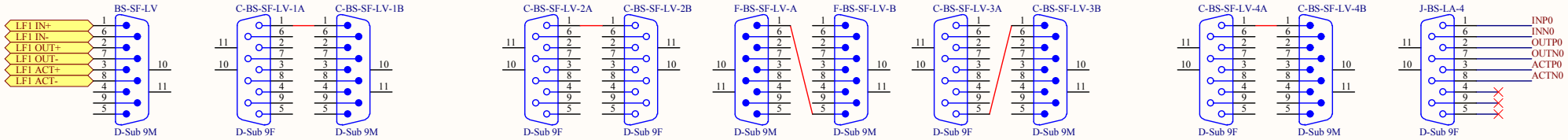
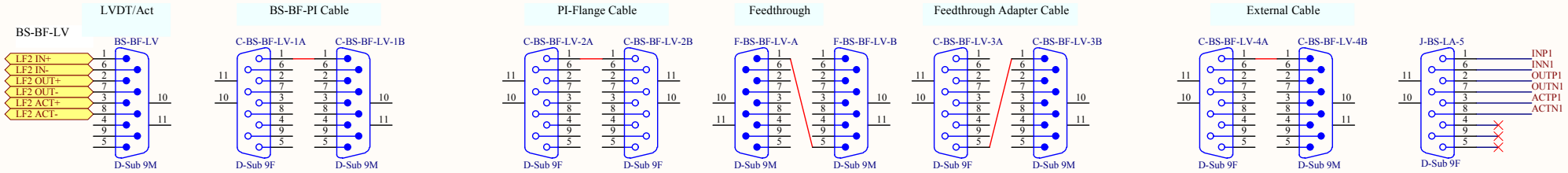
BF and SF LVDT/ACTs

2 Feedthroughs

BS-SF-LV



BS-BF-LV



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

Title	BS Suspension Cabling - Bottom and Standard Filter LVDTs	
Size: A3	Number: JGW-D1503382	Revision: -v2
Date: 2015/06/08		Sheet of
File: Z:\Work\..\BF&SF LVDTs.SchDoc		Drawn By:

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

Picos | 1.0 mm Male Pins (D-Sub style) | 1.0 mm Female Pins (D-Sub style) | D-Sub 9 Female | Pico BS-BF-PI Cable | Pico PI-Flange Cable | Feedthrough | Anti-Feedthrough Adapter Cable | Pico External Cable | Pico Adapter Cable | Newport 8742 Pico Driver #2

BS-BF-PP MOTOR — PDM1 PDF1
BS-BF-PP GND — PDM2 PDF2
BS-BF-PR MOTOR — PDM3 PDF3
BS-BF-PR GND — PDM4 PDF4
BS-BF-PY MOTOR — PDM5 PDF5
BS-BF-PY GND — PDM6 PDF6

C-BS-BF-PP/PR/PY-0B — D-Sub 9M
C-BS-BF-PP/PR/PY-1A — D-Sub 9F
C-BS-BF-PP/PR/PY-1B — D-Sub 9F
C-BS-BF-PP/PR/PY-2A — D-Sub 9M
C-BS-BF-PP/PR/PY-2B — D-Sub 9F
F-BS-BF-PP/PR/PY-A — D-Sub 9M
F-BS-BF-PP/PR/PY-B — D-Sub 9M
C-BS-BF-PP/PR/PY-3A — D-Sub 9F
C-BS-BF-PP/PR/PY-3B — D-Sub 9M
C-BS-BF-PP/PR/PY-4A — D-Sub 9F
C-BS-BF-PP/PR/PY-4B — D-Sub 9M
C-BS-BF-PP/PR/PY-5A — D-Sub 9F

C-BS-BF-PP/PR/PY-4B — J-BS-PDRV2-1
1 NC
2 BS-BF-PP-GND
3 BS-BF-PP-MOTOR
4 BS-BF-PP-GND
RJ22-PLUG 4 pins! — RJ22-JACK 4 pins!

C-BS-BF-PP/PR/PY-4B' — J-BS-PDRV2-2
1 NC
2 BS-BF-PR-GND
3 BS-BF-PR-MOTOR
4 BS-BF-PR-GND
RJ22-PLUG 4 pins! — RJ22-JACK 4 pins!

C-BS-BF-PP/PR/PY-4B" — J-BS-PDRV2-3
1 NC
2 BS-BF-PY-GND
3 BS-BF-PY-MOTOR
4 BS-BF-PY-GND
RJ22-PLUG 4 pins! — RJ22-JACK 4 pins!

