensen	A	<Doc>	<Part Number>	dwsm4km.opj	0.0
Designer	Date: Wednesday, March 18, 2009				
<Designer>	Sheet 1 of 1				



P1

MCOM16M

P2
50-57-9402

P3
50-57-9402

P4
50-57-9402

P6
50-57-9402

P5

JFA2P

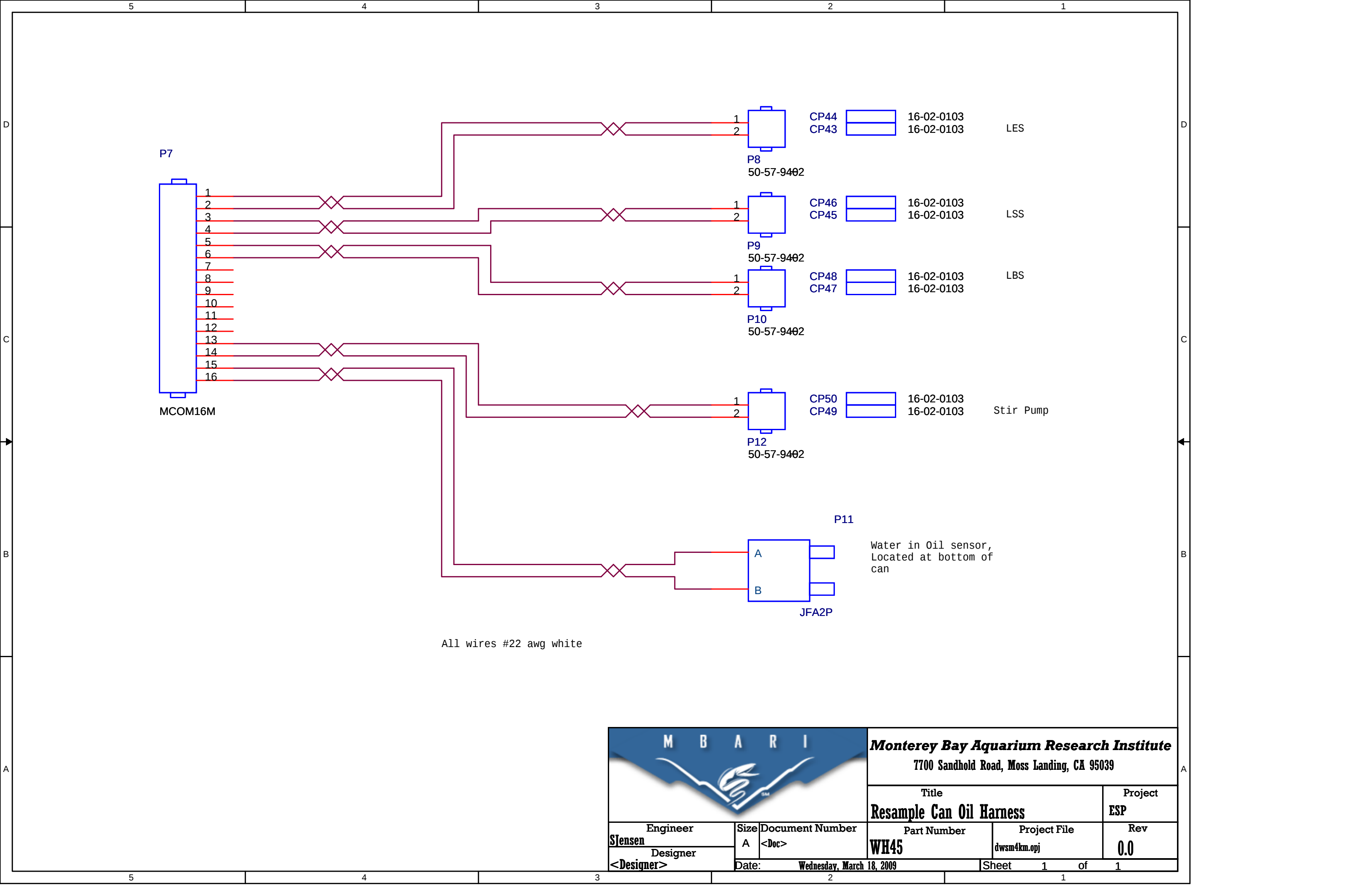
All wires #22 awg white



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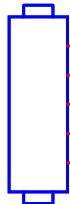
Title		Project
Sample Can Oil Harness		ESP

Engineer	Size	Document Number	Part Number	Project File	Rev
Stensen	A	<Doc>	WH44	dwsn4km.opj	0.0
Designer	Date: Wednesday, March 18, 2009				
<Designer>	Sheet 1 of 1				



Monterey Bay Aquarium Research Institute 7700 Sandhold Road, Moss Landing, CA 95039					
Title Resample Can Oil Harness				Project ESP	
Engineer Stensen	Size A	Document Number <Doc>	Part Number WH45	Project File dwsn4km.opj	Rev 0.0
Designer <Designer>	Date: Wednesday, March 18, 2009		Sheet 1 of 1		

P?



MINK5FCRL

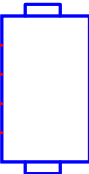
- | | | |
|---|--------------|-----|
| 1 | #16awg Red | VP+ |
| 2 | #16awg Black | PR |
| 3 | #18awg Red | |
| 4 | #18awg Black | |
| 5 | #18awg White | |

To HPP Picccoloservo Drive

Not connected

DWSM Resample Dwarf

P13



39-01-4040

- | | |
|------|--|
| CP53 | |
| CP54 | |
| CP52 | |
| CP51 | |

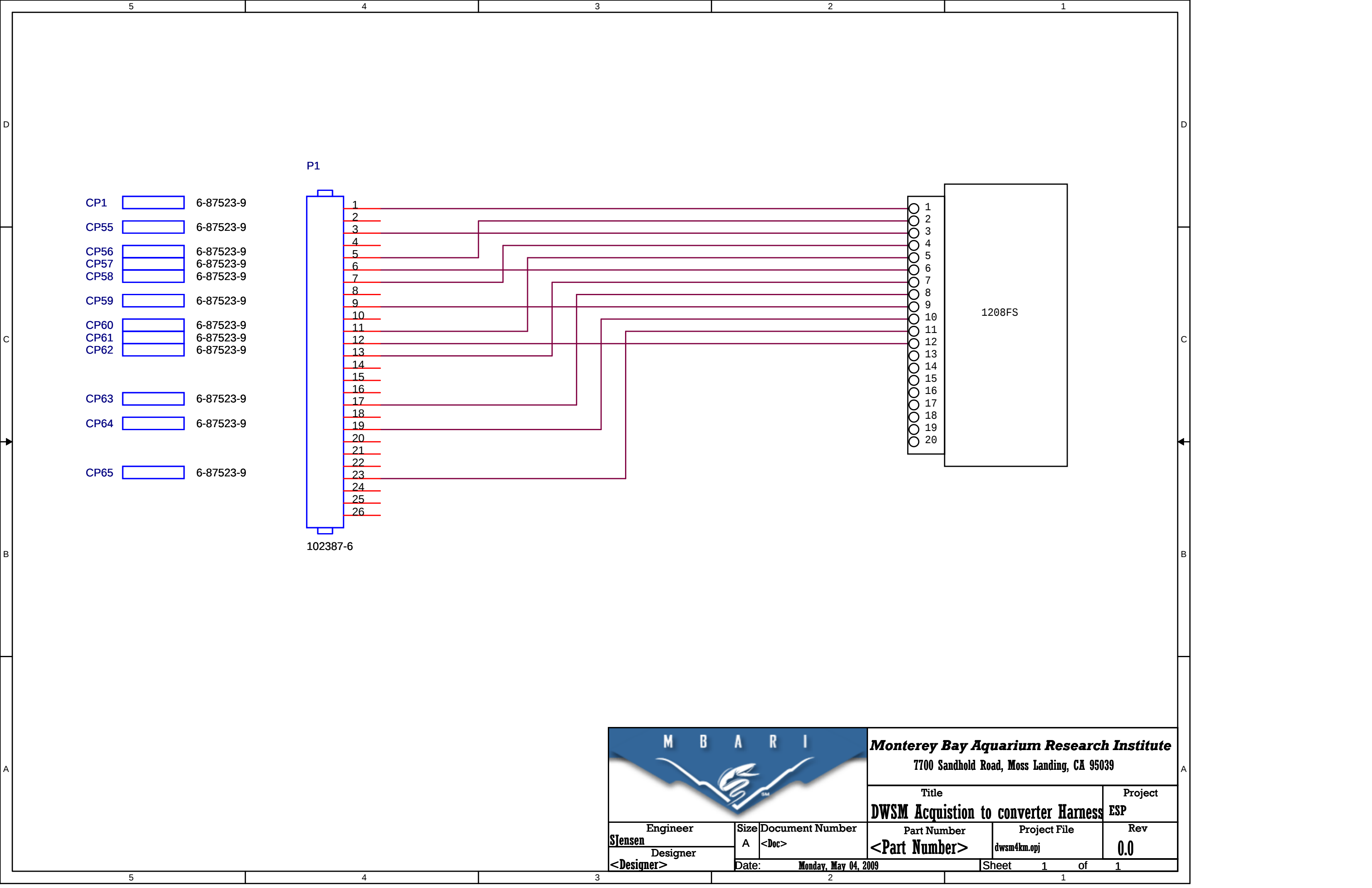
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|------------|
| 39-00-0039 |
| 39-00-0039 |
| 39-00-0039 |
| 39-00-0039 |



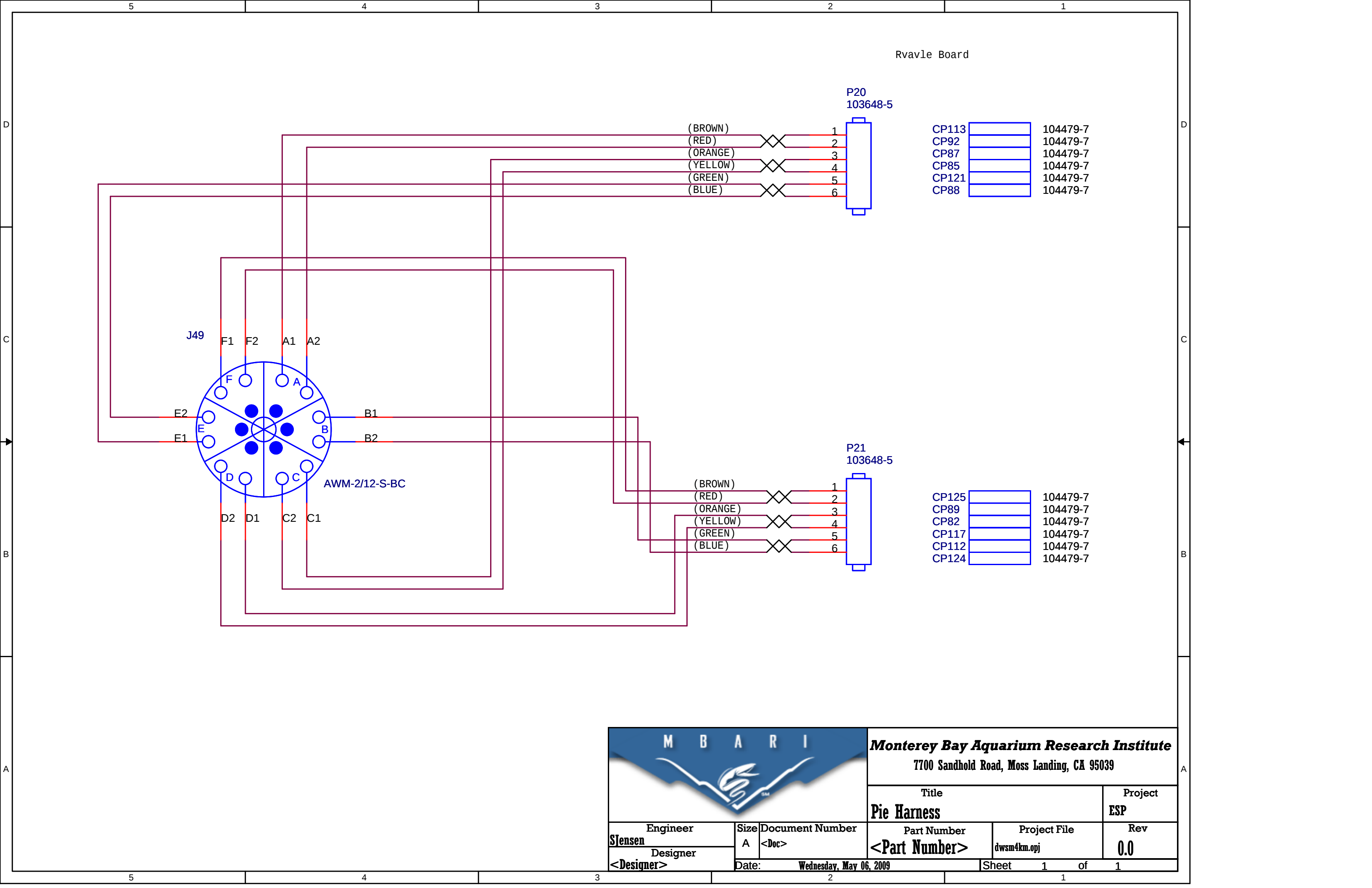
Monterey Bay Aquarium Research Institute
7700 Sandhold Road, Moss Landing, CA 95039

