

4 Feedthroughs

TM OSEMs

OSEM

OSEM-BF Cable

OSEM BF-PI Cable

OSEM PI-Flange Cable

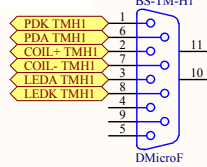
Feedthrough

Anti-Feedthrough Adapter Cable

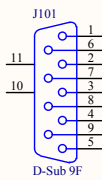
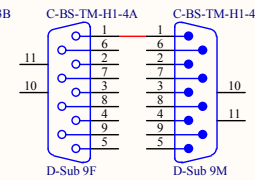
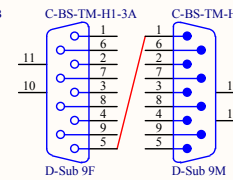
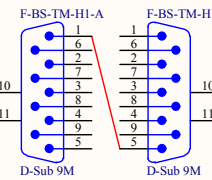
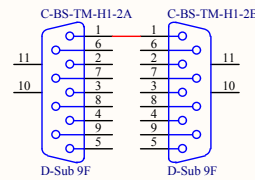
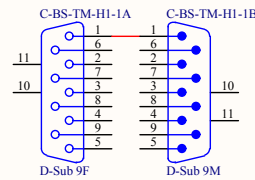
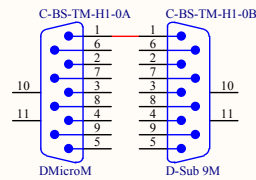
OSEM External Cable

Sat Amp #1 D1402809

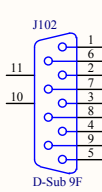
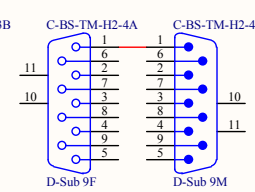
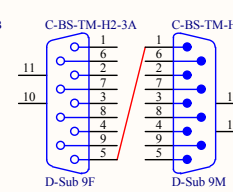
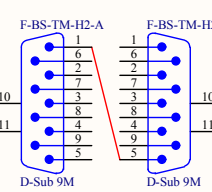
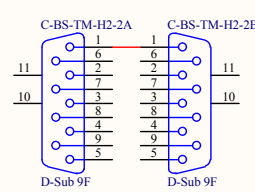
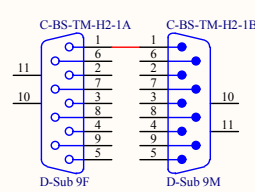
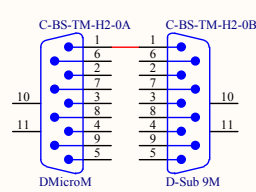
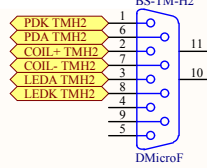
Glenair GMR7590-9P-1BPN
BS-TM-H1= top



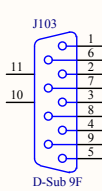
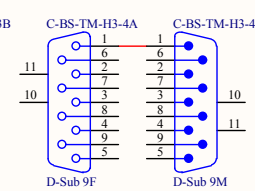
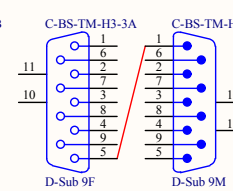
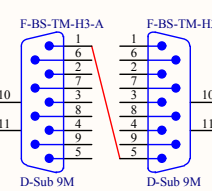
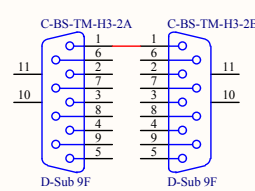
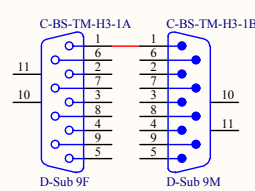
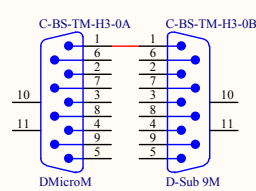
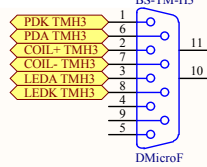
Glenair MWDMD2L-9SS



