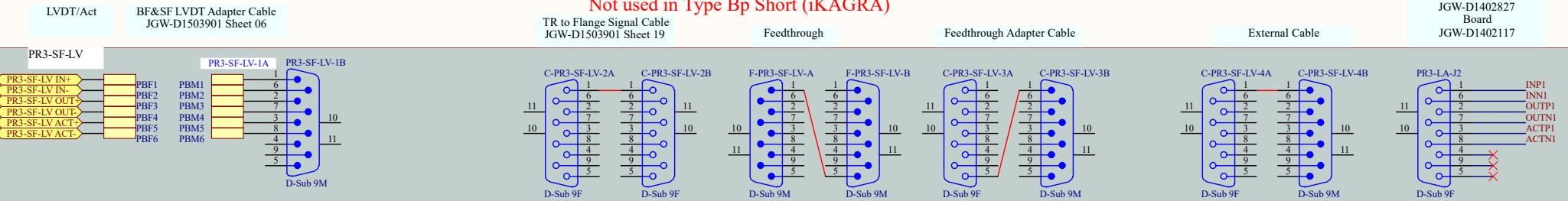
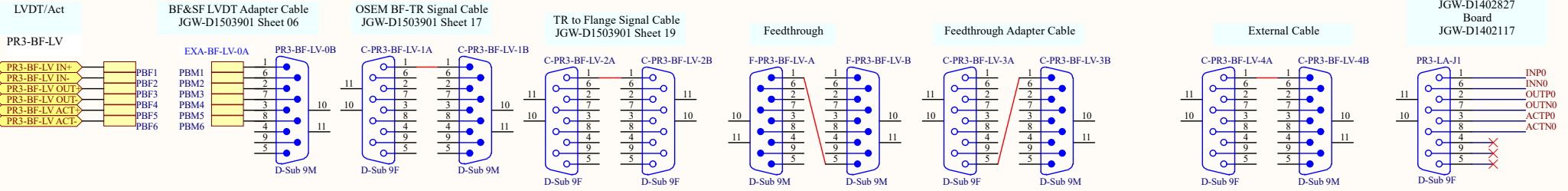


BF and SF LVDT/ACTs

2 Feedthroughs (1 in Type Bp Short, iKAGRA)



Not used in Type Bp Short (iKAGRA)

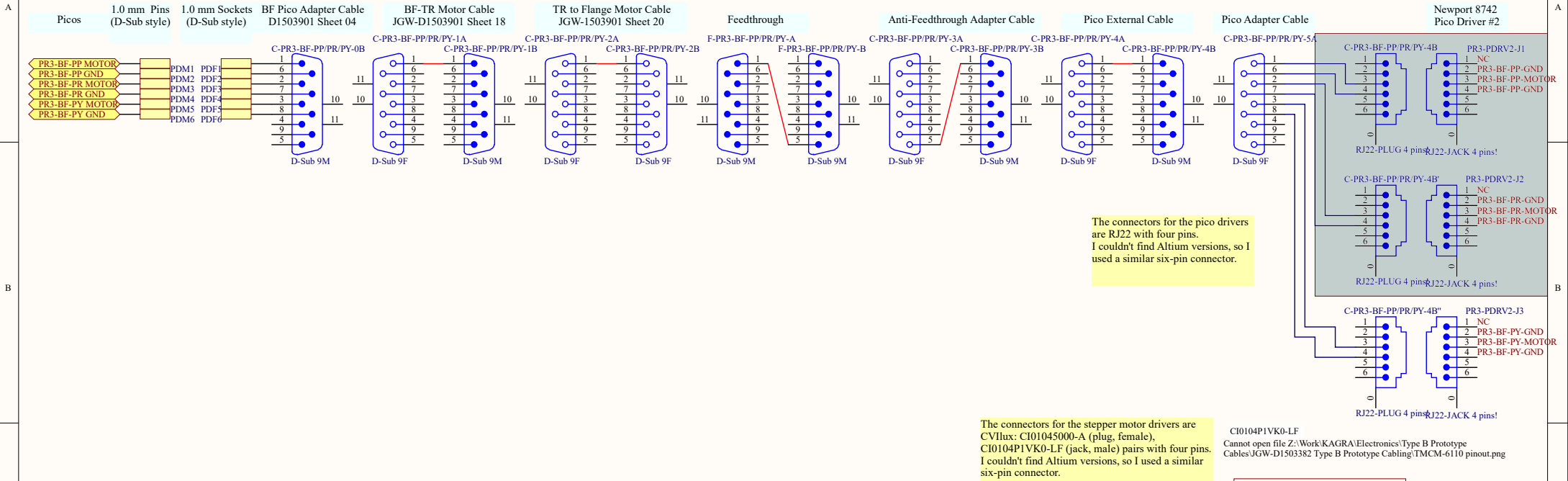
J-PR3-LA-6 and J-PR3-LA-7 not used

Title			
PR3 Suspension Cabling - Bottom and Standard Filter LVDTs			
Size	Number	Revision	
A3	JGW-D1503615	-v1	
Date:	2016/02/12	Sheet 5 of 10	
File:	\\.\BF&SF LVDTs.SchDoc	Drawn By:	