Title	Project
DWSM Resample Power	ESP

Engineer	Size	Document Number	Part Number	Project File	Rev
Slensen	A	<Doc>	<Part Number>	dwsm4km.opj	0.0
Designer	Date: Monday, March 23, 2009			Sheet 1 of 1	
<Designer>					



Monterey Bay Aquarium Research Institute 7700 Sandhold Road, Moss Landing, CA 95039					
Title DWSM Acquisition to converter Harness				Project ESP	
Engineer Slensen	Size A	Document Number <Doc>	Part Number <Part Number>	Project File dwsm4km.opj	Rev 0.0
Designer <Designer>	Date: Monday, May 04, 2009			Sheet 1 of 1	



Monterey Bay Aquarium Research Institute				
7700 Sandhold Road, Moss Landing, CA 95039				
Title			Project	
Pie Harness			ESP	
Part Number		Project File		Rev
<Part Number>		dwsm4km.opj		0.0
2, 2009		Sheet 1 of 1		

Power Input - From Main Ball
Raw Battery Power (10-16) 4Amps
Raw Battery Ground
High Voltage (90VDC) 12Amps cont., 24Amps inter.
High Voltage Ground
MINKSFCL 5x16awg

I2C bus - to Resample Can
System +3.3 1Amp
System +5 1Amp
System Ground
SCL
System Ground
SDA
System Ground
MINK16FCR

Pressure signals - To and From Resample Can
Raw to Resample Can
System Ground
Raw From Resample Can
System Ground
signals to Resample Dwarf:
SSS
SES
SSS
Signals from Resample Dwarf:
RSS
RES
RBS
Ground - caution for ground loop
MINK19FCR

Power Resample Can Harness

I2C Resample Can Harness

Face View of Circuit Board connectors
Rear View of Connector Shroud as plugged into Board

RV4 - RV3
SOV - RV3
RV4 - RV2
FOV - RV1

Pressure Exchange Resample Can Harness

High Pressure Pump Control Harness

ASSM12

HP pump

Piccolo

ASSM1

Core_Rev_2

Rvalve_Rev0

ASSM9

Stir Pump Resample Harness

ASSM8

Pressure Sensor Harness

Pressure Sensor

Limit Switches Harness

Limit Switches Harness

To Oil Chamber Resample Can Harness

WENA Harness

To Oil Chamber Resample Can Harness

Encoder located in 1 atmosphere housing

Encoder
IE pump
Brushless DC
Motor

ASSM11

Maxon10pinAdapter

ASSM10

Maxon10pinAdapter

High Pressure Pump Harness

IE Pump Harness

Motor located INSIDE oil compensated housing

Encoder

HP pump
Brushless DC
Motor

Encoder

Waste Bag Full (FLS)

PS2

Pressure Switch

Waste Bag very Empty (RLS)

PS4

Pressure Switch

Waste Bag Empty (Home)

PS7

Pressure Switch

Water Sensor

Stir Pump

MCBH16F

MCOM16H

Water Sensor

Water Sensor

Water Sensor

Water Sensor

Water Sensor

Water Sensor

Water Sensor

Water Sensor

Water Sensor

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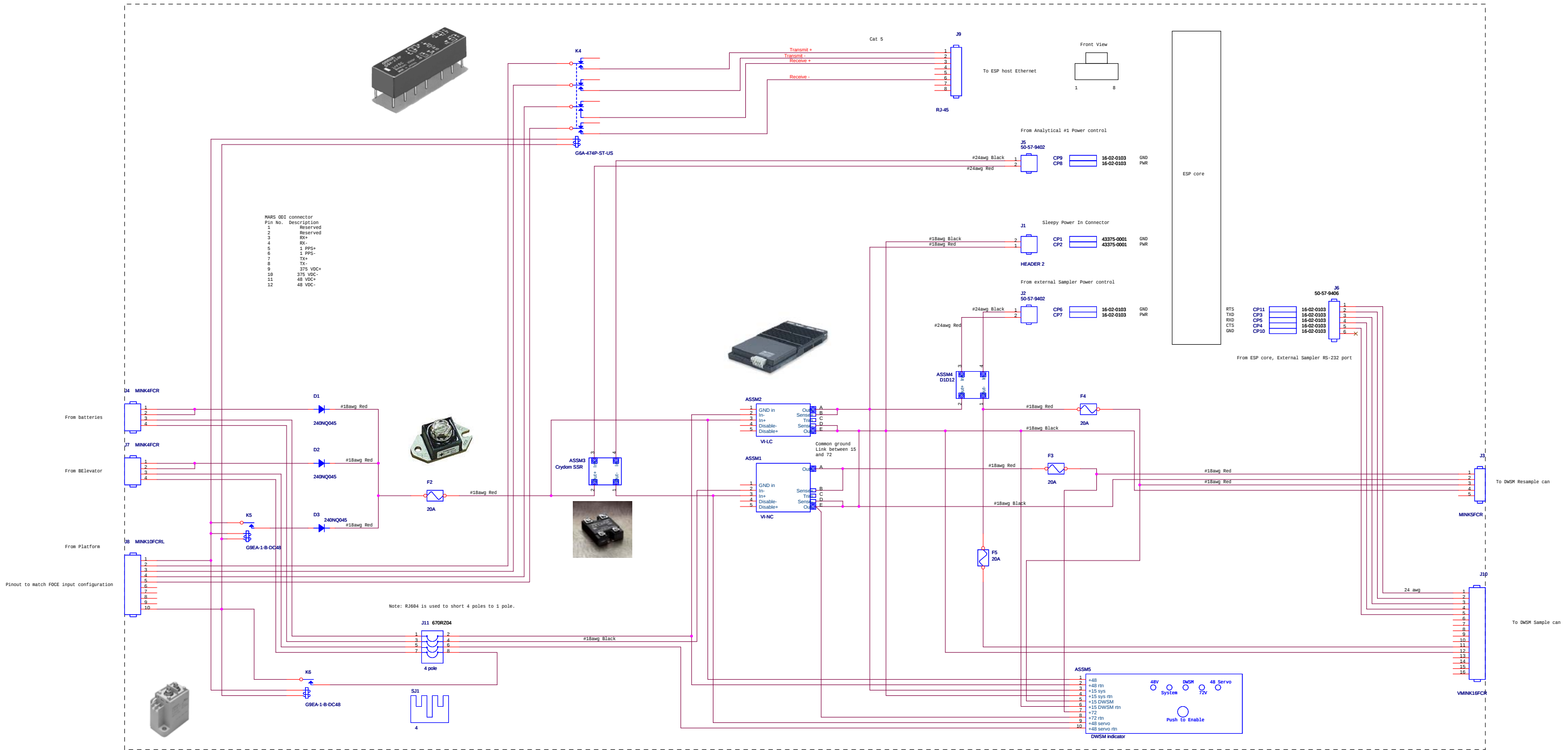
Water Sensor