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: 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

Steppers | 1.6 mm Female Pins (Burndy) | 1.6 mm Male Pins (Burndy) | Stepper BS-SF-PI Cable | Stepper PI-Flange Cable | Feedthrough | Anti-Feedthrough Adapter Cable | Stepper External Cable | Stepper Adapter Cable | Stepper Driver TMCM-6110

BS-BF-S1-A1 — PBF1 PBM1
BS-BF-S1-A2 — PBF2 PBM2
BS-BF-S1-B1 — PBF3 PBM3
BS-BF-S1-B2 — PBF4 PBM4

C-BS-BF-S1-0B — D-Sub 9M
C-BS-BF-S1-1A — D-Sub 9F
C-BS-BF-S1-1B — D-Sub 9M
C-BS-BF-S1-2A — D-Sub 9F
C-BS-BF-S1-2B — D-Sub 9F
F-BS-BF-S1-A — D-Sub 9M
F-BS-BF-S1-B — D-Sub 9M
C-BS-BF-S1-3A — D-Sub 9F
C-BS-BF-S1-3B — D-Sub 9M
C-BS-BF-S1-4A — D-Sub 9F
C-BS-BF-S1-4B — D-Sub 9M
C-BS-BF-S1-5A — D-Sub 9F

CI0104S0000 CVIlux CI01 series, 4 pins, 2mm pitch Text
C-BS-BF-S1-5B — CI01 Connector M, 4 pins!
CI0104P1VK0-LF CVIlux CI01 series, 4 pins, 2mm pitch
J-BS-SDRV-1
1 BS-BF-S1-A1
2 BS-BF-S1-A2
3 BS-BF-S1-B1
4 BS-BF-S1-B2
CI01 Connector F, 4 pins!

BS-SF-S1-A1 — PBF5 PBM5
BS-SF-S1-A2 — PBF6 PBM6
BS-SF-S1-B1 — PBF7 PBM7
BS-SF-S1-B2 — PBF8 PBM8

C-BS-SF-S1-0B — D-Sub 9M
C-BS-SF-S1-1A — D-Sub 9F
C-BS-SF-S1-1B — D-Sub 9M
C-BS-SF-S1-2A — D-Sub 9F
C-BS-SF-S1-2B — D-Sub 9F
F-BS-SF-S1-A — D-Sub 9M
F-BS-SF-S1-B — D-Sub 9M
C-BS-SF-S1-3A — D-Sub 9F
C-BS-SF-S1-3B — D-Sub 9M
C-BS-SF-S1-4A — D-Sub 9F
C-BS-SF-S1-4B — D-Sub 9M
C-BS-SF-S1-5A — D-Sub 9F

CI0104S0000 CVIlux CI01 series, 4 pins, 2mm pitch
C-BS-SF-S1-5B — CI01 Connector M, 4 pins!
CI0104P1VK0-LF CVIlux CI01 series, 4 pins, 2mm pitch
J-BS-SDRV-2
1 BS-SF-S1-A1
2 BS-SF-S1-A2
3 BS-SF-S1-B1
4 BS-SF-S1-B2
CI01 Connector F, 4 pins!