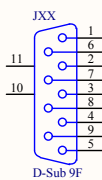
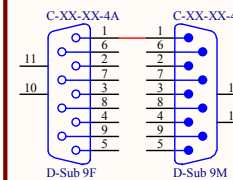
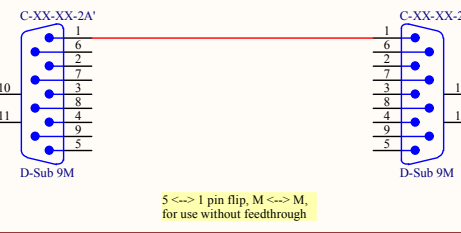
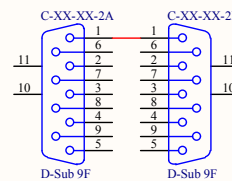
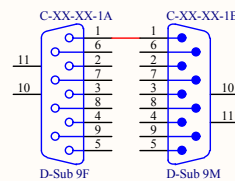
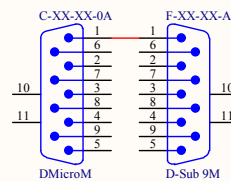
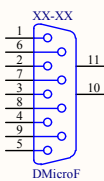
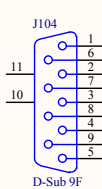
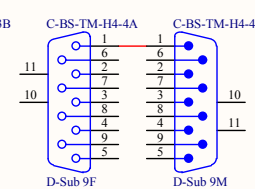
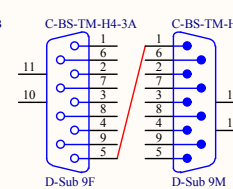
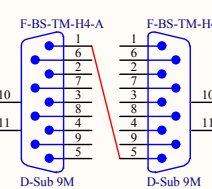
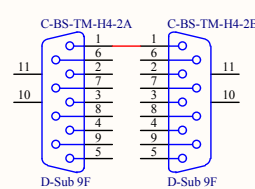
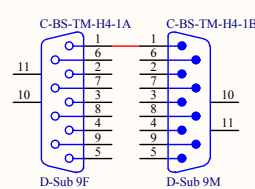
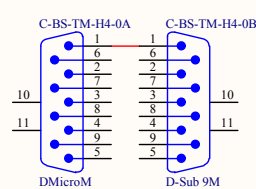
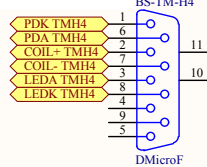
BS-TM-H2 = right



BS-TM-H3 = bottom



BS-TM-H4 = left



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 BS Suspension Cabling - Test Mass OSEMs		
Size A3	Number JGW-D1503600	Revision -v4
Date 2015/06/09		Sheet of 1
File: Z:\Work\TM OSEMs\SchDoc		Drawn By:

6 Feedthroughs

IM OSEMs

OSEM

OSEM-BF Cable

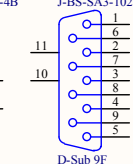
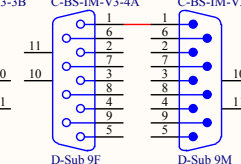
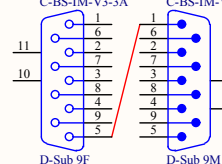
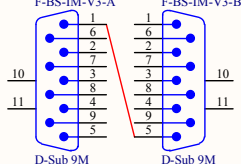
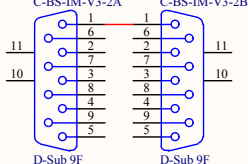
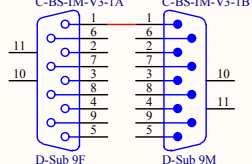
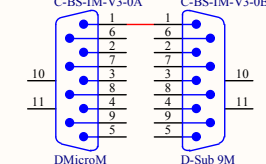
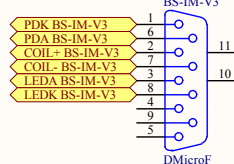
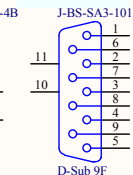
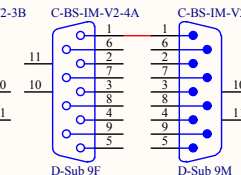
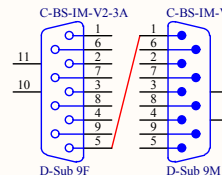
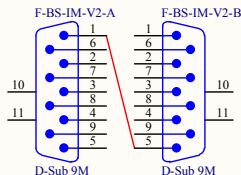
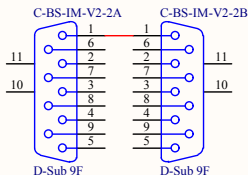
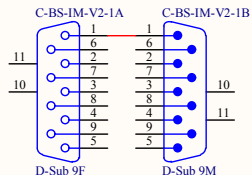
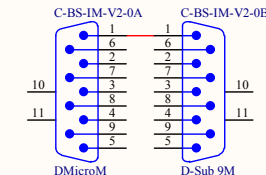
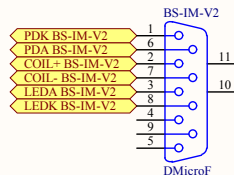
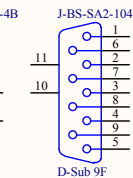
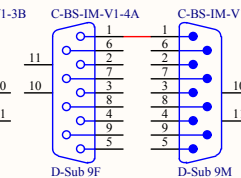
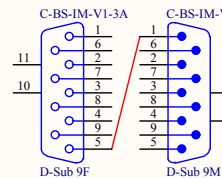
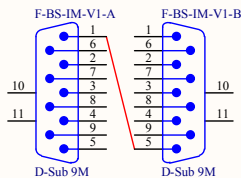
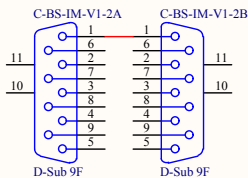
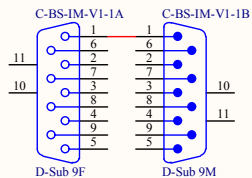
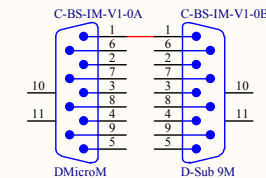
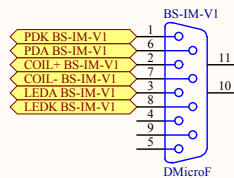
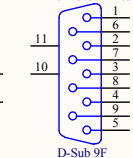
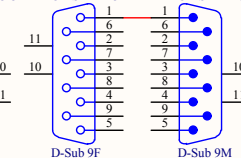
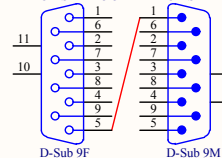
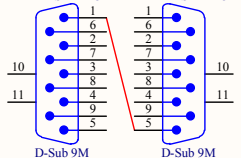
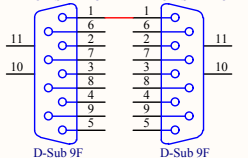
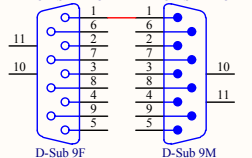
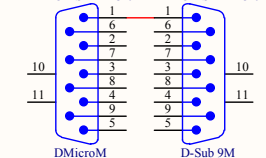
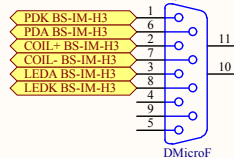
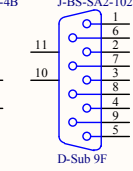
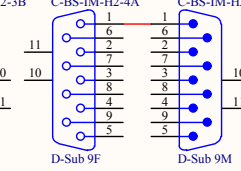
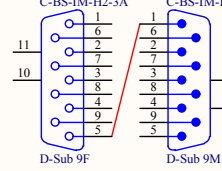
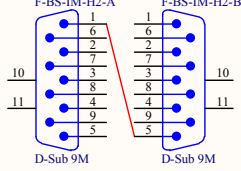
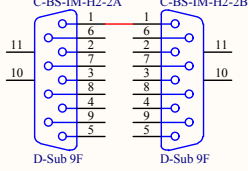
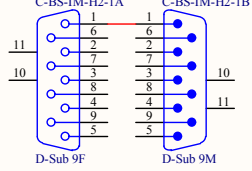
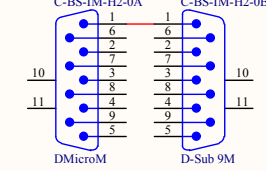
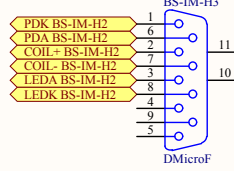
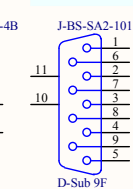
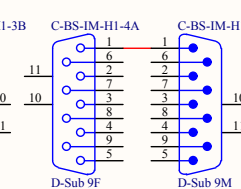
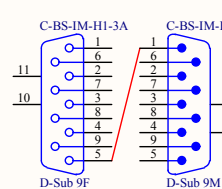
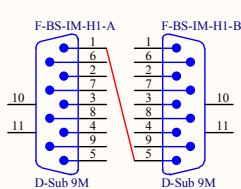
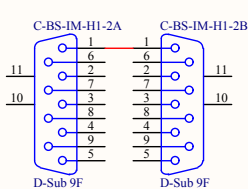
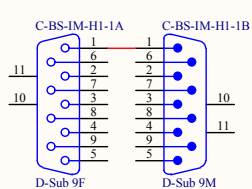
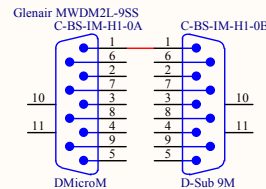
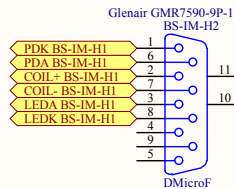
OSEM BF-PI Cable