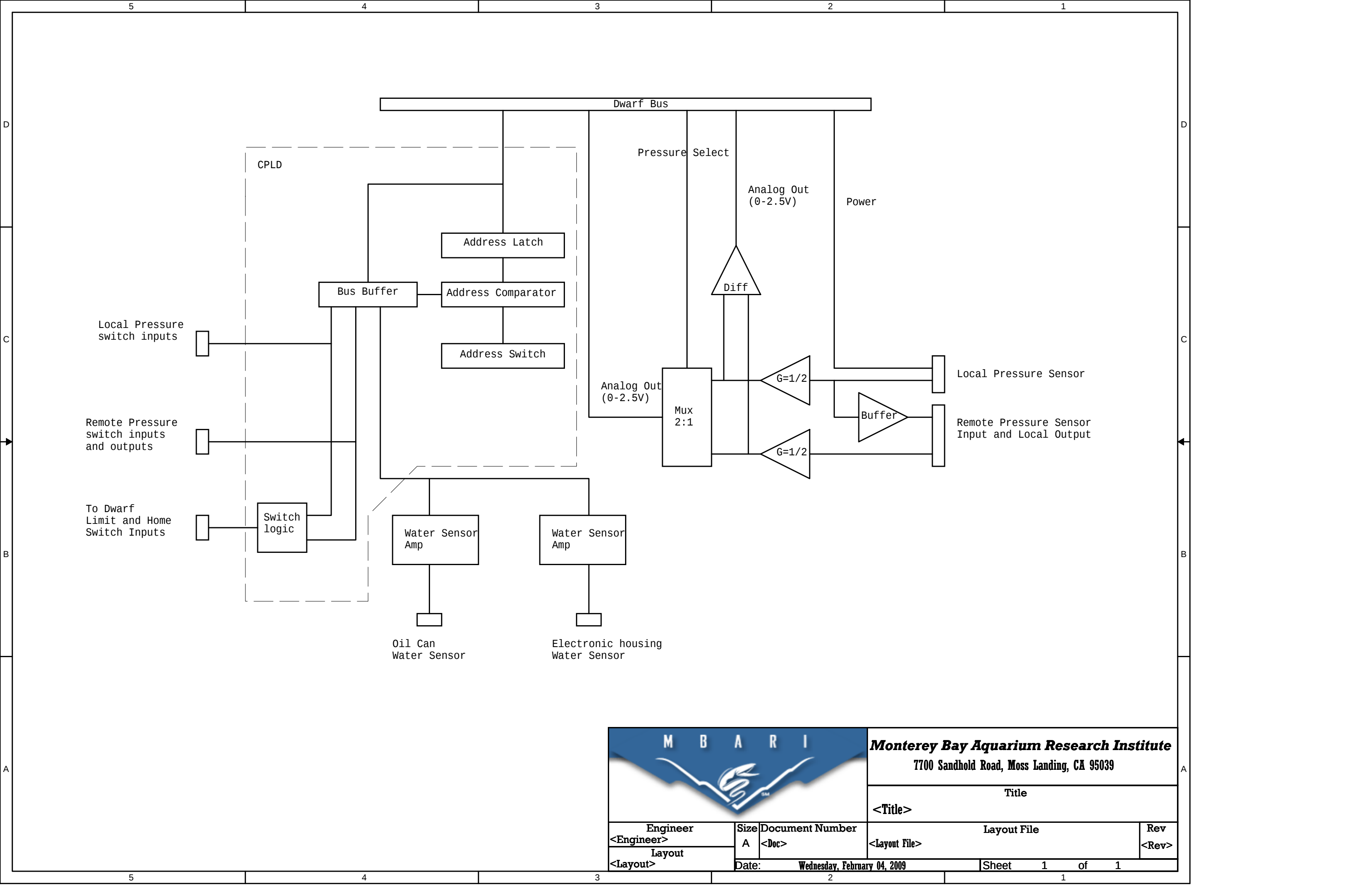
Water Sensor

Water Sensor

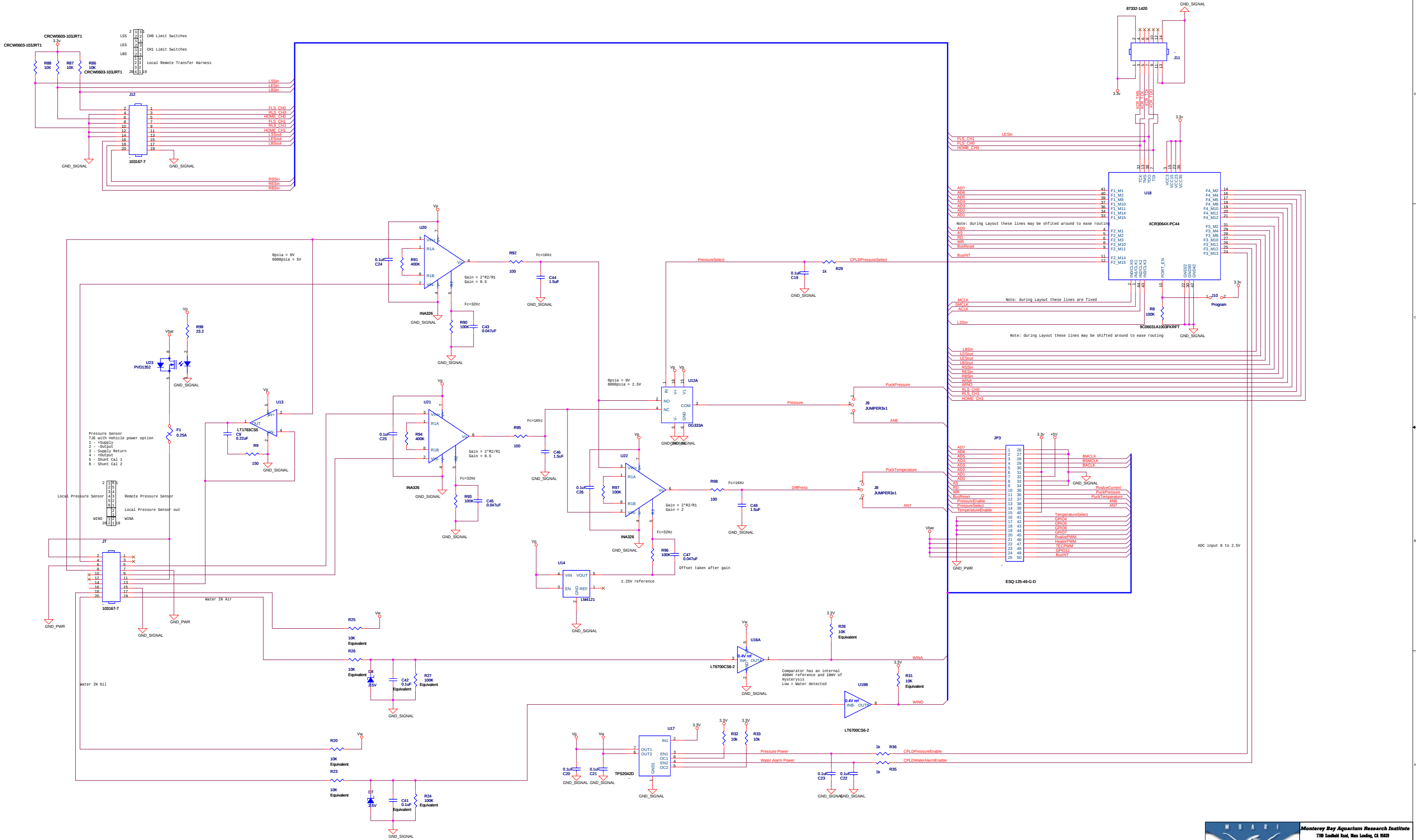
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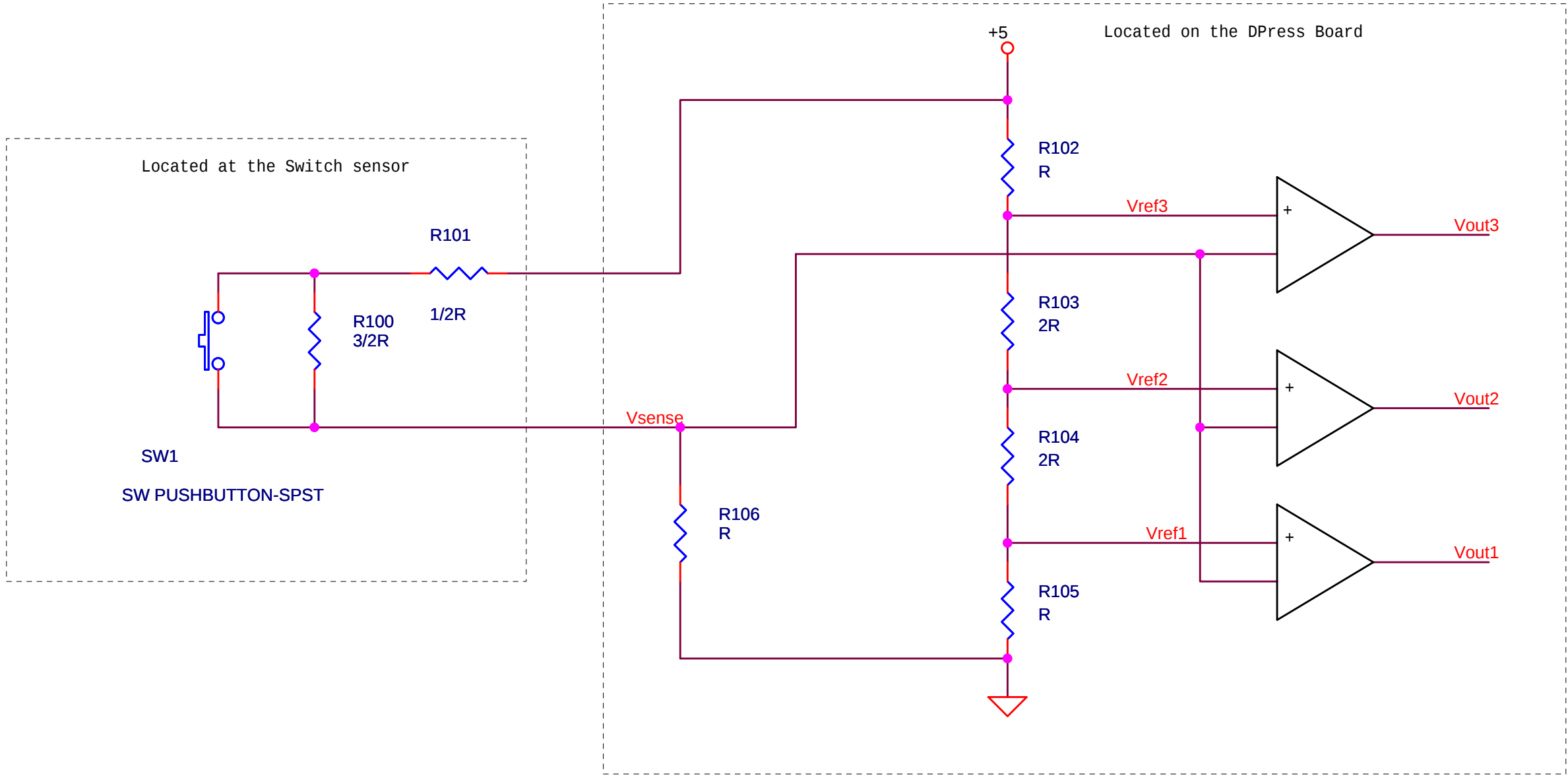
Water Sensor



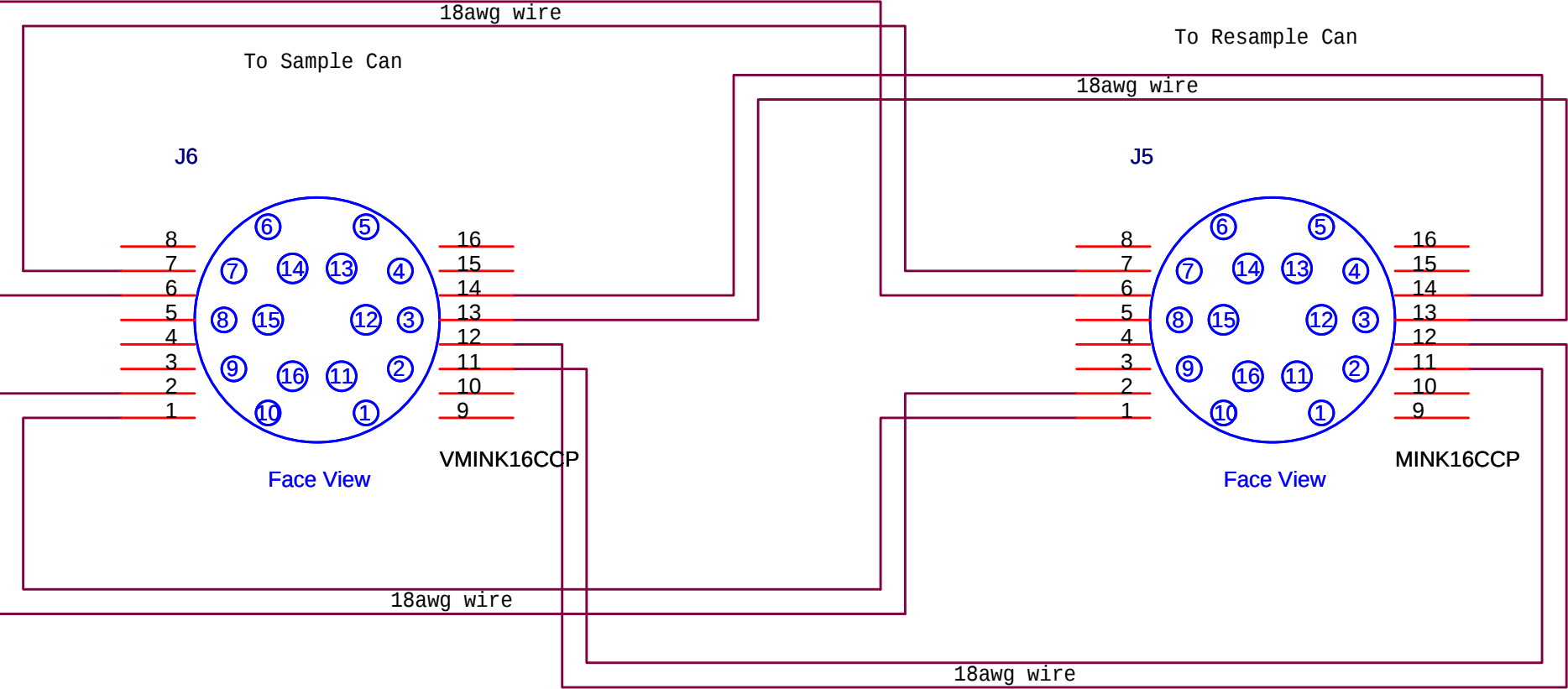


Monterey Bay Aquarium Research Institute 7700 Sandhold Road, Moss Landing, CA 95039			
Title <Title>			
Engineer <Engineer>	Size A	Document Number <Doc>	Rev <Rev>
Layout <Layout>		Layout File <Layout File>	
Date: Wednesday, February 04, 2009		Sheet 1 of 1	





Monterey Bay Aquarium Research Institute 7700 Sandhold Road, Moss Landing, CA 95039			
Title Pressure Switch fault detection			
Engineer <Engineer>	Size A	Document Number <Doc>	Rev <Rev>
Layout <Layout>	Date: Wednesday, February 04, 2009		
Sheet 1 of 1		Layout File	



18/16 S0

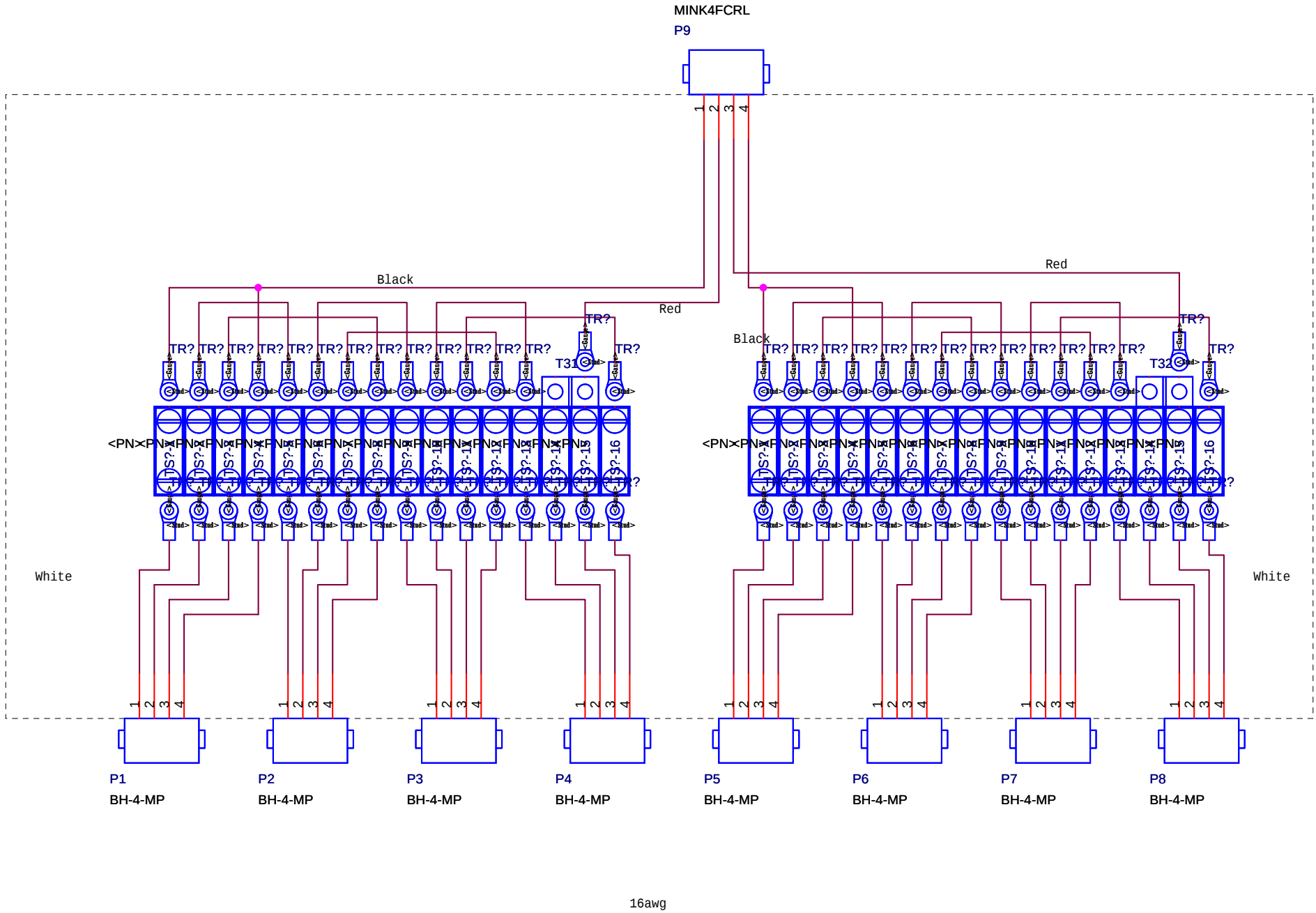


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Title I2C Sample Resample		Project ESP
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Engineer Stensen	Size A	Document Number <Doc>	Part Number CAB4	Project File DWSM4km	Rev 0.0
----------------------------	------------------	---------------------------------------	----------------------------	--------------------------------	-------------------