BF and SF Picomotors and Steppers

3 Feedthroughs (2 for Type Bp Short, iKAGRA)

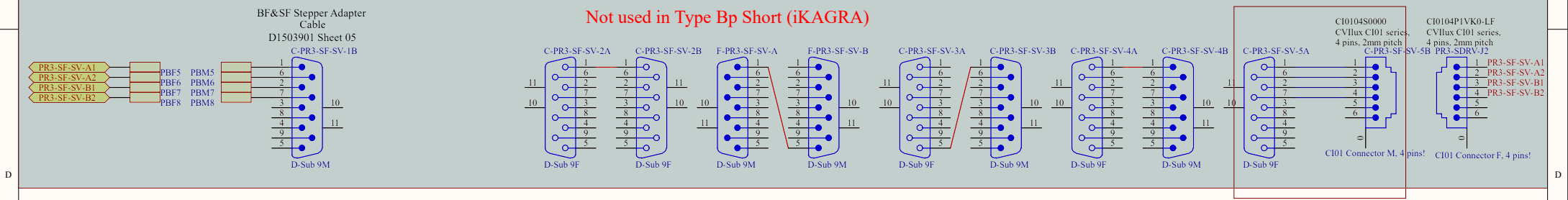
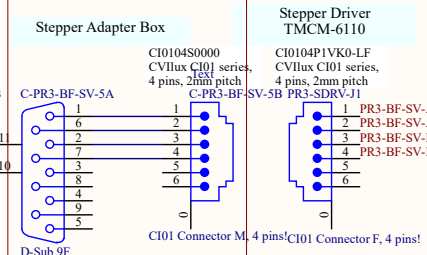
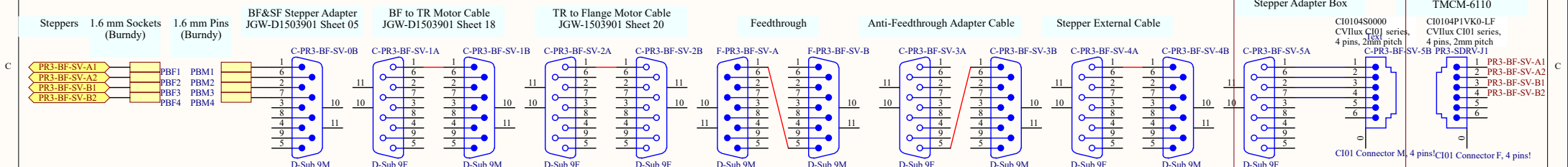
Cannot Black Z:\Work\Red Electronics\Type B
 Prototype Red GW-D1503382 Type
 B Proto Green ig\Newport 8742 Pico
 Driver Yellow



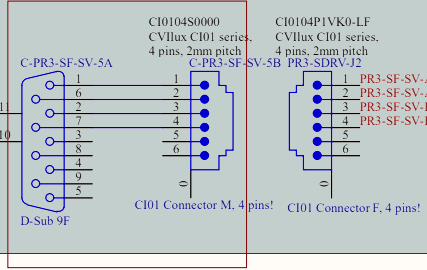
The connectors for the pico drivers are RJ22 with four pins. I couldn't find Altium versions, so I used a similar six-pin connector.

The connectors for the stepper motor drivers are CVIlux: C101045000-A (plug, female), C10104P1VK0-LF (jack, male) pairs with four pins. I couldn't find Altium versions, so I used a similar six-pin connector.

C10104P1VK0-LF
 Cannot open file Z:\Work\KAGRA\Electronics\Type B Prototype Cables\JGW-D1503382 Type B Prototype Cabling\TMCM-6110 pinout.png



Not used in Type Bp Short (iKAGRA)



Title PR3 Suspension Cabling - Bottom and Standard Filter Picos/Steppers		
Size A3	Number JGW-D1503615	Revision -v1
Date 2016/02/12	Sheet 4 of 10	
File \\.\BF&SF Picos&Steppers.SchDoc	Drawn By:	

6 Feedthroughs

IM OSEMs

Sat Amp #2, JGW-D1503498,
Rear Panel 1, JGW-D1503500,
Board, JGW-D1503499

OSEM

IM OSEM to BF Cable
JGW-D1503901 Sheet 02

OSEM BF-TR Signal Cable
JGW-D1503901 Sheet 17

TR to Flange Signal Cable
JGW-D1503901 Sheet 19

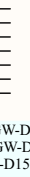
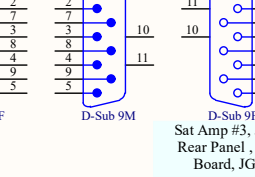
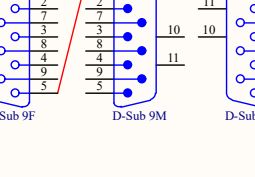
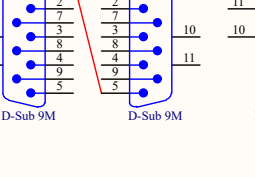
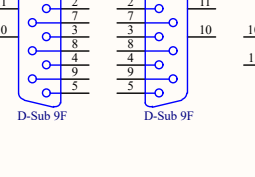
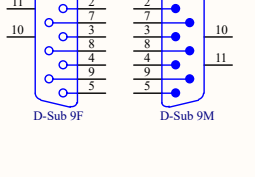
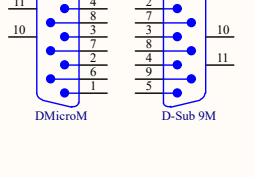
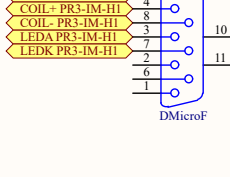
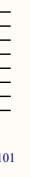
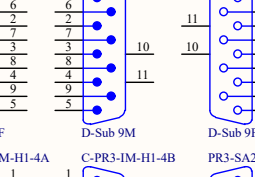
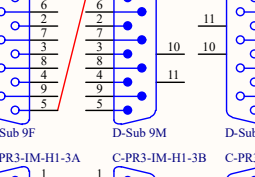
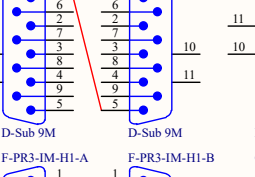
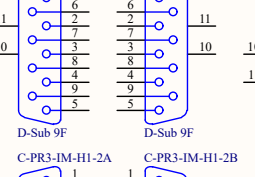
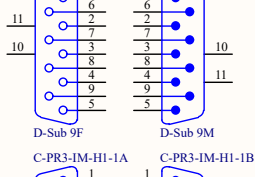
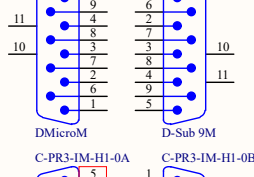
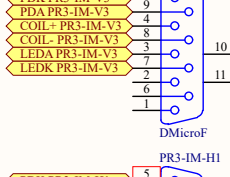
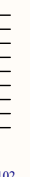
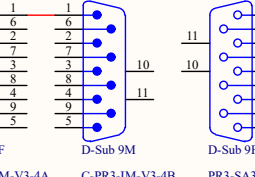
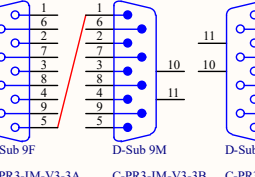
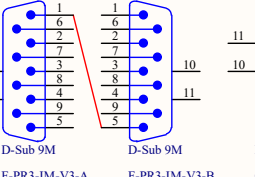
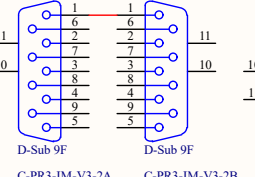
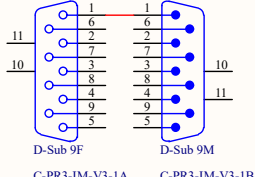
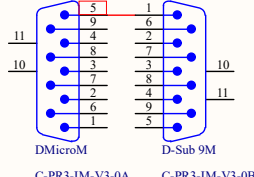
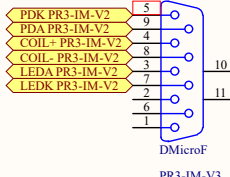
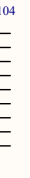
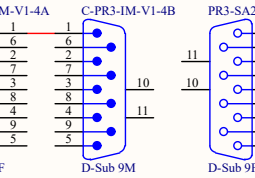
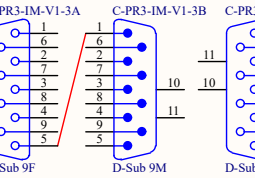
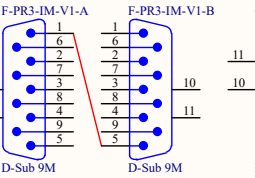
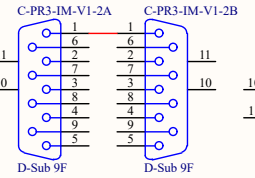
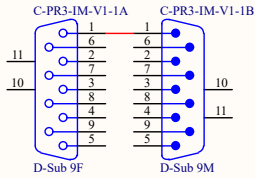
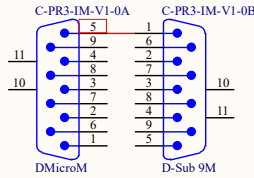
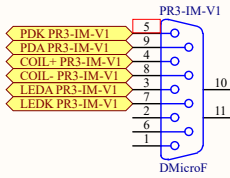
Feedthrough