OSEM PI-Flange Cable

Feedthrough

Anti-Feedthrough Adapter Cable

OSEM External Cable

Sat Amp #2
D1402809

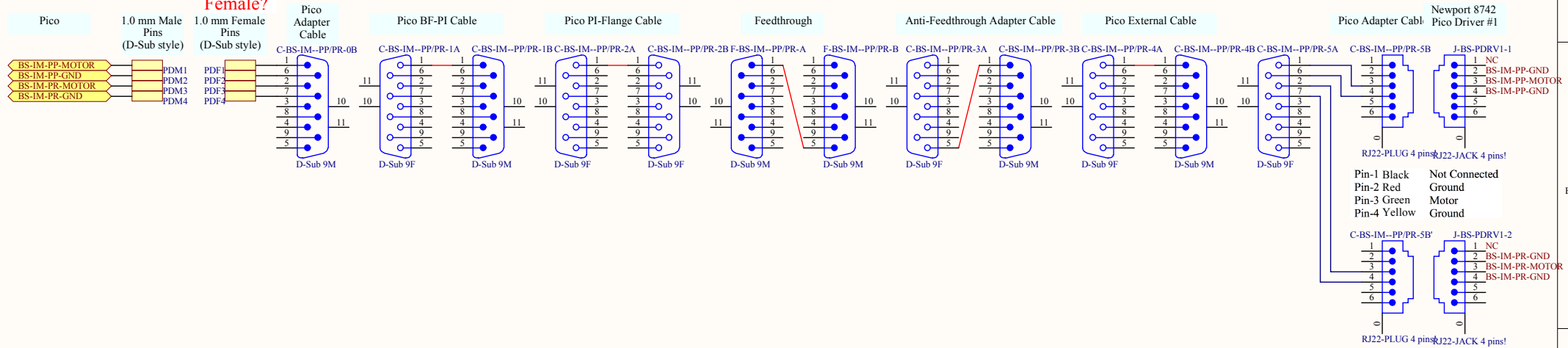
J-BS-SA3-103 and J-BS-SA3-104 not used

Title BS Suspension Cabling - Intermediate Mass OSEMs		
Size A3	Number JGW-D1503600	Revision -v4
Date: 2015/06/09	Sheet of	
File: Z:\Work\IM OSEMs.SchDoc	Drawn By:	

1 Feedthrough

IM Picomotors

Maybe
D-Sub
Female?



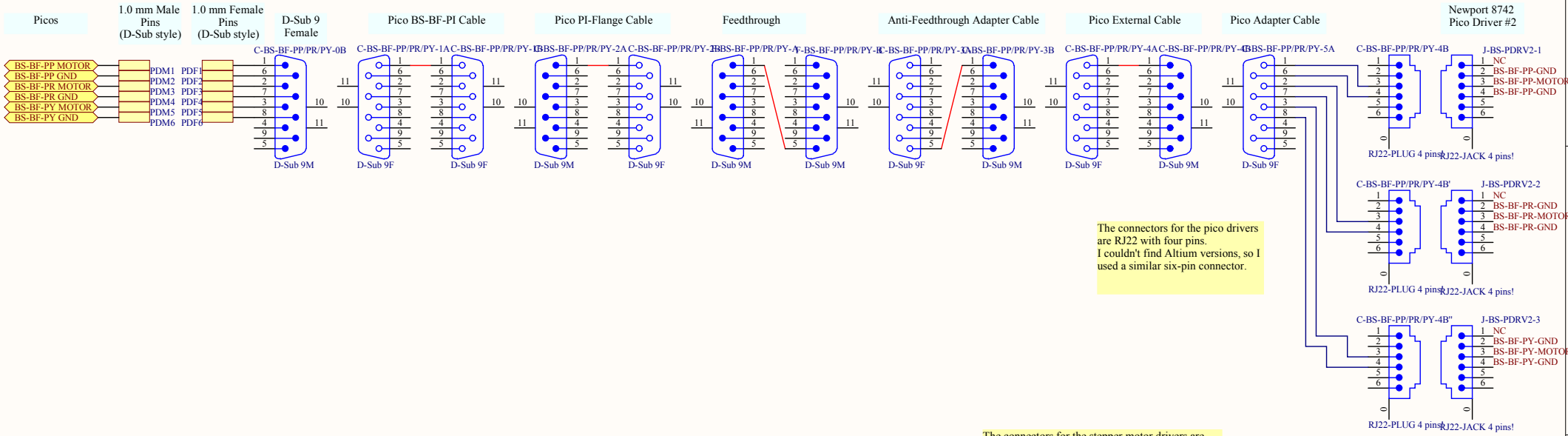
Title BS Suspension Cabling - Intermediate Mass Picos			
Size A3	Number JGW-D1503600	Revision -v4	
Date: 2015/06/09	Sheet of 1		Drawn By:
File: Z:\Work\IM Picos.SchDoc			