Date: Wednesday, February 04, 2009	Sheet 1 of 1
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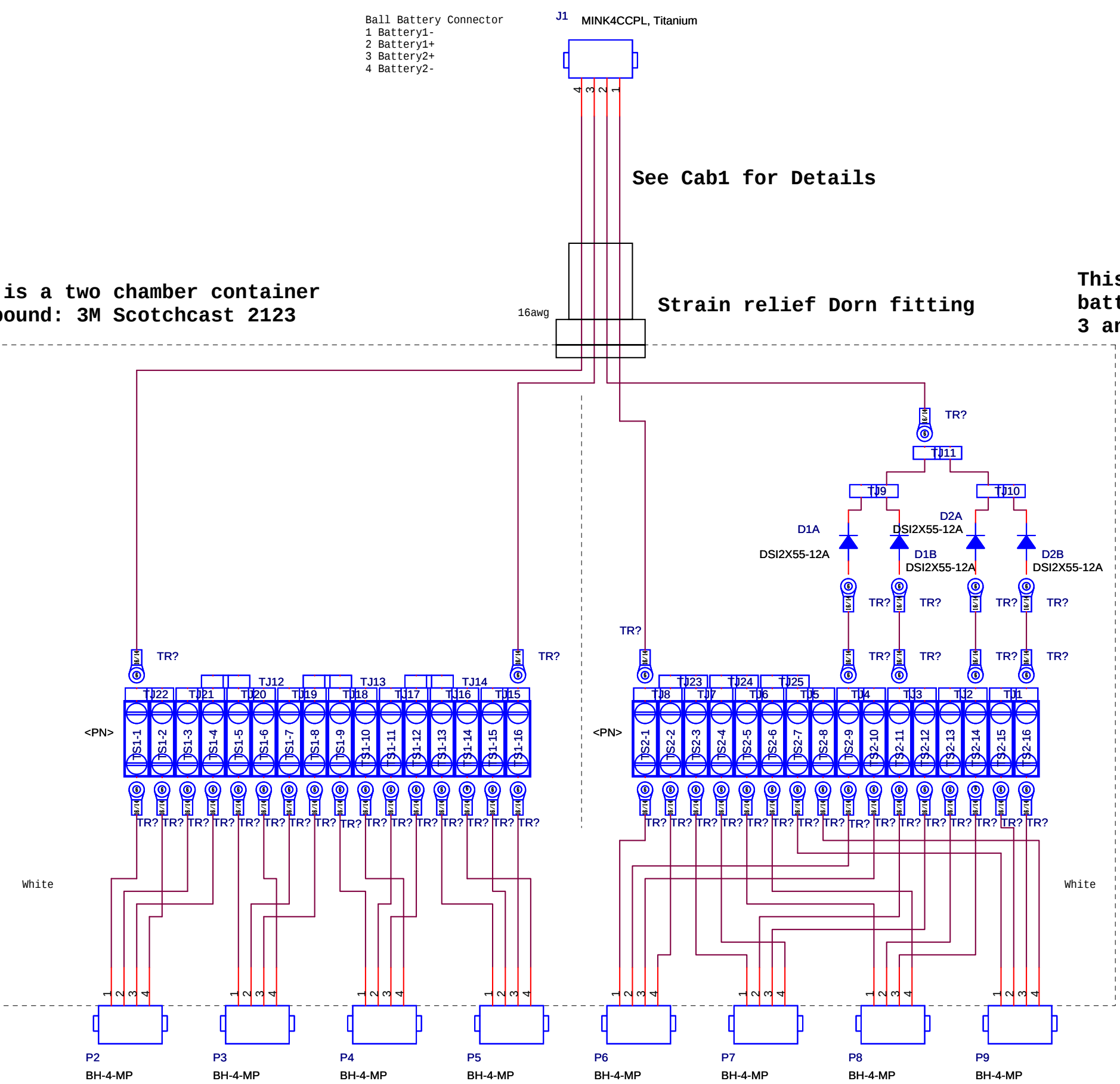


			Monterey Bay Aquarium Research Institute		
			7700 Sandhold Road, Moss Landing, CA 95039		
			Title Battery Combiner		Project ESP
Engineer SJensen	Size B	Document Number <Doc>	Part Number <Part Number>	Project File DWSM4km	Rev 0.0
Designer <Designer>	Date: Wednesday, March 18, 2009			Sheet 1	of 1

Potting Box is a two chamber container
Potting Compound: 3M Scotchcast 2123

See Cab1 for Details

This half configured for paralleled 24V
batteries for a combined 24V out across pins
3 and 4.

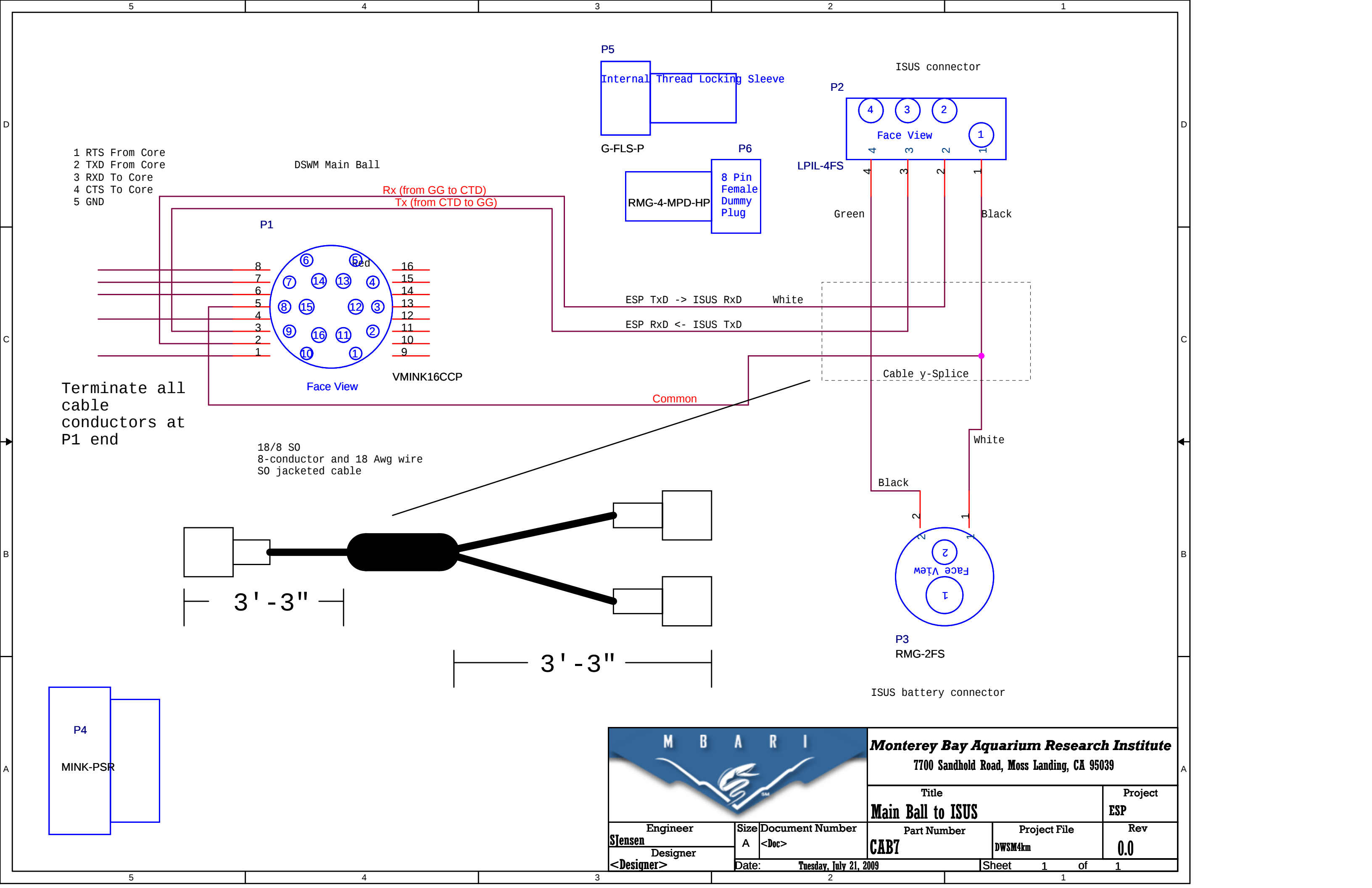


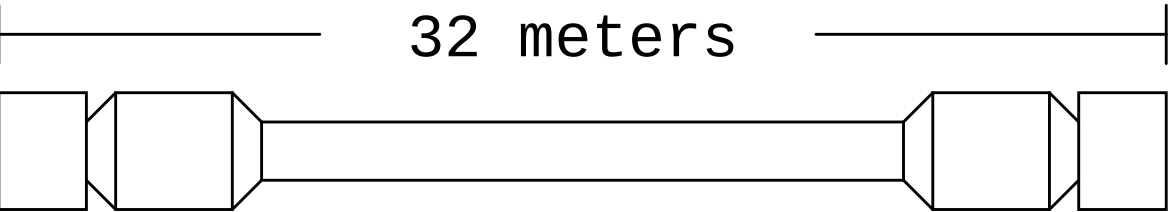
DSI2X55-12A



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Title		Project	
Battery Combiner 12Vbat		<Project>	
Engineer	Size	Document Number	Rev
<Engineer>	B	<Doc>	0.0
Designer	Part Number		Project File
<Designer>	<Part Number>		<Project File>
Date:		Sheet 1 of 1	
Monday, April 12, 2010			