Title	BS Suspension Cabling - Bottom and Standard Filter Picos/Steppers	
Size: A3	Number: JGW-D1503382	Revision: -v2
Date: 2015/06/08	Sheet of	
File: Z:\Work\..\BF&SF Picos&Steppers.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
Glenair GMR7590-9P-1BPN	Glenair MWDM2L-9SS						
BS-IM-H2	C-BS-IM-H1-0A / C-BS-IM-H1-0B	C-BS-IM-H1-1A / C-BS-IM-H1-1B	C-BS-IM-H1-2A / C-BS-IM-H1-2B	F-BS-IM-H1-A / F-BS-IM-H1-B	C-BS-IM-H1-3A / C-BS-IM-H1-3B	C-BS-IM-H1-4A / C-BS-IM-H1-4B	J-BS-SA2-101
BS-IM-H3	C-BS-IM-H2-0A / C-BS-IM-H2-0B	C-BS-IM-H2-1A / C-BS-IM-H2-1B	C-BS-IM-H2-2A / C-BS-IM-H2-2B	F-BS-IM-H2-A / F-BS-IM-H2-B	C-BS-IM-H2-3A / C-BS-IM-H2-3B	C-BS-IM-H2-4A / C-BS-IM-H2-4B	J-BS-SA2-102
BS-IM-H4	C-BS-IM-H3-0A / C-BS-IM-H3-0B	C-BS-IM-H3-1A / C-BS-IM-H3-1B	C-BS-IM-H3-2A / C-BS-IM-H3-2B	F-BS-IM-H3-A / F-BS-IM-H3-B	C-BS-IM-H3-3A / C-BS-IM-H3-3B	C-BS-IM-H3-4A / C-BS-IM-H3-4B	J-BS-SA2-103
BS-IM-V1	C-BS-IM-V1-0A / C-BS-IM-V1-0B	C-BS-IM-V1-1A / C-BS-IM-V1-1B	C-BS-IM-V1-2A / C-BS-IM-V1-2B	F-BS-IM-V1-A / F-BS-IM-V1-B	C-BS-IM-V1-3A / C-BS-IM-V1-3B	C-BS-IM-V1-4A / C-BS-IM-V1-4B	J-BS-SA2-104
							Sat Amp #3 D1402809
BS-IM-V2	C-BS-IM-V2-0A / C-BS-IM-V2-0B	C-BS-IM-V2-1A / C-BS-IM-V2-1B	C-BS-IM-V2-2A / C-BS-IM-V2-2B	F-BS-IM-V2-A / F-BS-IM-V2-B	C-BS-IM-V2-3A / C-BS-IM-V2-3B	C-BS-IM-V2-4A / C-BS-IM-V2-4B	J-BS-SA3-101
BS-IM-V3	C-BS-IM-V3-0A / C-BS-IM-V3-0B	C-BS-IM-V3-1A / C-BS-IM-V3-1B	C-BS-IM-V3-2A / C-BS-IM-V3-2B	F-BS-IM-V3-A / F-BS-IM-V3-B	C-BS-IM-V3-3A / C-BS-IM-V3-3B	C-BS-IM-V3-4A / C-BS-IM-V3-4B	J-BS-SA3-102

PDK BS-IM-H1	1	DMicroF	DMicroM	D-Sub 9M	D-Sub 9F	D-Sub 9F	D-Sub 9F
PDA BS-IM-H1	6						
COIL+ BS-IM-H1	2						
COIL- BS-IM-H1	7						
LEDA BS-IM-H1	3						
LEDK BS-IM-H1	8						
	4						
	9						
	5						
	11		D-Sub 9M	D-Sub 9F	D-Sub 9F	D-Sub 9M	
	10						

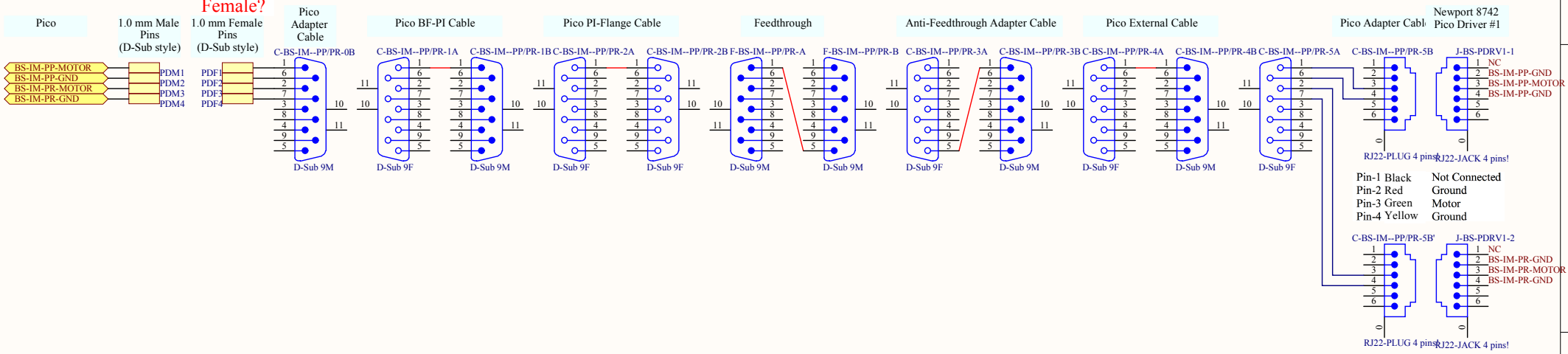
J-BS-SA3-103 and J-BS-SA3-104 not used

Title	BS Suspension Cabling - Intermediate Mass OSEMs
Size	A3
Number	JGW-D1503382
Revision	-v2
Date:	2015/06/08
Sheet	of
File:	Z:\Work\..\IM OSEMs.SchDoc
Drawn By:	

1 Feedthrough

IM Picomotors

Maybe D-Sub Female?