BF and SF
Picomotors and Steppers

3 Feedthroughs

Pin-1 Black Not Connected
Pin-2 Red Ground
Pin-3 Green Motor
Pin-4 Yellow Ground

Newport 8742
Pico Driver #2



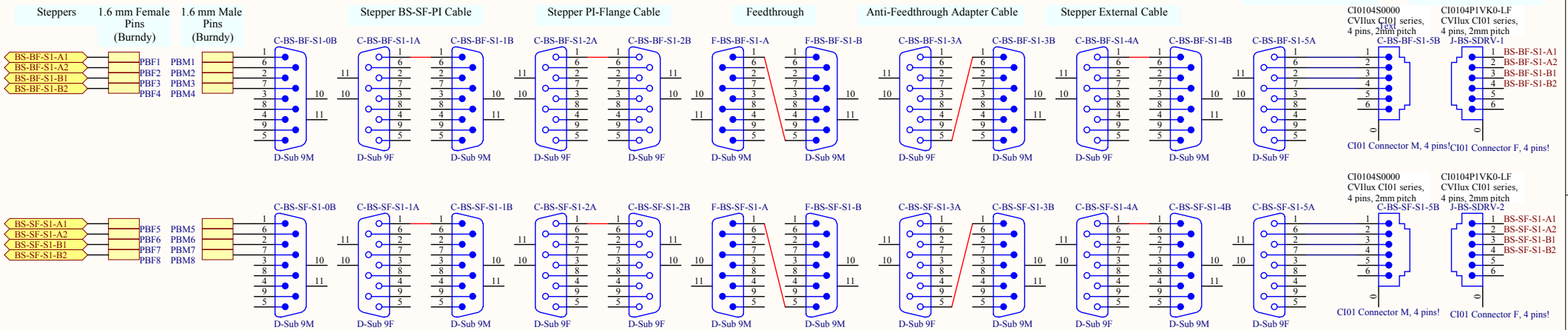
The connectors for the stepper motor drivers are CVIlux: CI01045000-A (plug, female), CI0104P1VK0-LF (jack, male) pairs with four pins. I couldn't find Altium versions, so I used a similar six-pin connector.