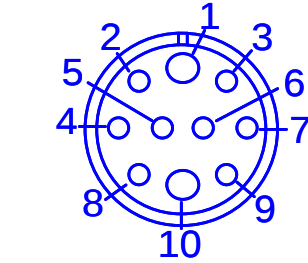




32 Meter Cable (Orange)
Falmat PN# FM122203-1CP Rev A

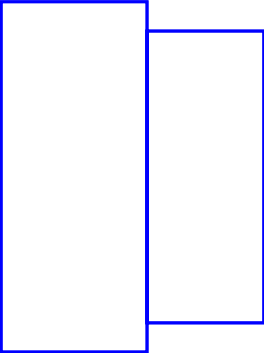
ODI 12 Way
Connector

MINK-10-CCP/L



MINK-10-CCP/L

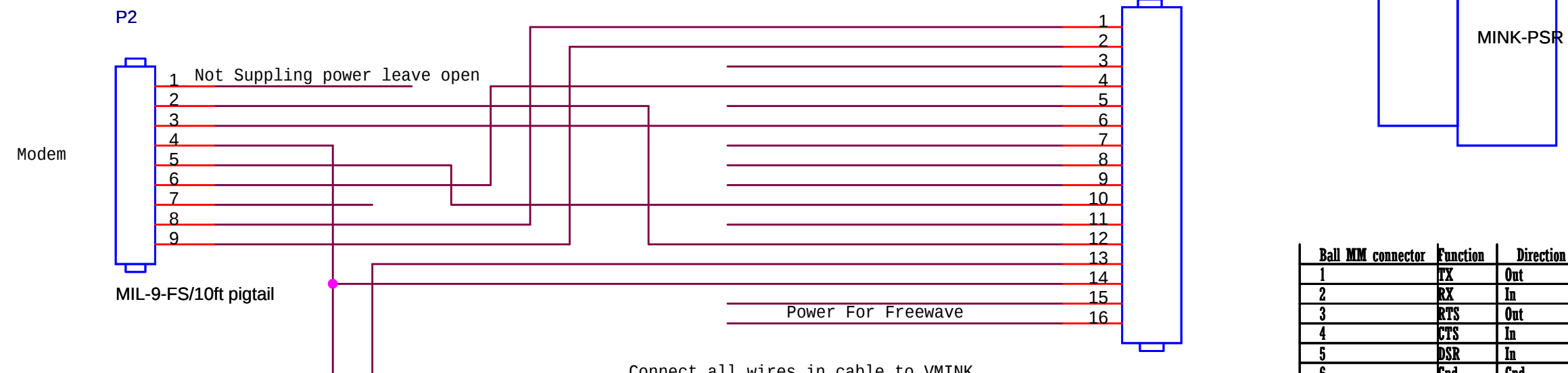
P3
MINK-PSRL



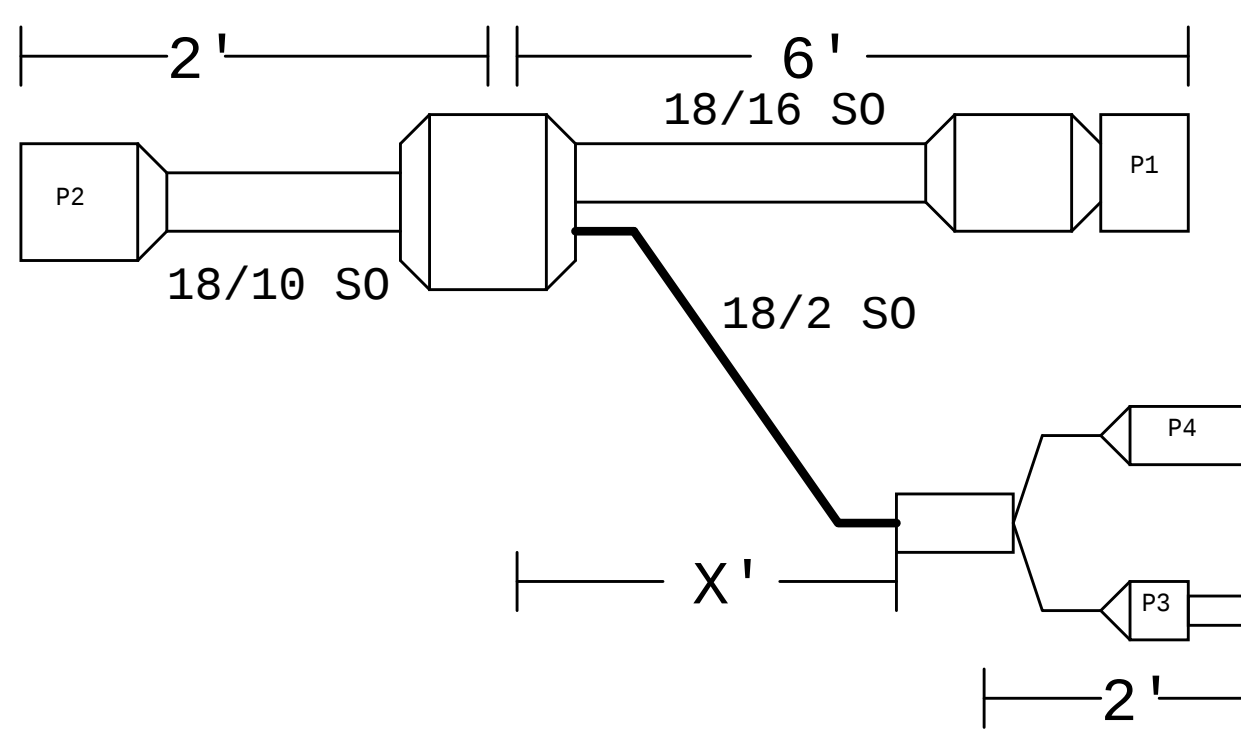
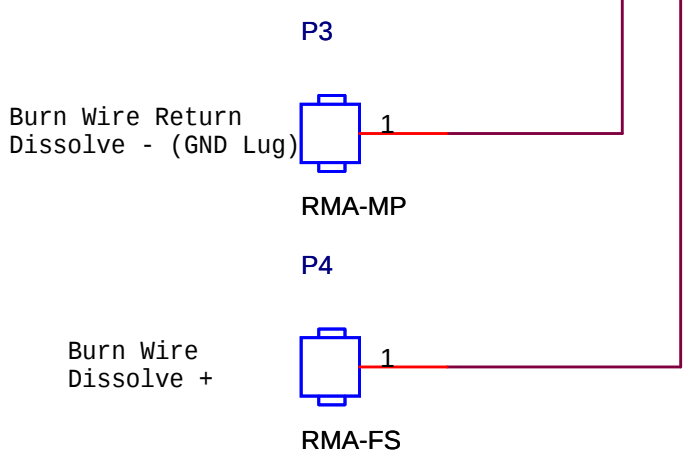
Monterey Bay Aquarium Research Institute
7700 Sandhold Road, Moss Landing, CA 95039

Title Platform Interface		Project ESP
------------------------------------	--	-----------------------

Engineer Stensen	Size A	Document Number <Doc>	Part Number CAB8	Project File DWSM4km	Rev 0.0
Designer <Designer>	Date: Tuesday, July 21, 2009	Sheet 1	of 1		



Ball MM connector	Function	Direction
1	TX	Out
2	RX	In
3	RTS	Out
4	CTS	In
5	DSR	In
6	Gnd	Gnd
7	CD	In
8	DTR	Out
9	-	-
10	DE	In
11	Reserved	--
12	Burn Src	--
13	Burn Sns	--
14	Burn Rtn	--
15	Sys Pwr	Out
16	Sys Gnd	Gnd

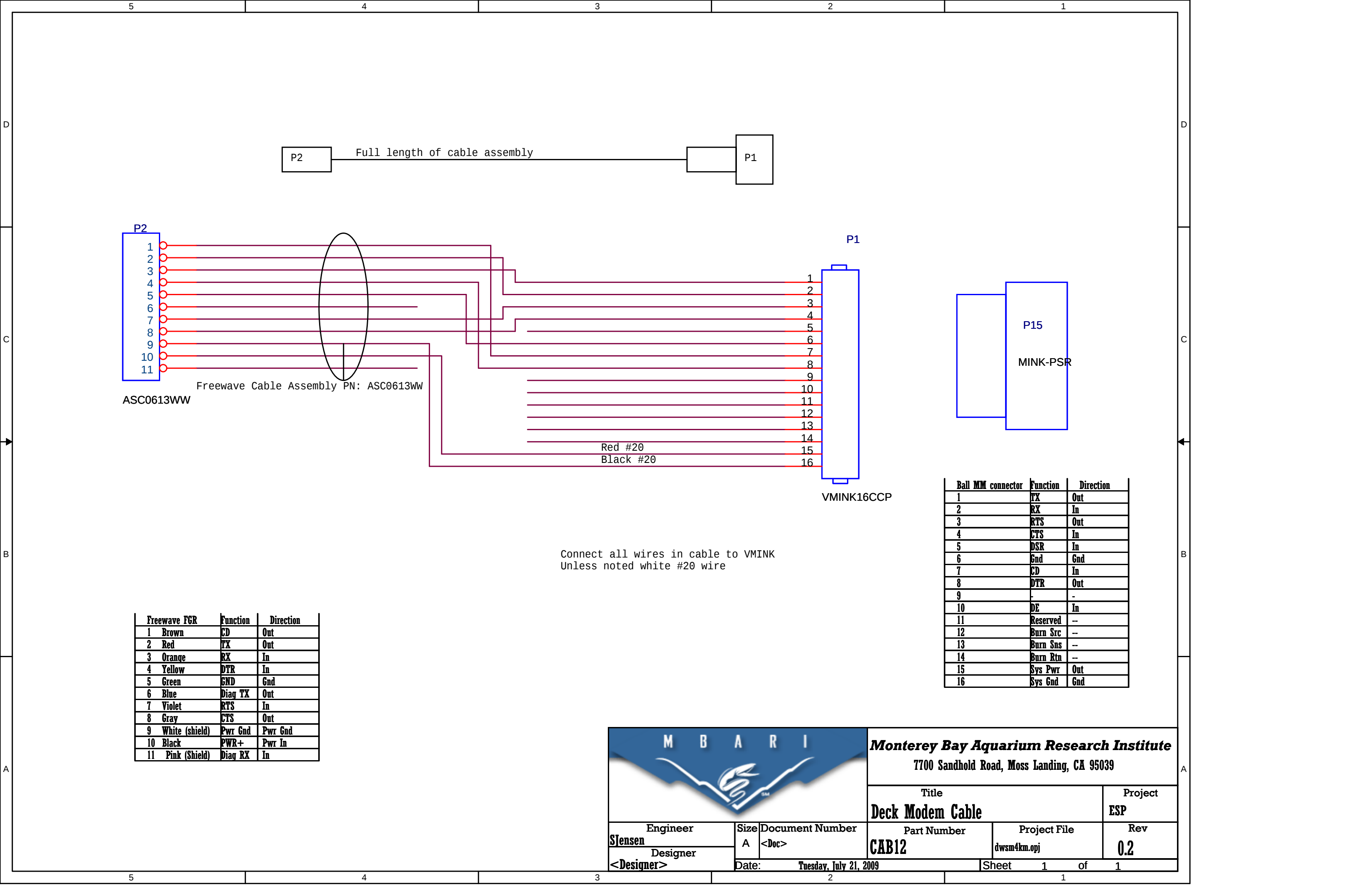


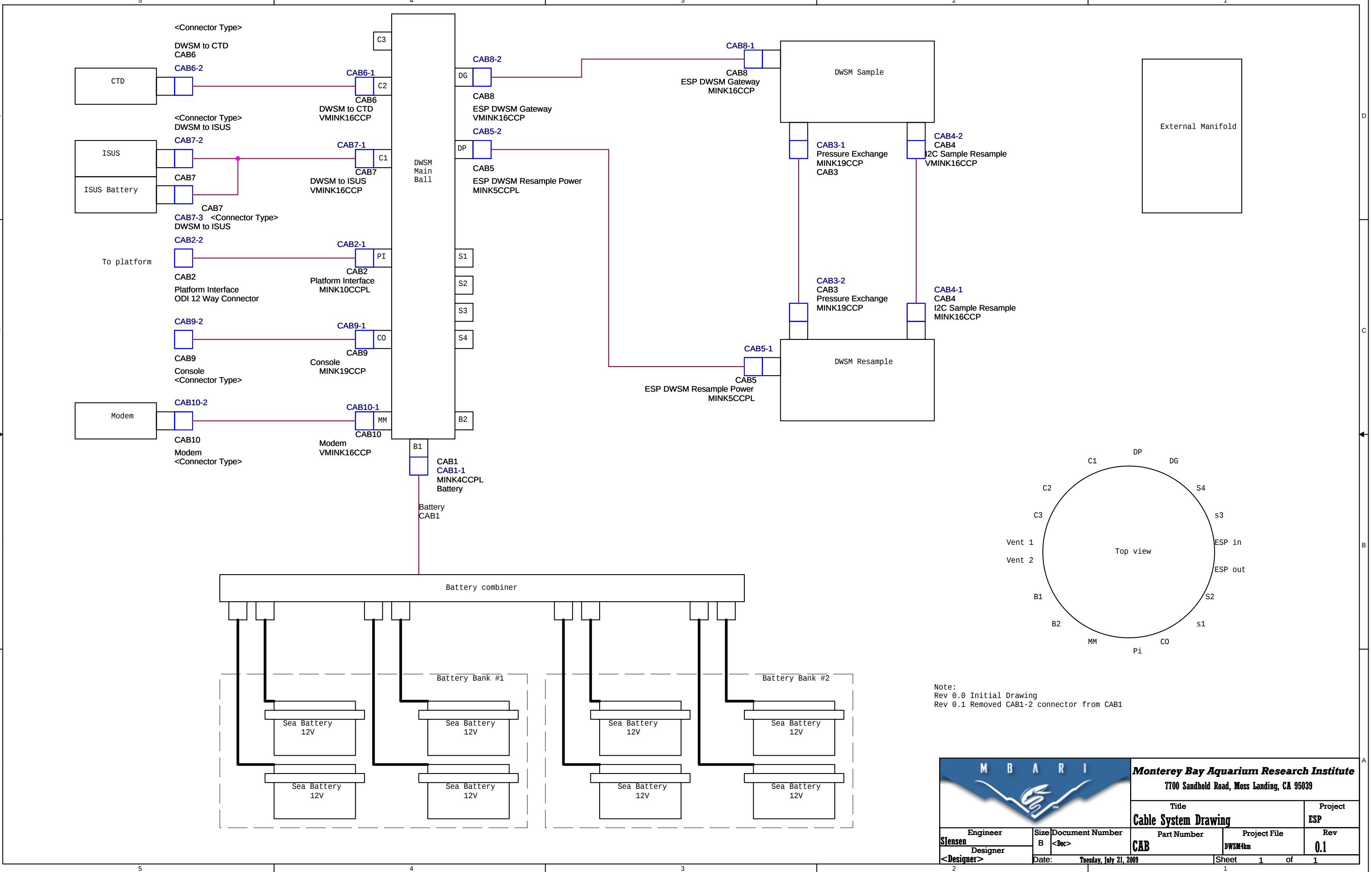
ATM-887 Modem	Function	Direction
1	Power	To Modem
2	Dissolve+	From Modem
3	GND	Gnd
4	Dissolve-	From Modem
5	DE	Modem to Host
6	RTS	Modem to Host
7	TX(-) (422)	Modem to Host
8	RXD	Host to Modem
9	TXD	Modem to host