Anti-Feedthrough Adapter Cable

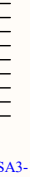
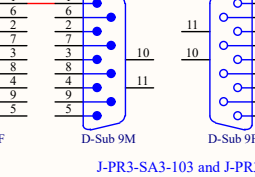
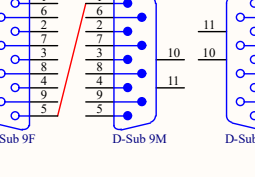
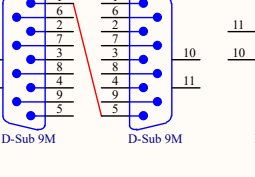
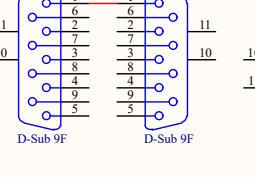
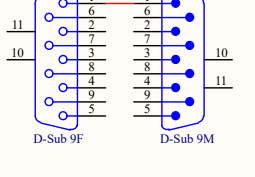
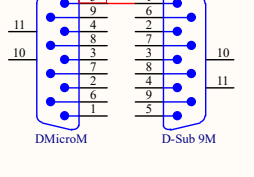
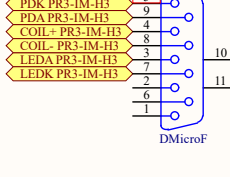
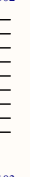
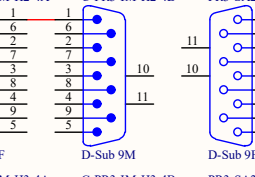
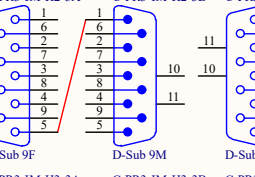
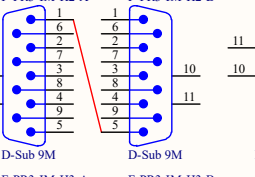
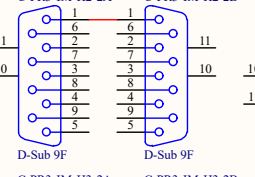
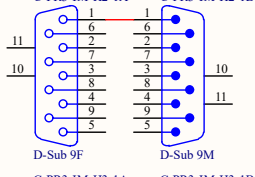
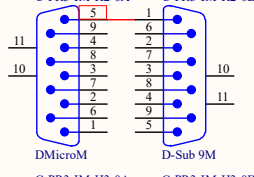
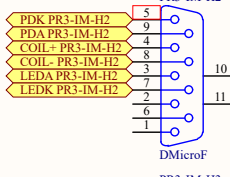
OSEM External Cable

Glenair GMR7590-9P-1BPN

Glenair MWDMD2L-9SS



Sat Amp #3, JGW-D1503498,
Rear Panel 1, JGW-D1503500,
Board, JGW-D1503499

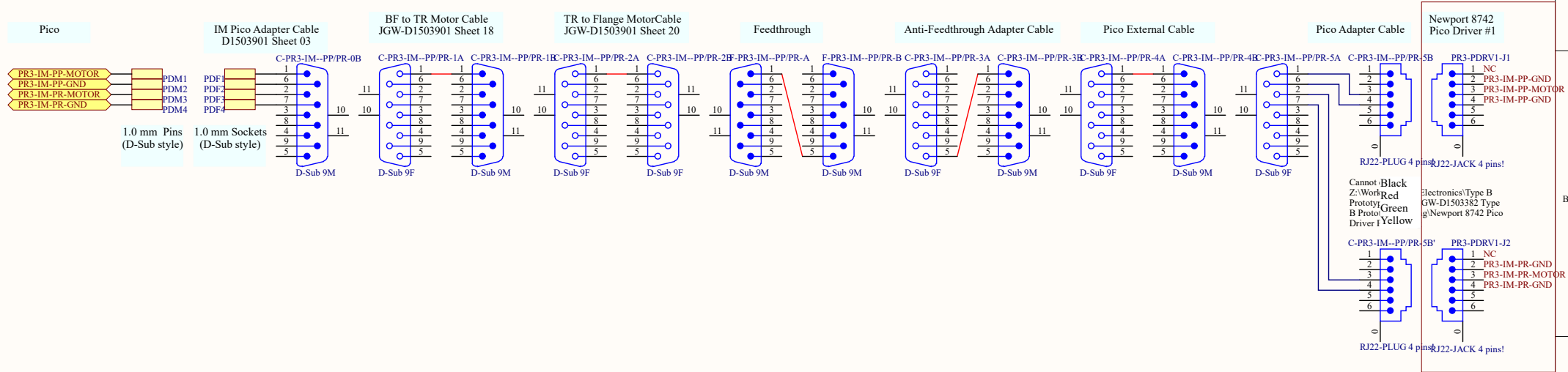


J-PR3-SA3-103 and J-PR3-SA3-104 not used

Title PR3 Suspension Cabling - Intermediate Mass OSEMs			
Size A3	Number JGW-D1503615	Revision -v1	
Date 2016/02/12	Sheet 2of 10		Drawn By:
File: \\JM OSEMs.SchDoc			