CI0104P1VK0-LF

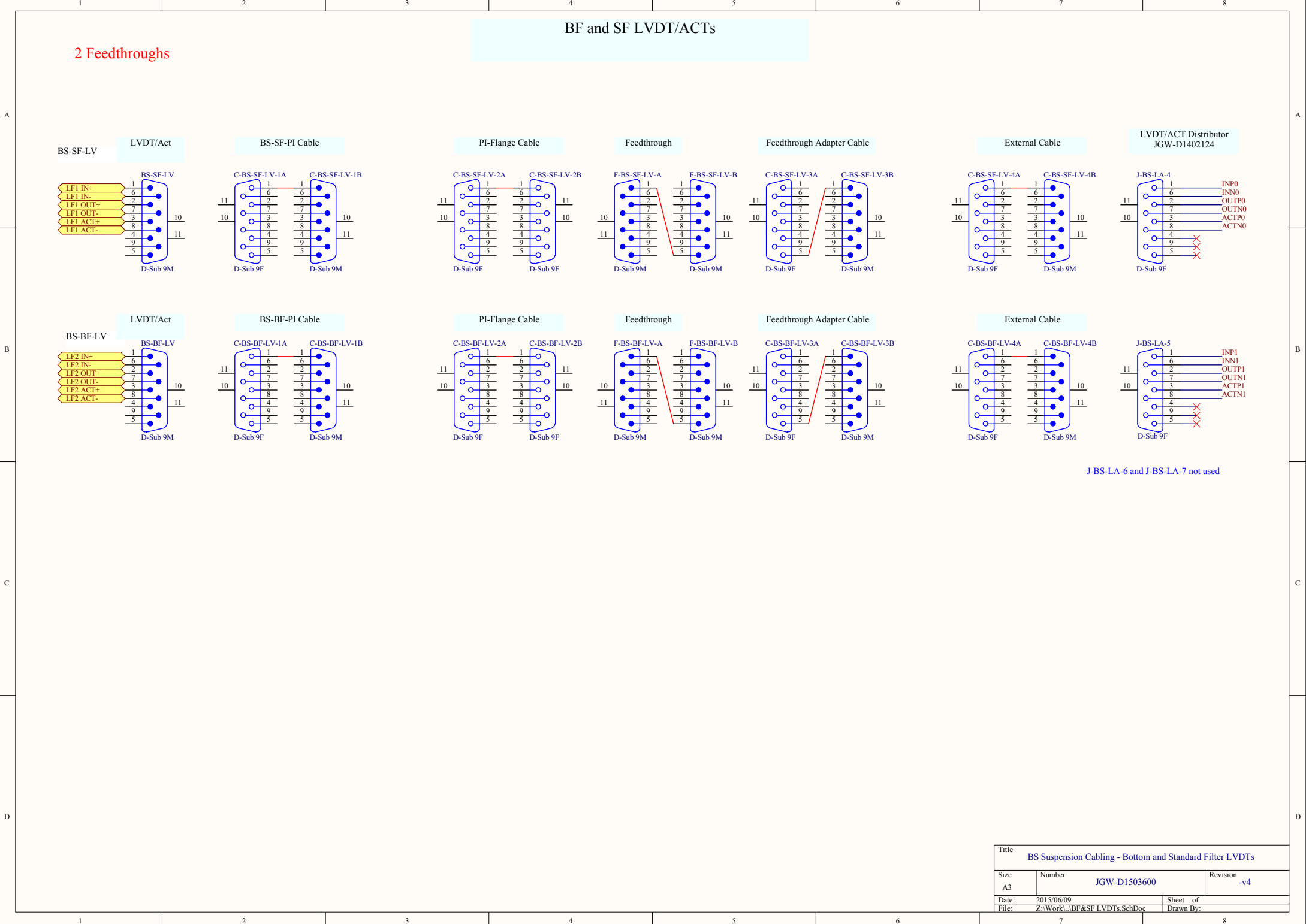
Pin	Label	Direction	Description
1	A1	Output	Pin 1 of motor coil A
2	A2	Output	Pin 2 of motor coil A
3	B1	Output	Pin 1 of motor coil B
4	B2	Output	Pin 2 of motor coil B

Stepper Adapter Cable

Stepper Driver
TMCM-6110



Title			
BS Suspension Cabling - Bottom and Standard Filter Picos/Steppers			
Size	Number		Revision
A3	JGW-D1503600		-v4
Date:	2015/06/09	Sheet of	
File:	Z:\Work\BF&SF Picos&Steppers.SchDoc		Drawn By:



4 Feedthroughs

Preisolator LVDT/ACTs

LVDT/ACT

LVDT/ACT-PI Cable

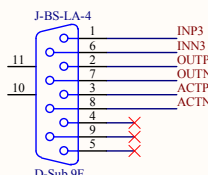
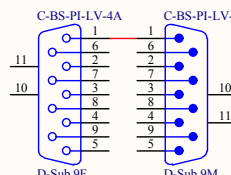
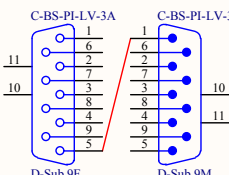
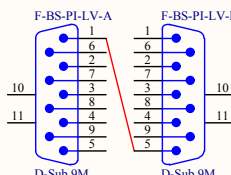
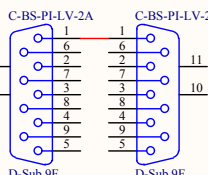
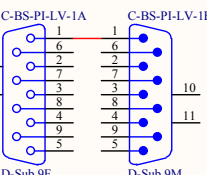
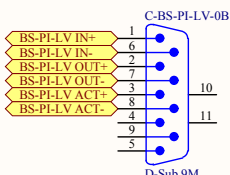
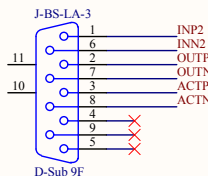
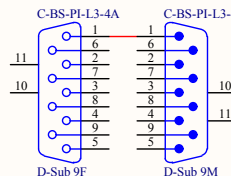
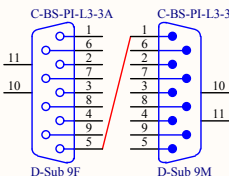
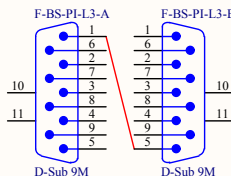
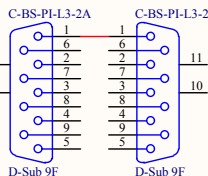
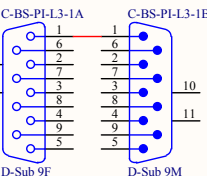
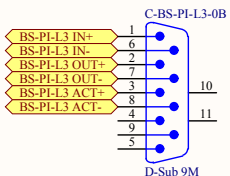
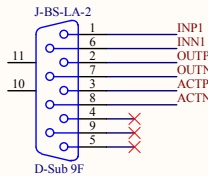
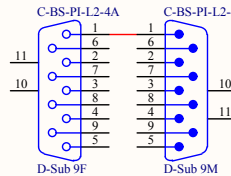
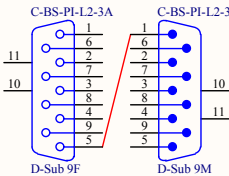
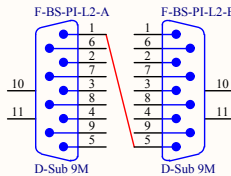
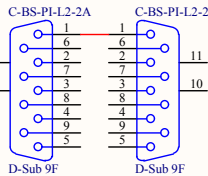
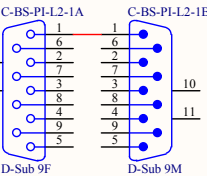
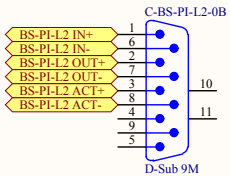
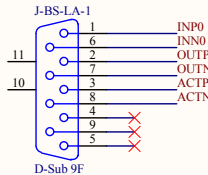
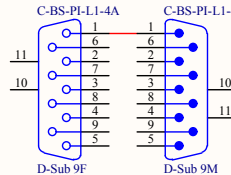
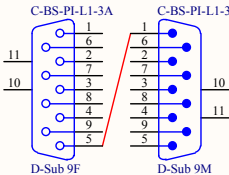
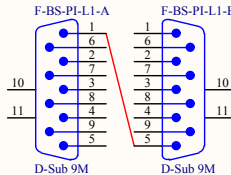
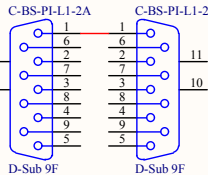
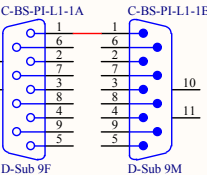
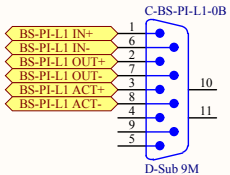
BS-PI-Flange Cable

Feedthrough

Anti-Feedthrough Adapter Cable

LVDT/ACT External Cable

LVDT/ACT Distributor
JGW D1402124



LVDT-COIL	
Pin	Function
1	LVDT IN P
2	LVDT OUT P
3	COIL P
4	
5	
6	LVDT IN N
7	LVDT OUT N
8	COIL N
9	

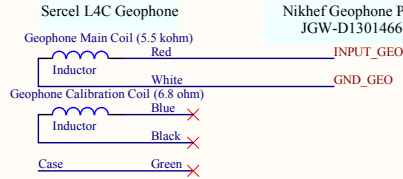
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Size	Number	Revision
A3	JGW-D1503600	-v4
Date:	2015/06/09	Sheet of
File:	Z:\Work\PI LVDTs.SchDoc	Drawn By:

3 Feedthroughs

Preisolator Geophones

Geophone Pod Internal Cabling
(same for all three pods):

Pod #1: geophone L400002322, preamp 15
Pod #2: geophone L400002321, preamp 12
Pod #3: geophone L400002323, preamp 14