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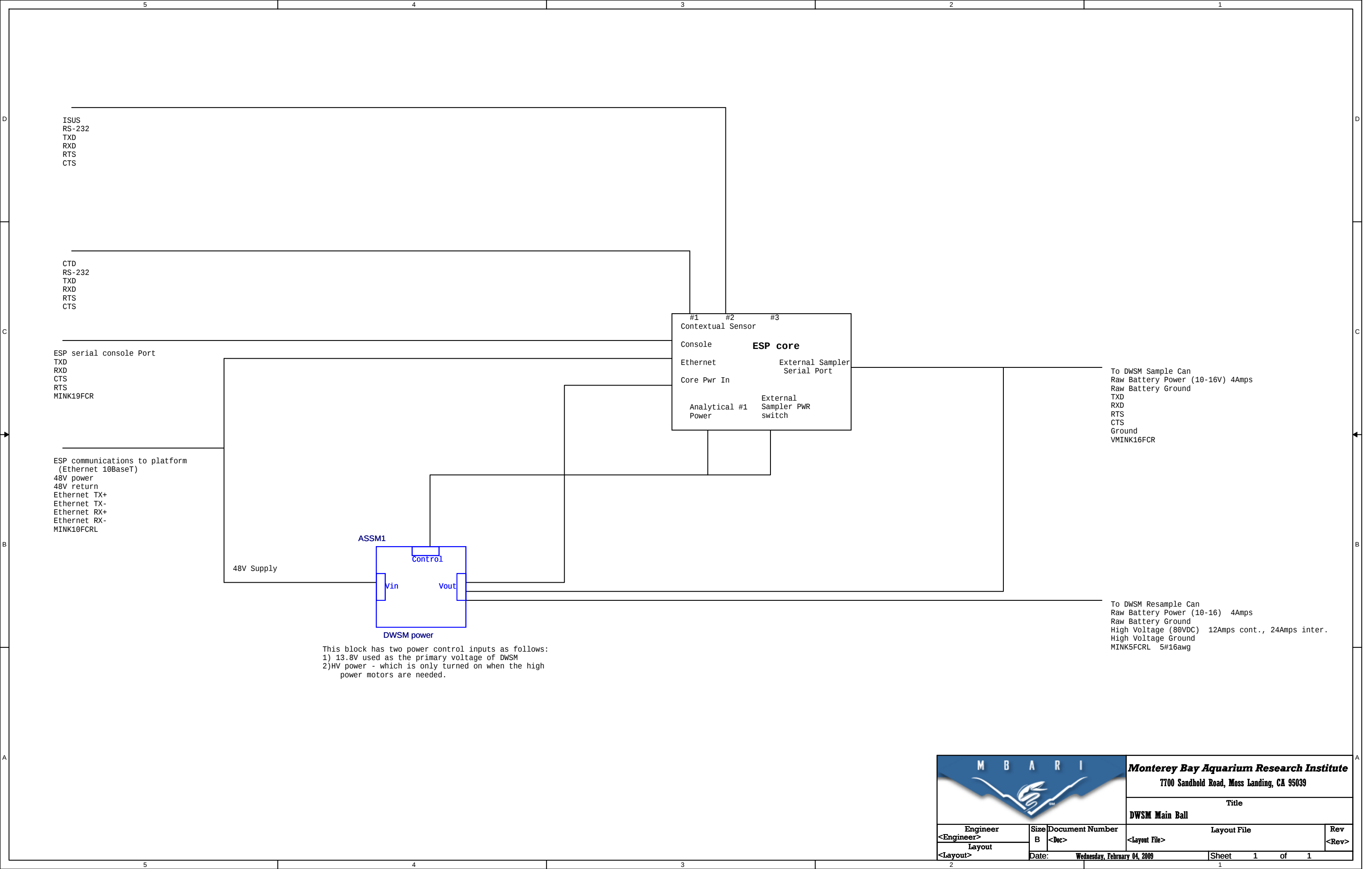
Title Modem Cable		Project ESP
Engineer Stensen	Size A	Document Number <Doc>
Designer <Designer>		Part Number CAB10
Date: Tuesday, July 21, 2009		Project File dwsn4km.opj
Sheet 1		Rev 0.3
of 1		of 1





Note:
Rev 0.0 Initial Drawing
Rev 0.1 Removed CAB1-2 connector from CAB1

	Monterey Bay Aquarium Research Institute 7700 Sandhold Road, Moss Landing, CA 95039		
	Title Cable System Drawing		Project ESP
Engineer SJensen	Size B	Document Number <Doc>	Part Number CAB
Designer <Designer>	Date: Tuesday, July 21, 2009	Project File DWSM4km	Rev 0.1
		Sheet 1	of 1

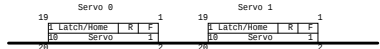


I2C bus - to Waste Can
System +3.3 1Amp
System +5 1Amp
System Ground
SCL
System Ground
SDA
System Ground
WINK16FCR

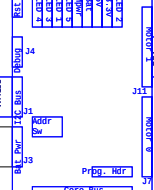
DWSM Gateway to Main Ball
Raw Battery Power (18-16V) 4Amps
TXD
RXD
RTS
CTS
Ground
WINK16FCR

External Devices
Sample Wand Pump power
Sample Wand Pump gnd
Valve #1 +
Valve #1 -
Valve #2 +
Valve #2 -
Valve #3 +
Valve #3 -
Valve #4 +
Valve #4 -
Wand Cap +
Wand Cap -
AUX2/12

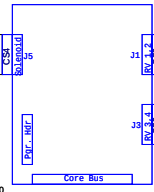
Pressure signals - To and From Waste Can
Raw to Resample Can
System Ground
Raw From Resample Can
System Ground
Signals to Resample Dwarf:
SES
SES
SES
Signals from Resample Dwarf:
RES
RES
RES
Ground - caution for ground loop
WINK16FCR



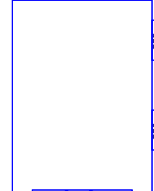
ASSM1



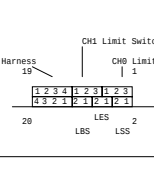
ASSM2



ASSM3



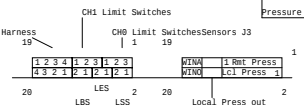
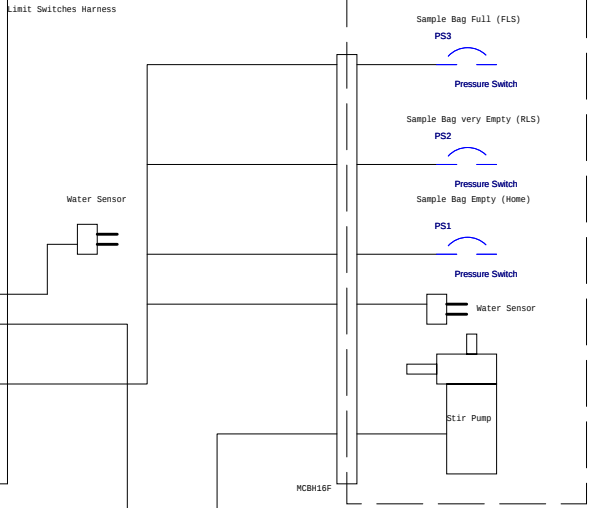
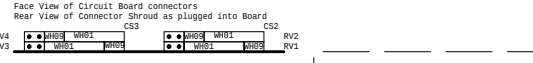
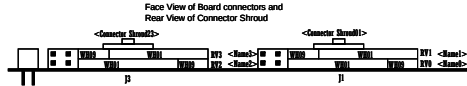
ASSM4