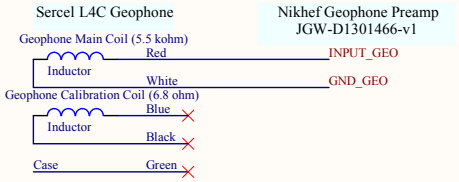
Title: BS Suspension Cabling - Intermediate Mass Picos		
Size: A3	Number: JGW-D1503382	Revision: -v2
Date: 2015/06/08		Sheet of
File: Z:\Work\..\IM Picos.SchDoc		Drawn By:

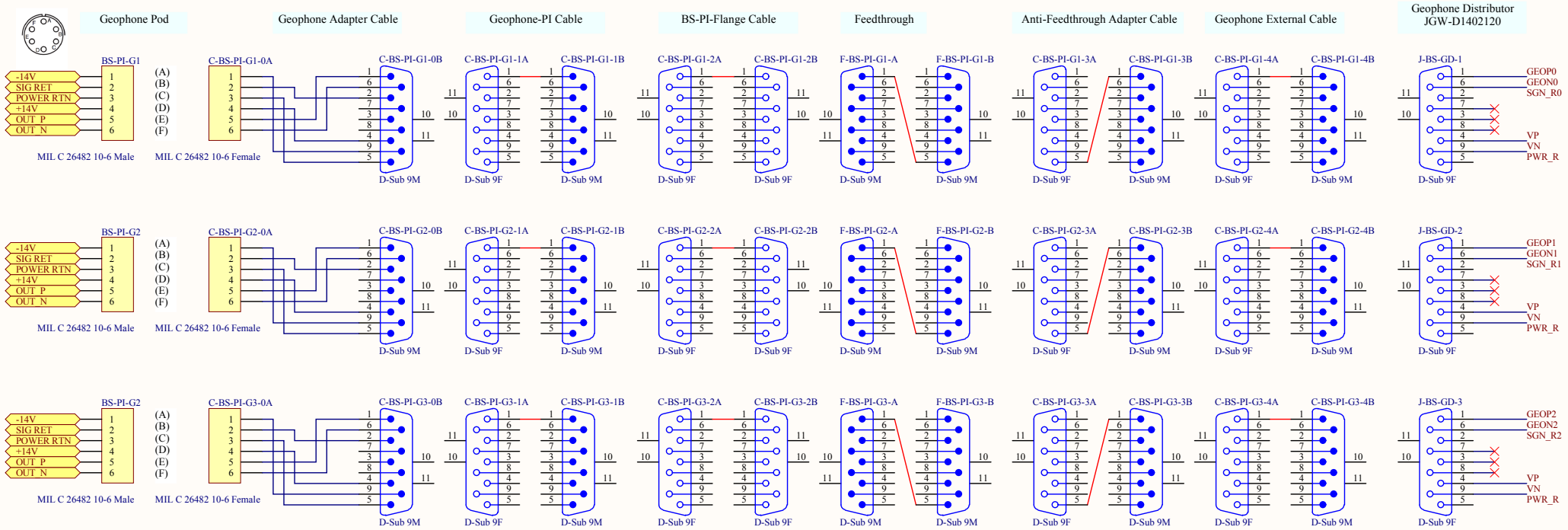
3 Feedthroughs

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





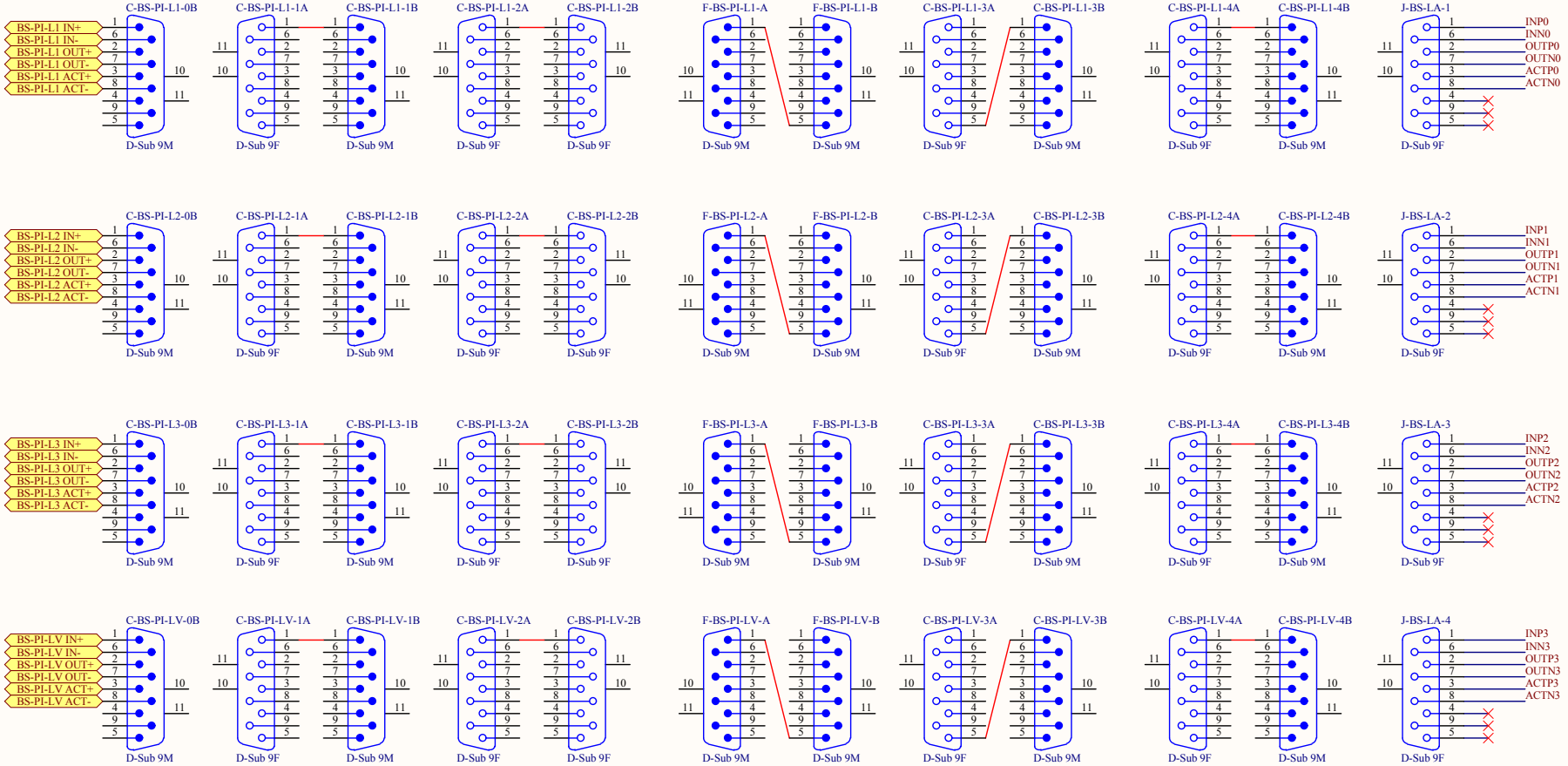
J-BS-GD-4 not used

Title: BS Suspension Cabling - Preisolator Geophones		
Size: A3	Number: JGW-D1503382	Revision: -v2
Date: 2015/06/08		Sheet of
File: Z:\Work\..\PI Geophones.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