Geophone Pod

Geophone Adapter Cable

Geophone-PI Cable

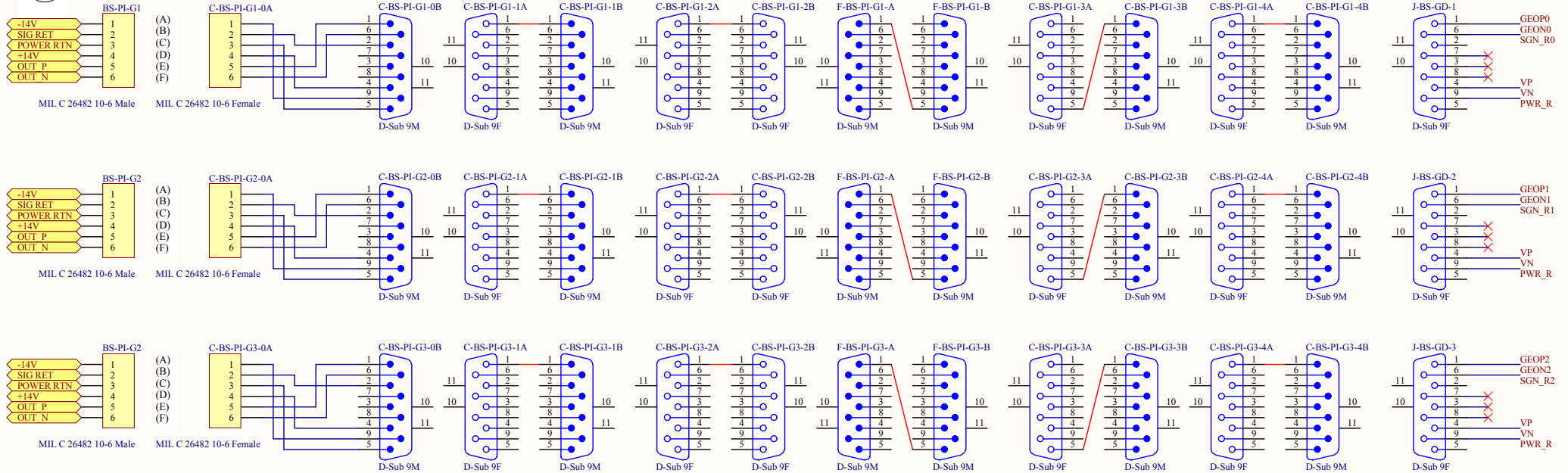
BS-PI-Flange Cable

Feedthrough

Anti-Feedthrough Adapter Cable

Geophone External Cable

Geophone Distributor
JGW-D1402120



J-BS-GD-4 not used

Title BS Suspension Cabling - Preisolator Geophones			
Size A3	Number JGW-D1503600	Revision -v4	
Date: 2015/06/09	Sheet of 2		Drawn By:
File: Z:\Work\PI Geophones.SchDoc			

Preisolator Steppers/Pico

Stepper

1.6 mm Female
Pins
(Burndy)1.6 mm Male
Pins
(Burndy)

Stepper Internal Cable

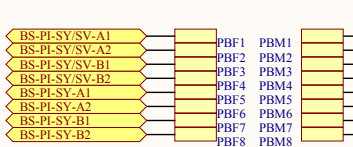
Feedthrough

Anti-Feedthrough Adapter Cable

Stepper External Cable

Stepper Splitter Cable
Double Motor VersionStepper Driver
TMC6110CI0104S0000
CVIlux C101 series,
4 pins, 2mm pitchCI0104PIVK0-LF
CVIlux C101 series,
4 pins, 2mm pitch

A



The vertical and yaw steppers have no limit switches and are comined on a single cable.

The horizontal steppers have limit switches and will be wired as indicated by the IP manufacturer.

Pin	Label	Direction	Description
1	A3	Output	Pin 1 of motor coil A
2	A2	Output	Pin 2 of motor coil A
3	B1	Output	Pin 1 of motor coil B
4	B2	Output	Pin 2 of motor coil B

Pin	Label	Direction	Description
1	GND	Power (GND)	Signal and system ground
2	V _{DD}	Power (Supply output)	Connected to V _{DD}
3	REF_L	Input	Input for reference / limit switch left
4	REF_R	Input	Input for reference / limit switch right

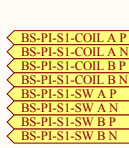
Controller motor inputs.

Controller switch inputs - don't know if these are actually going to be used.

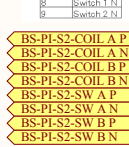
Stepper Splitter Cable
Motor+Switch Version

CI01 Connector M, 4 pins! CI01 Connector F, 4 pins!

B

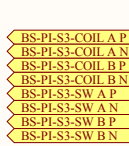


Pin	Function
1	COIL A P
2	COIL B P
3	Switch 1 P
4	Switch 2 P
5	
6	COIL A N
7	COIL B N
8	Switch 1 N
9	Switch 2 N



CI01 Connector M, 4 pins! CI01 Connector F, 4 pins!
-5B' TBD connector for limit switches

C



CI01 Connector M, 4 pins! CI01 Connector F, 4 pins!
-5B' TBD connector for limit switches

D

Title BS Suspension Cabling - Preisolator Steppers and Picomotor			
Size A3	Number JGW-D1503600	Revision -v4	
Date: 2015/06/09	Sheet of		
File: Z:\Work\PI Picos&Steppers.Sch.Doc	Drawn By:		