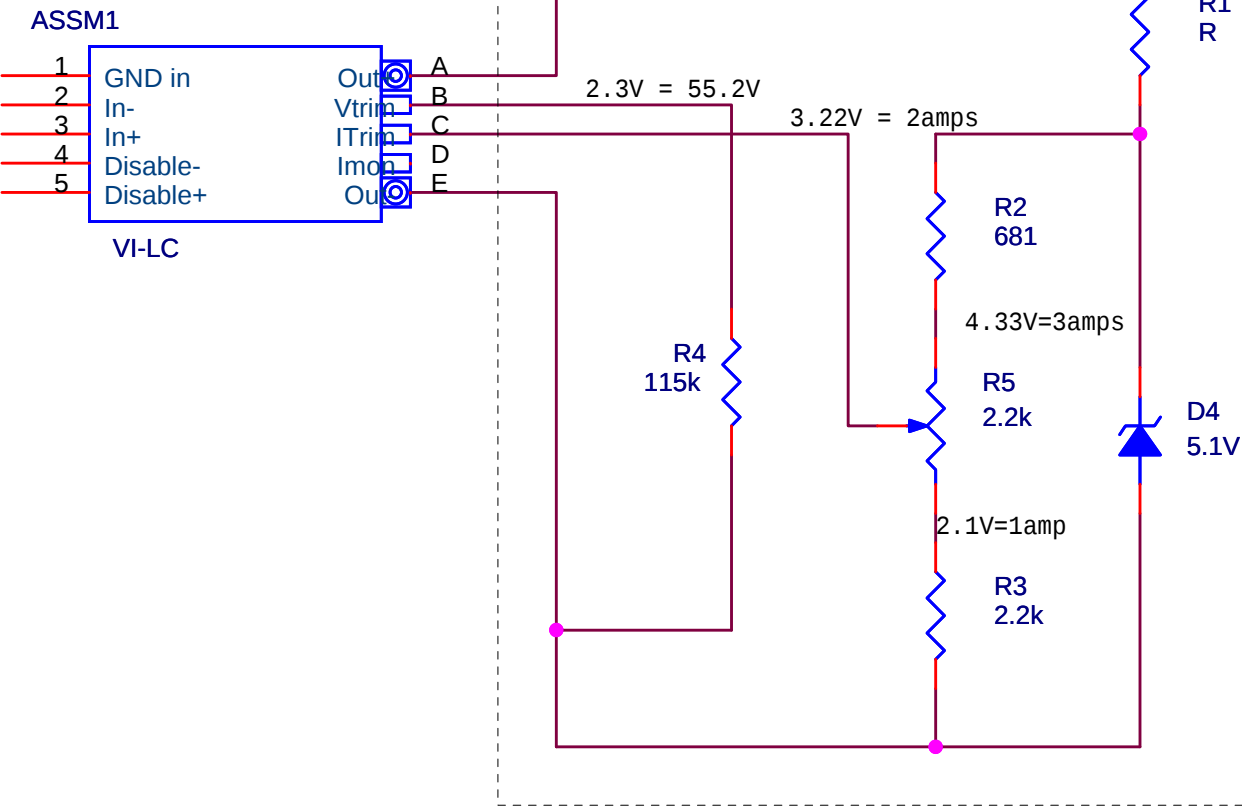


ASSM5



ASSM6



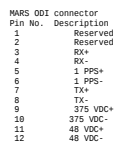


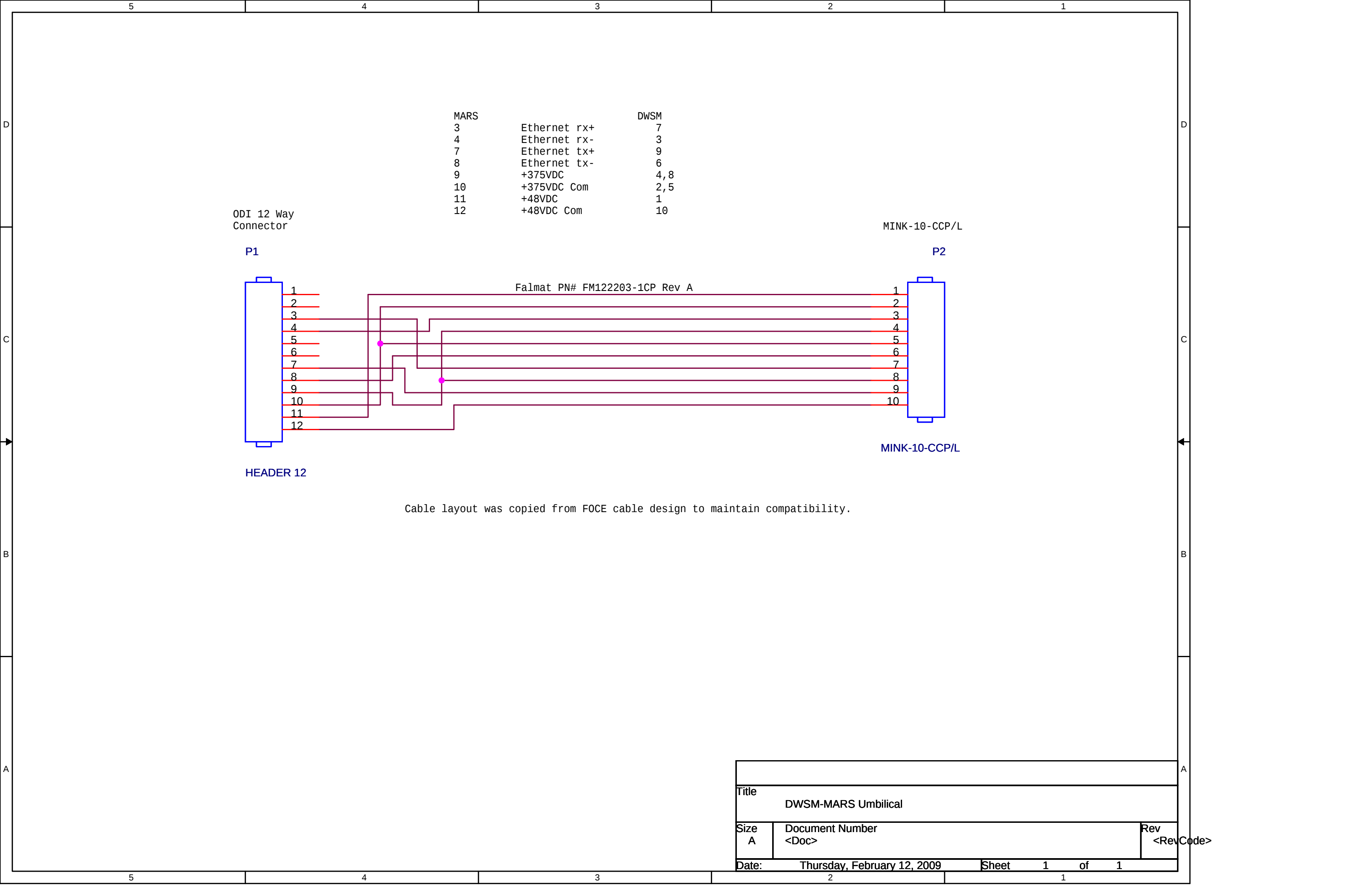
Monterey Bay Aquarium Research Institute
7700 Sandhold Road, Moss Landing, CA 95039

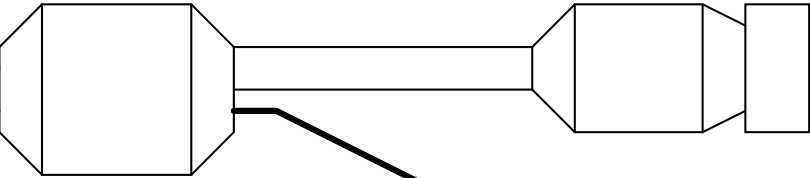
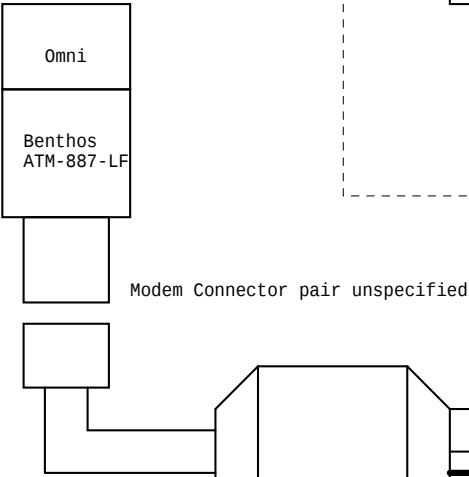
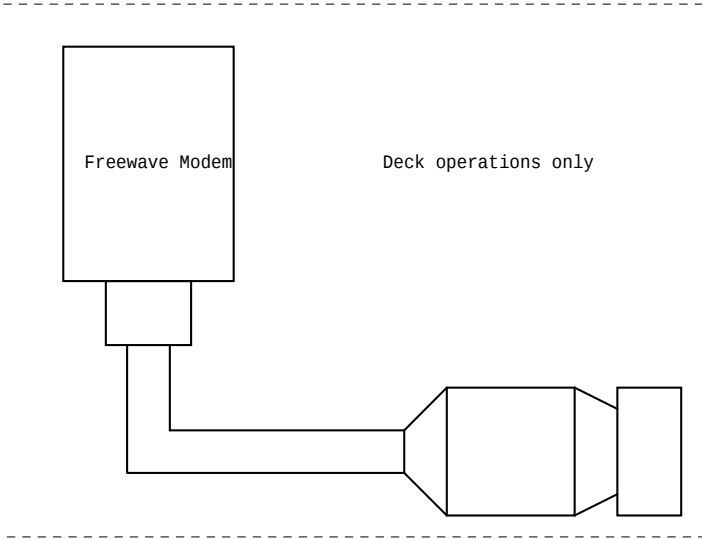
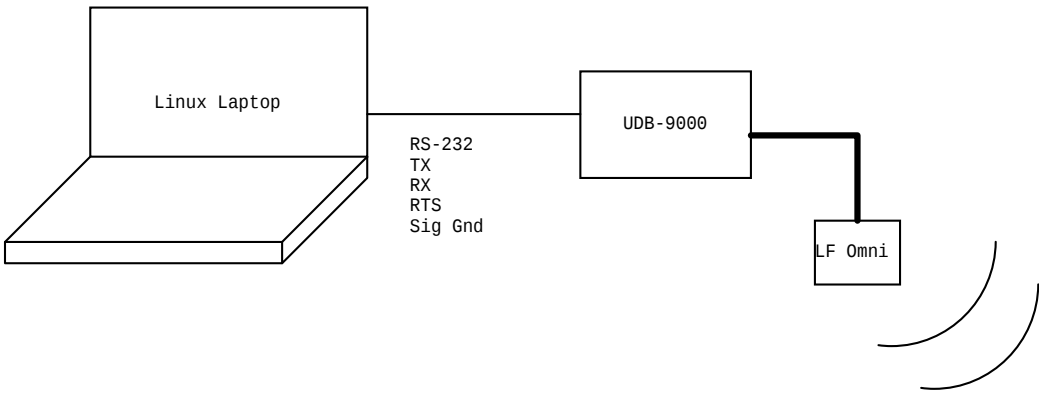
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DWSM Power BatMod circuit

Project
ESP

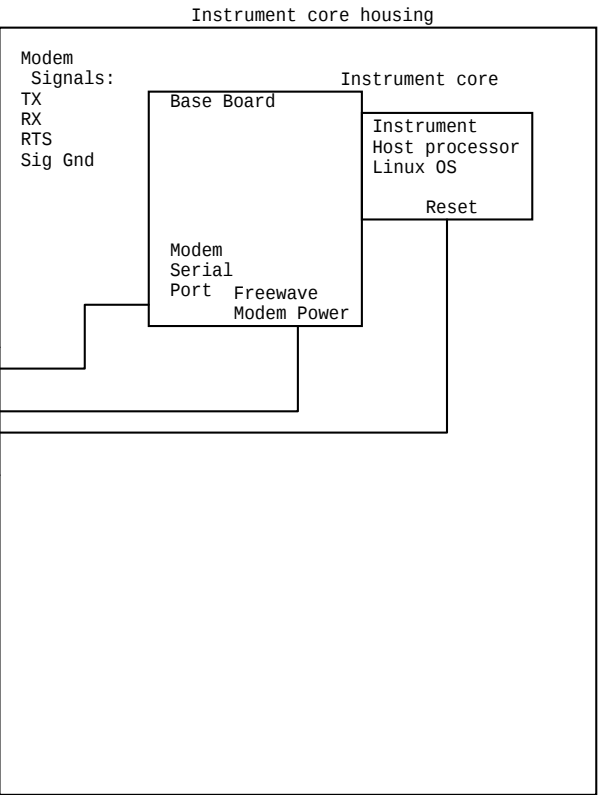
Engineer Slensen	Size A	Document Number <Doc>	Part Number <Part Number>	Project File DWSM4km	Rev 0.0
Designer <Designer>	Date: Wednesday, February 04, 2009				
Sheet 1 of 1					







Seacon
VMINK16



Impulse RMA connectors

Burn wire

Burn Return

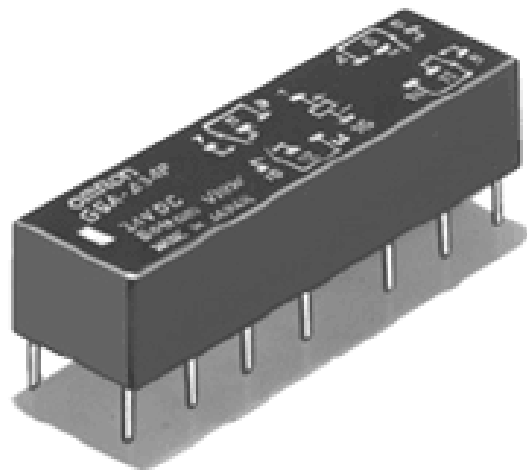
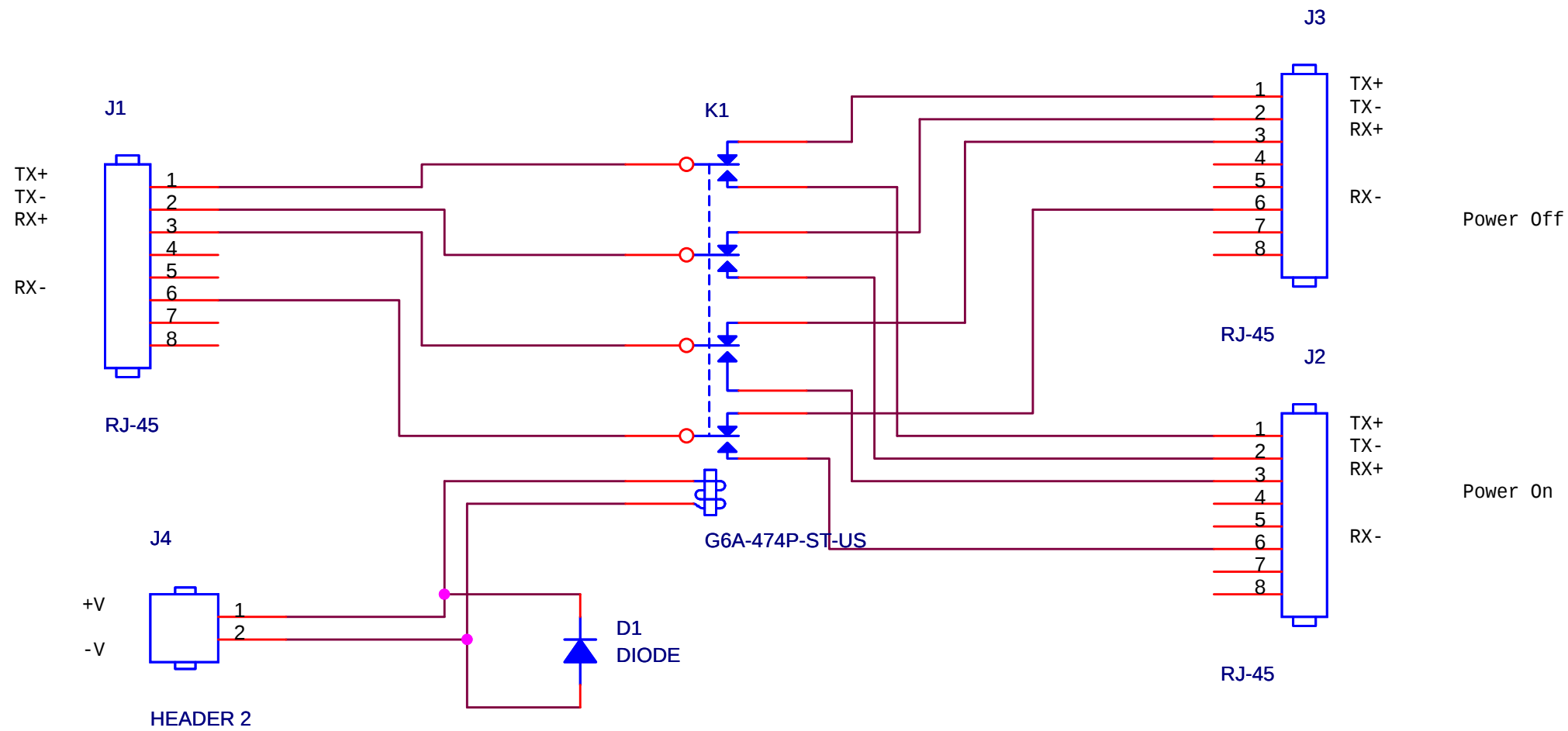
Notes:
REV 1: Burn wire monitoring and handshacking removed