1 Feedthrough

IM Picomotors



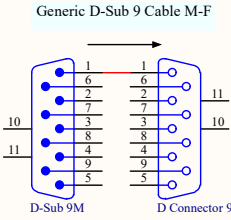
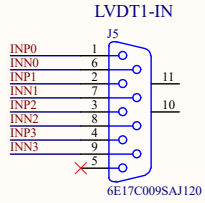
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Size A3	Number JGW-D1503615	Revision -v1
Date: 2016/02/12	Sheet 3 of 10	Drawn By:
File: \\.\IM Picos.SchDoc		

LVDT Drivers

Inputs from LVDTs (see Sheet 5)

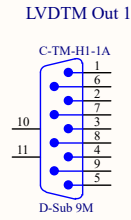
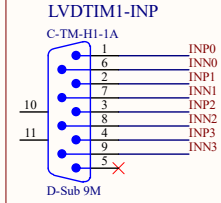
LVDT/ACT Distributor
JGW-D1402124,
Rear Panel
JGW-D1402828,
Board
JGW-D1402117

LVDT/ACT Distributor
JGW-D1402124,
Rear Panel
JGW-D1402828,
Board
JGW-D1402117

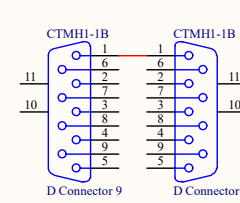


LVDT Driver
JGW-D1402826,
Front Panel
JGW-D1402827
Input Board
JGW-D1301467

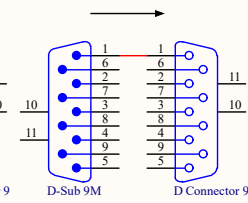
LVDT Driver
JGW-D1402826,
Front Panel
JGW-D1402827
Main Board
JGW-D1301467



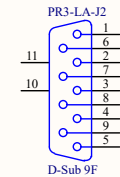
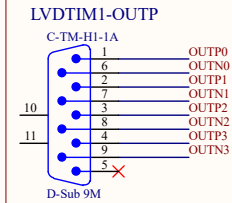
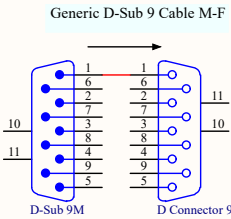
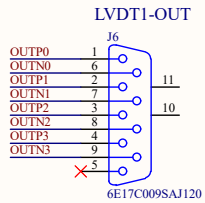
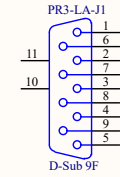
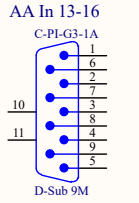
Gender Bender F-F



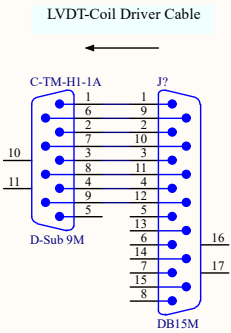
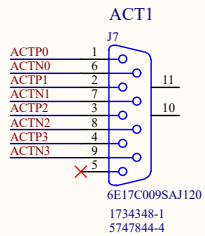
Generic D-Sub 9 Cable M-F



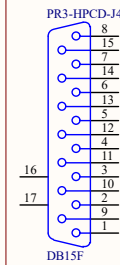
AA Chassis
JGW-D1100621



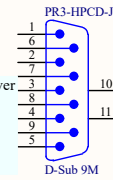
2 inputs unused



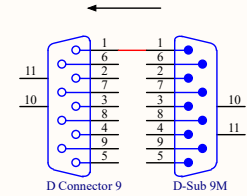
High Power Coil Driver
JGW-D1503504,
Rear Panel,
JGW-D1503505,
Board
JGW-D1503503



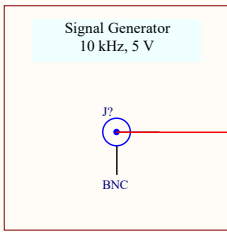
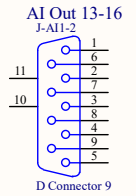
High Power Coil Driver
JGW-D1503504,
Front Panel,
JGW-D1503502,
Board
JGW-D1503503



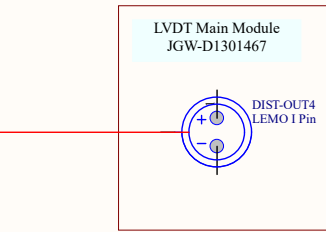
Generic D-Sub 9 Cable M-F



AI Chassis
D1101521



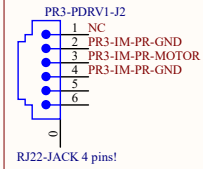
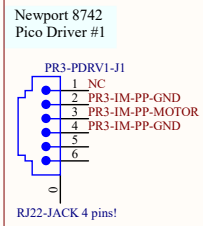
Cable



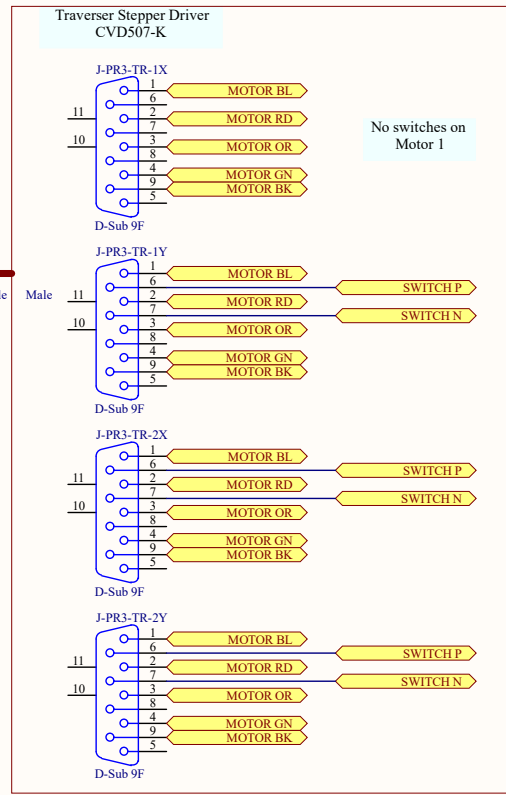
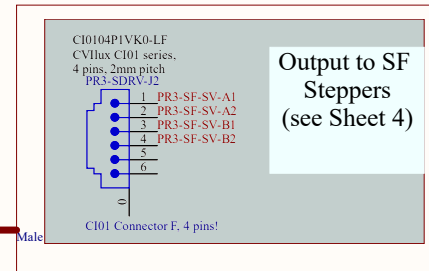
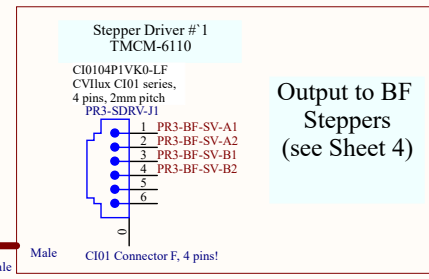
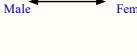
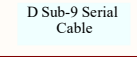
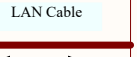
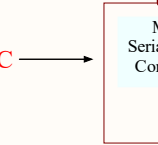
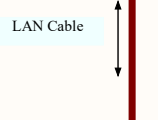
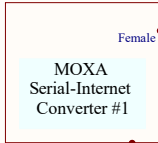
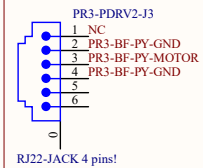
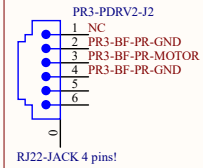
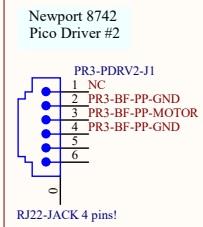
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Size A3	Number JGW-D1503615	Revision -v1
Date: 2016/02/12	Sheet 9 of 10	
File: \\.\LVDT Drive.SchDoc	Drawn By:	

Pico, Stepper and Traverser Drivers

Outputs to IM Picos (see Sheet 3)



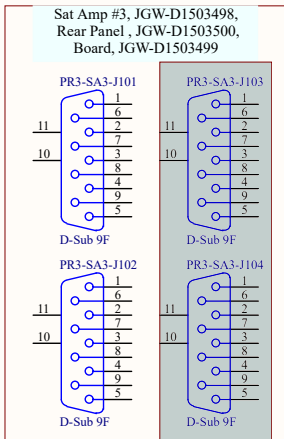
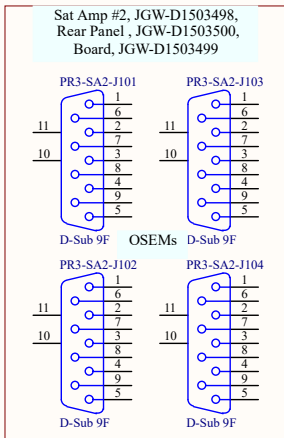
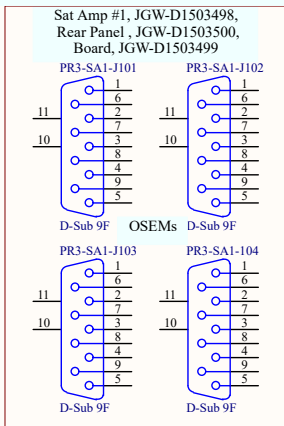
Outputs to BF Picos (see Sheet 4)



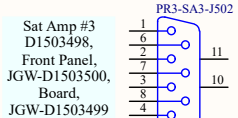
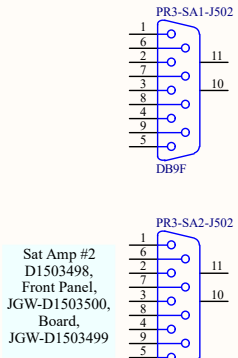
Title PR3 Suspension Cabling - Pico , Stepper and Traverser Drivers		
Size A3	Number JGW-D1503615	Revision -v1
Date: 2016/02/12	Sheet of 10	Drawn By: 10
File: \\.\Pico&Stepper Drive.SchDoc		

OSEM Sat Amps and Drivers

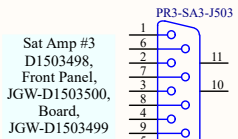
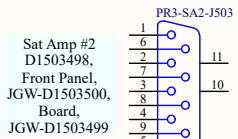
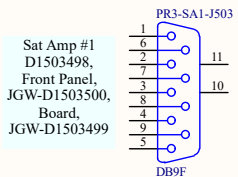
Sat Amp Inputs from OSEMs (see Sheets 1&2)



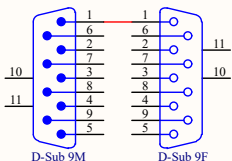
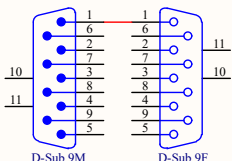
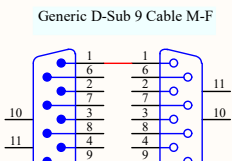
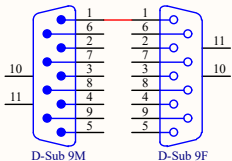
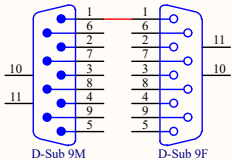
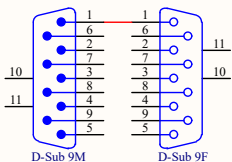
Sat Amp PD Outputs



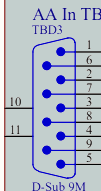
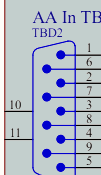
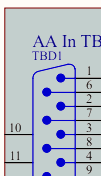
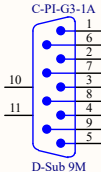
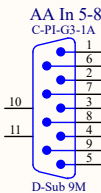
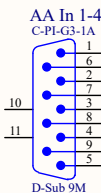
Sat Amp LED Current Monitor Outputs