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Title: **ESP Benthos Modem System** Project: **ESP**

Engineer SJensen	Size B	Document Number <Doc>	Part Number -	Project File dwsm4km.opj	Rev 1.0
Designer	Date: Monday, May 18, 2009	Sheet 1 of 1			



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Title
Ethernet Disconnect

Project
<Project>

Engineer
<Engineer>
Designer
<Designer>

Size
A

Document Number
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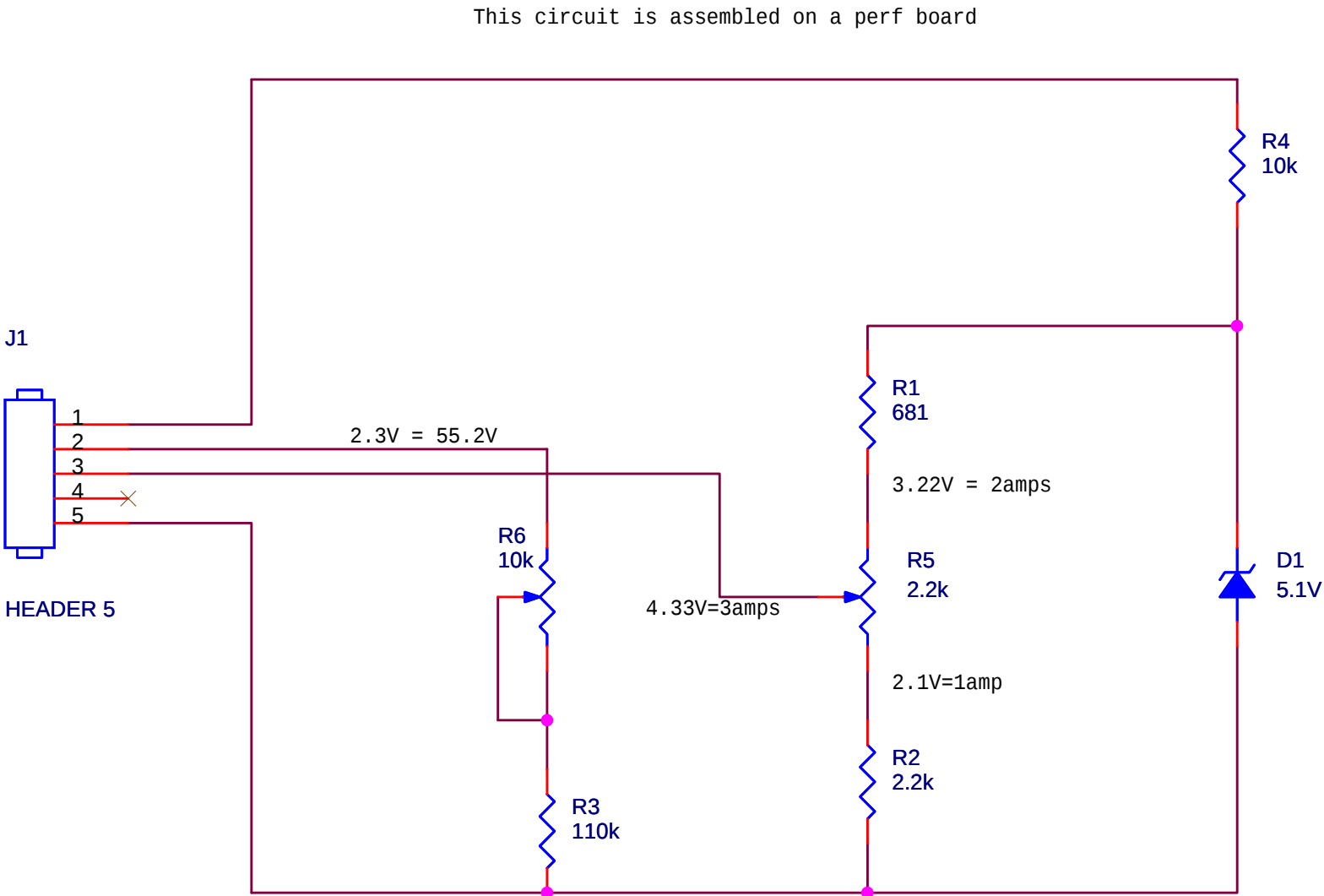
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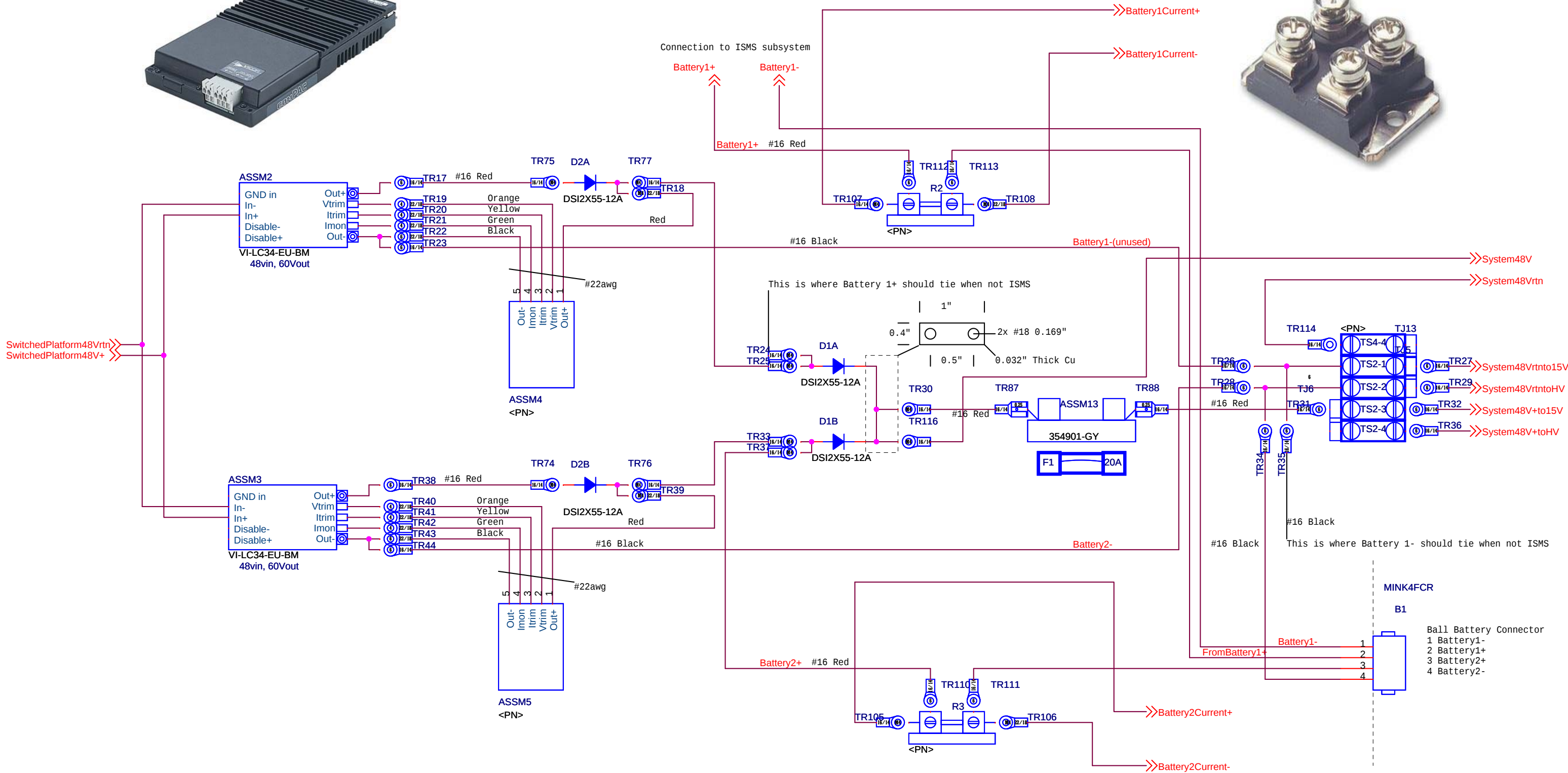
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Date: Wednesday, February 04, 2009

Sheet 1 of 1

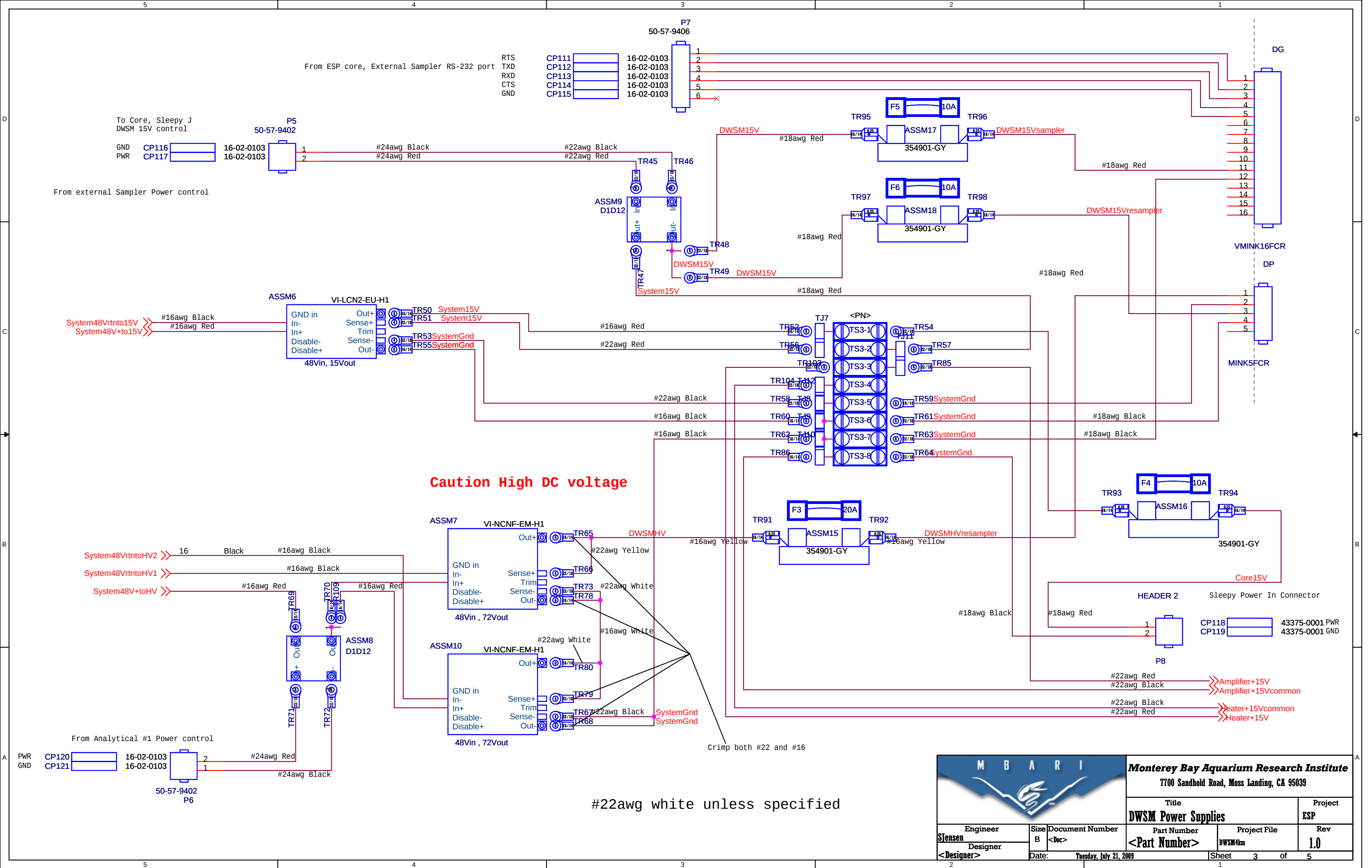


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Title DWSM Charge Controller				Project ESP	
Engineer Slensen	Size A	Document Number <Doc>	Part Number <Part Number>	Project File <Project File>	Rev 0.0
Designer <Designer>	Date: Wednesday, February 04, 2009			Sheet 1 of 1	



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Title		Project		
DWSm Power Chargers		ESP		
Engineer	Size	Document Number	Part Number	Project File
SJensen	B	<Doc>	<Part Number>	DWSM4km
Designer	Date:	Thursday, May 13, 2010	Sheet	2 of 5
<Designer>				





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Title		Project	
DWSM Power Supplies		ESP	
Engineer	Size	Document Number	Part Number
SJensen	B	<Doc>	<Part Number>
Designer	Project File		Rev
<Designer>	DWSM4km		1.0
Date:	Tuesday, July 21, 2009		Sheet 3 of 5