Generic D-Sub 9 Cable M-F



AA Chassis D1100621



Sat Amp #1
JGW-D1503498,
Front,
JGW-D1503500,
Board,
JGW-D1503499

Sat Amp #2
JGW-D1503498,
Front,
JGW-D1503500,
Board,
JGW-D1503499

Sat Amp #3
JGW-D1503498,
Front,
JGW-D1503500,
Board,
JGW-D1503499

Sat Amp Coil Current Inputs

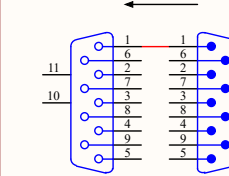
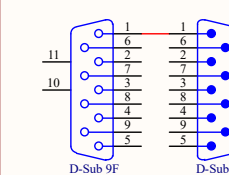
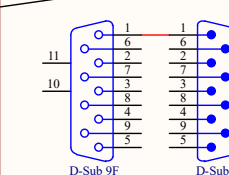
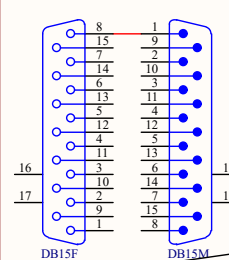
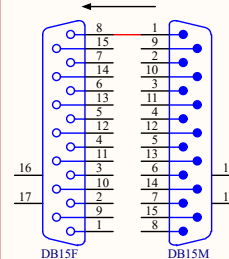
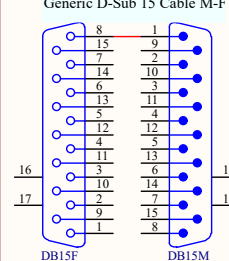
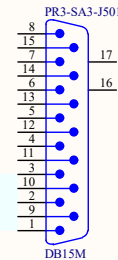
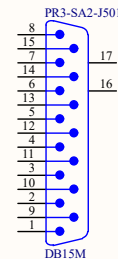
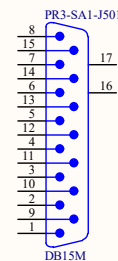
Low Power Coil Driver #1
JGW-D1503506,
Front Panel,
JGW-D1503508,
Board,
JGW-D1503507

Low Power Coil Driver #2
JGW-D1503506,
Front Panel,
JGW-D1503508,
Board,
JGW-D1503507

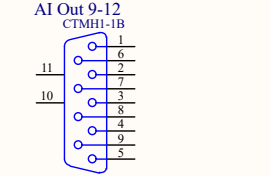
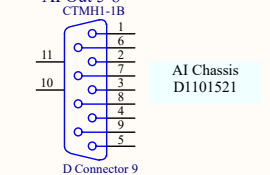
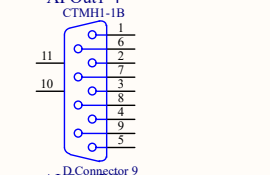
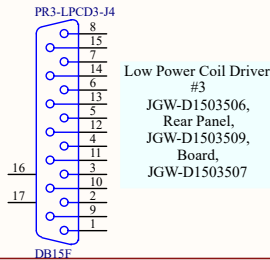
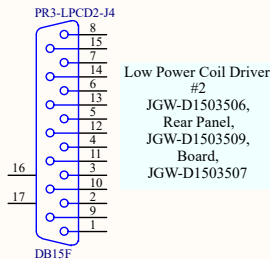
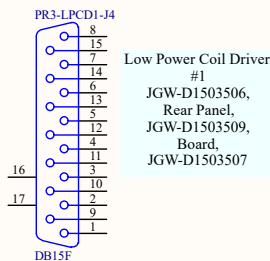
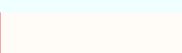
Low Power Coil Driver #3
JGW-D1503506,
Front Panel,
JGW-D1503508,
Board,
JGW-D1503507

Coil Current Request Inputs

Generic D-Sub 15 Cable M-F



Generic D-Sub 9 Cable M-F



Title			
PR3 Suspension Cabling - OSEM Sat Amps & Drivers			
Size	Number	Revision	
A3	JGW-D1503615	-v1	
Date:	2016/02/12	Sheet	8of 10
File:	\\.\Sat Amps & Coil Drivers.SchDoc	Drawn By:	

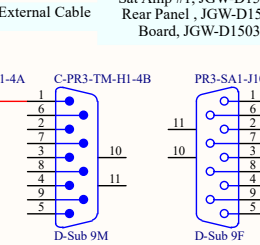
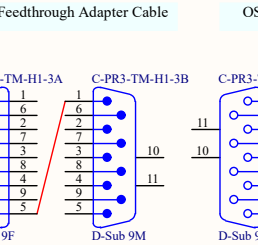
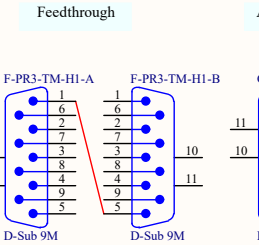
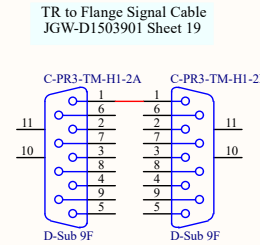
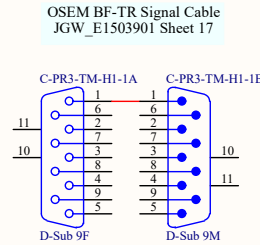
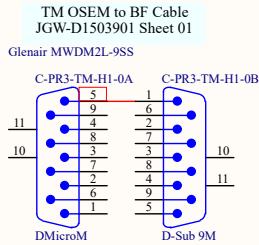
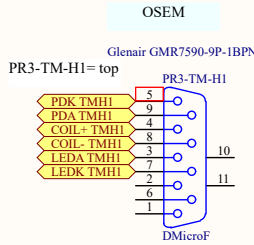
4 Feedthroughs

TM OSEMs

Sat Amp #1, JGW-D1503498,
Rear Panel, JGW-D1503500,
Board, JGW-D1503499

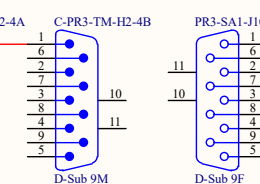
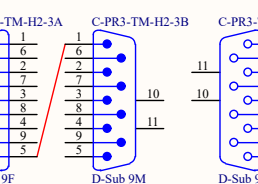
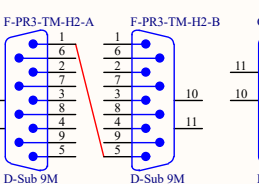
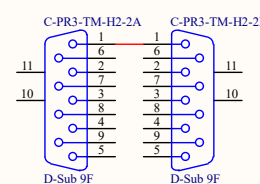
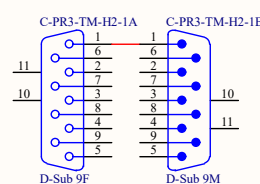
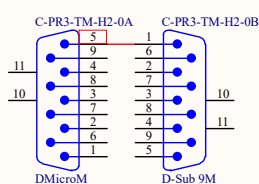
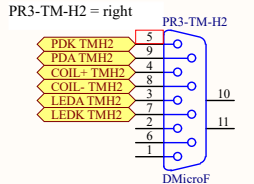
A

A



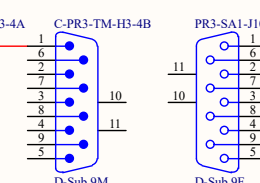
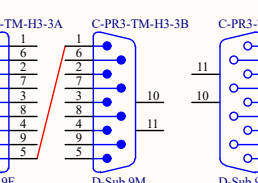
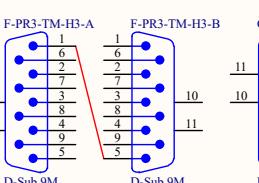
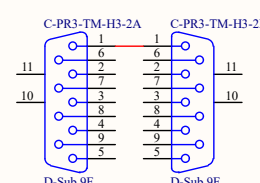
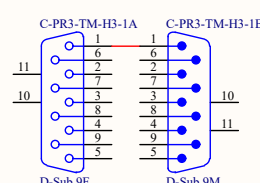
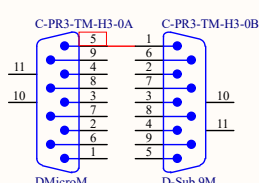
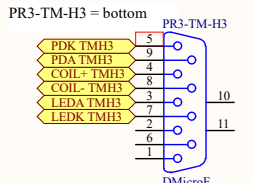
B

B



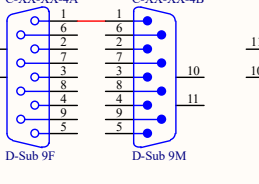
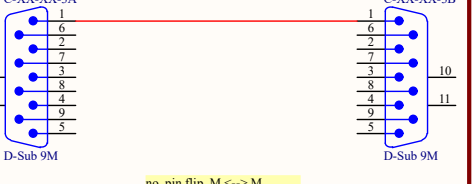
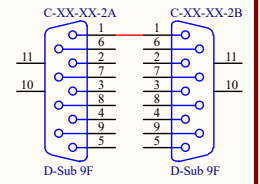
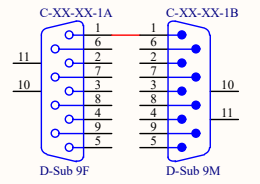
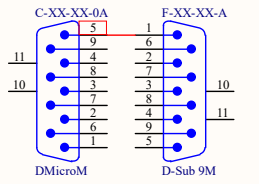
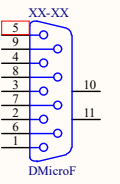
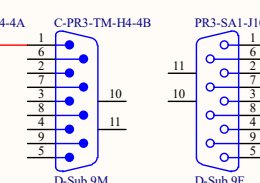
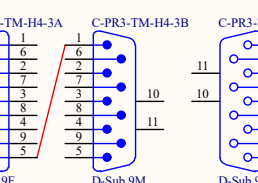
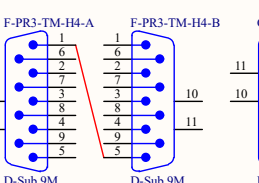
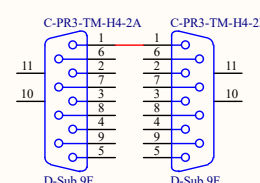
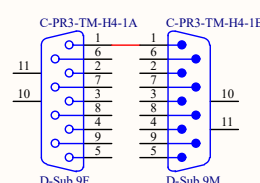
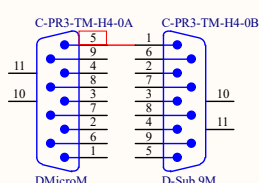
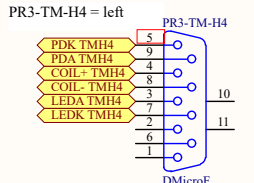
C

C



D

D



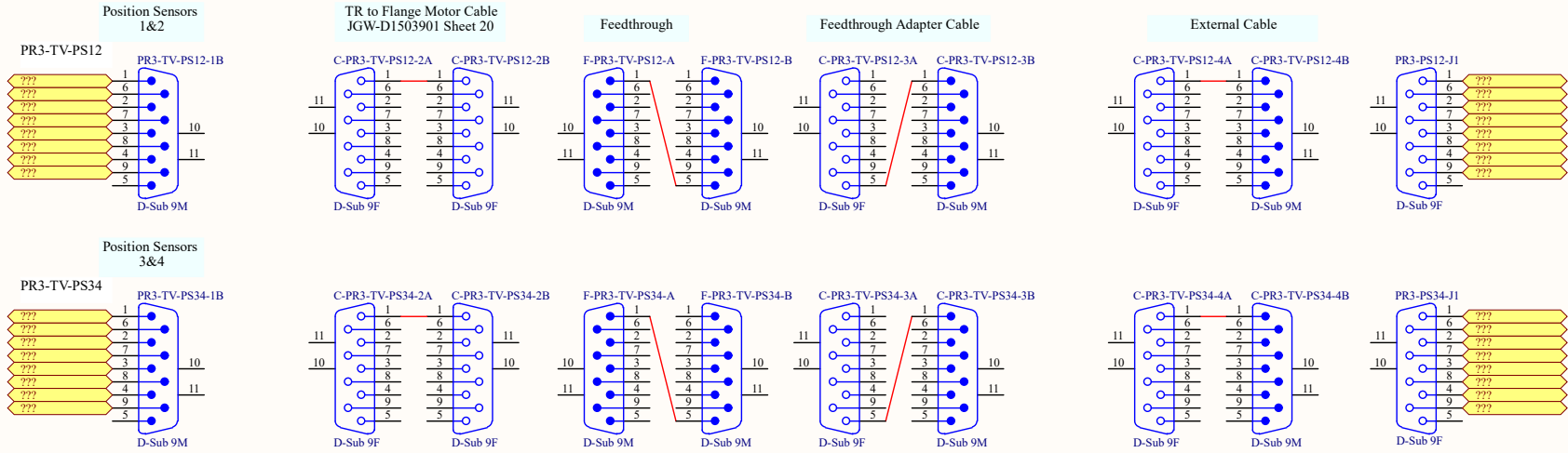
no pin flip, M <=> M,
for use without feedthrough

For testing the suspension outside the vacuum tank,
there should be a supply of plain M-M gender changers
to replace the combination of Feedthrough+Anti-Feedthrough adapter cable.

Title PR3 Suspension Cabling - Test Mass OSEMs		
Size A3	Number JGW-D1503615	Revision -v1
Date: 2016/02/12	Sheet 1 of 10	
File: \\...TM OSEMs.SchDoc	Drawn By:	

Placeholder design!

Assume sensor signals are robust, so we can use motor-type cable



Title		
PR3 Suspension Cabling - Traverser Steppers and Position Sensors		
Size	Number	Revision
A3	JGW-D1503615	-v1
Date:	2016/02/12	Sheet 6 of 10
File:	\\.\TR Position Sensors.SchDoc	Drawn By:

4 Feedthroughs

Traverser Steppers

Limit Switch

Stepper

D-Sub 9 Female

TR to Flange Motor Cable
JGW-D1503901 Sheet 20

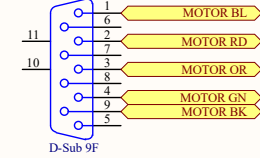
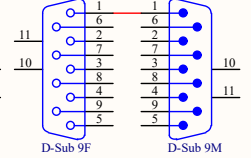
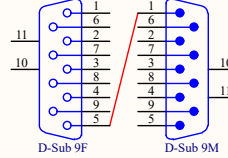
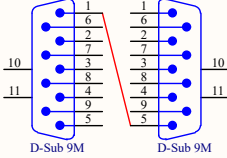
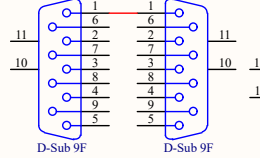
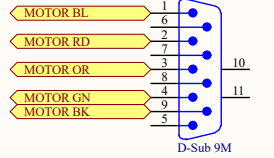
Feedthrough

Anti-Feedthrough Adapter Cable

Stepper External Cable

Stepper Driver
CVD507-K

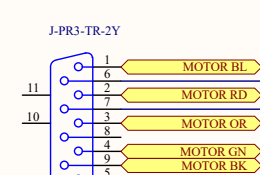
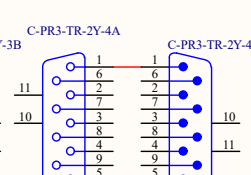
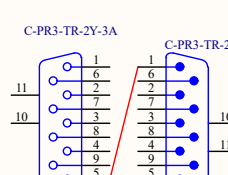
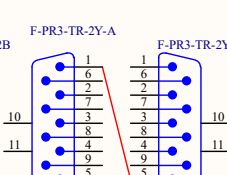
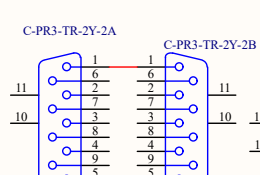
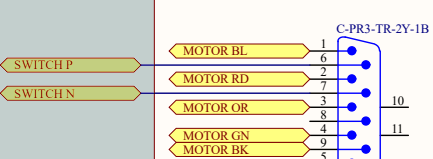
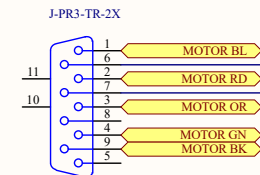
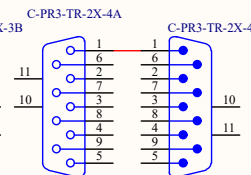
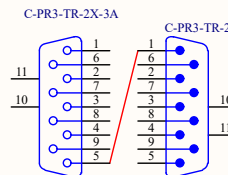
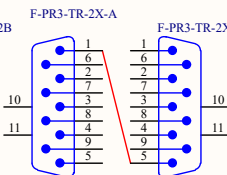
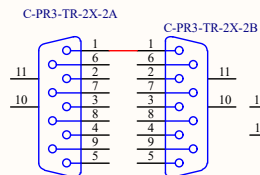
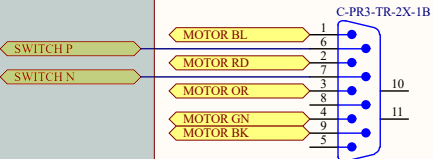
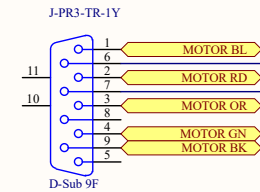
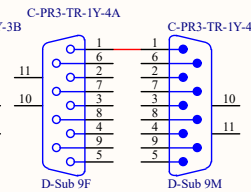
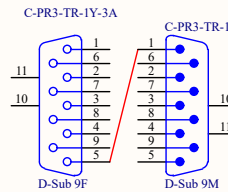
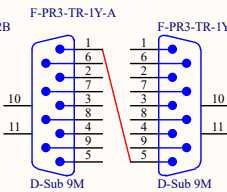
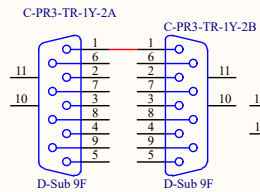
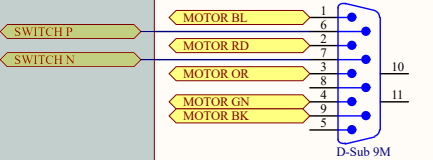
No switches on Motor 1



No switches on Motor 1

Not used in iKAGRA

Not used in iKAGRA



Title PR3 Suspension Cabling - Traverser Steppers		
Size A3	Number JGW-D1503615	Revision -v1
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