C-BS-PI-L1-0B	C-BS-PI-L1-1A / C-BS-PI-L1-1B	C-BS-PI-L1-2A / C-BS-PI-L1-2B	F-BS-PI-L1-A / F-BS-PI-L1-B	C-BS-PI-L1-3A / C-BS-PI-L1-3B	C-BS-PI-L1-4A / C-BS-PI-L1-4B	J-BS-LA-1
C-BS-PI-L2-0B	C-BS-PI-L2-1A / C-BS-PI-L2-1B	C-BS-PI-L2-2A / C-BS-PI-L2-2B	F-BS-PI-L2-A / F-BS-PI-L2-B	C-BS-PI-L2-3A / C-BS-PI-L2-3B	C-BS-PI-L2-4A / C-BS-PI-L2-4B	J-BS-LA-2
C-BS-PI-L3-0B	C-BS-PI-L3-1A / C-BS-PI-L3-1B	C-BS-PI-L3-2A / C-BS-PI-L3-2B	F-BS-PI-L3-A / F-BS-PI-L3-B	C-BS-PI-L3-3A / C-BS-PI-L3-3B	C-BS-PI-L3-4A / C-BS-PI-L3-4B	J-BS-LA-3
C-BS-PI-LV-0B	C-BS-PI-LV-1A / C-BS-PI-LV-1B	C-BS-PI-LV-2A / C-BS-PI-LV-2B	F-BS-PI-LV-A / F-BS-PI-LV-B	C-BS-PI-LV-3A / C-BS-PI-LV-3B	C-BS-PI-LV-4A / C-BS-PI-LV-4B	J-BS-LA-4

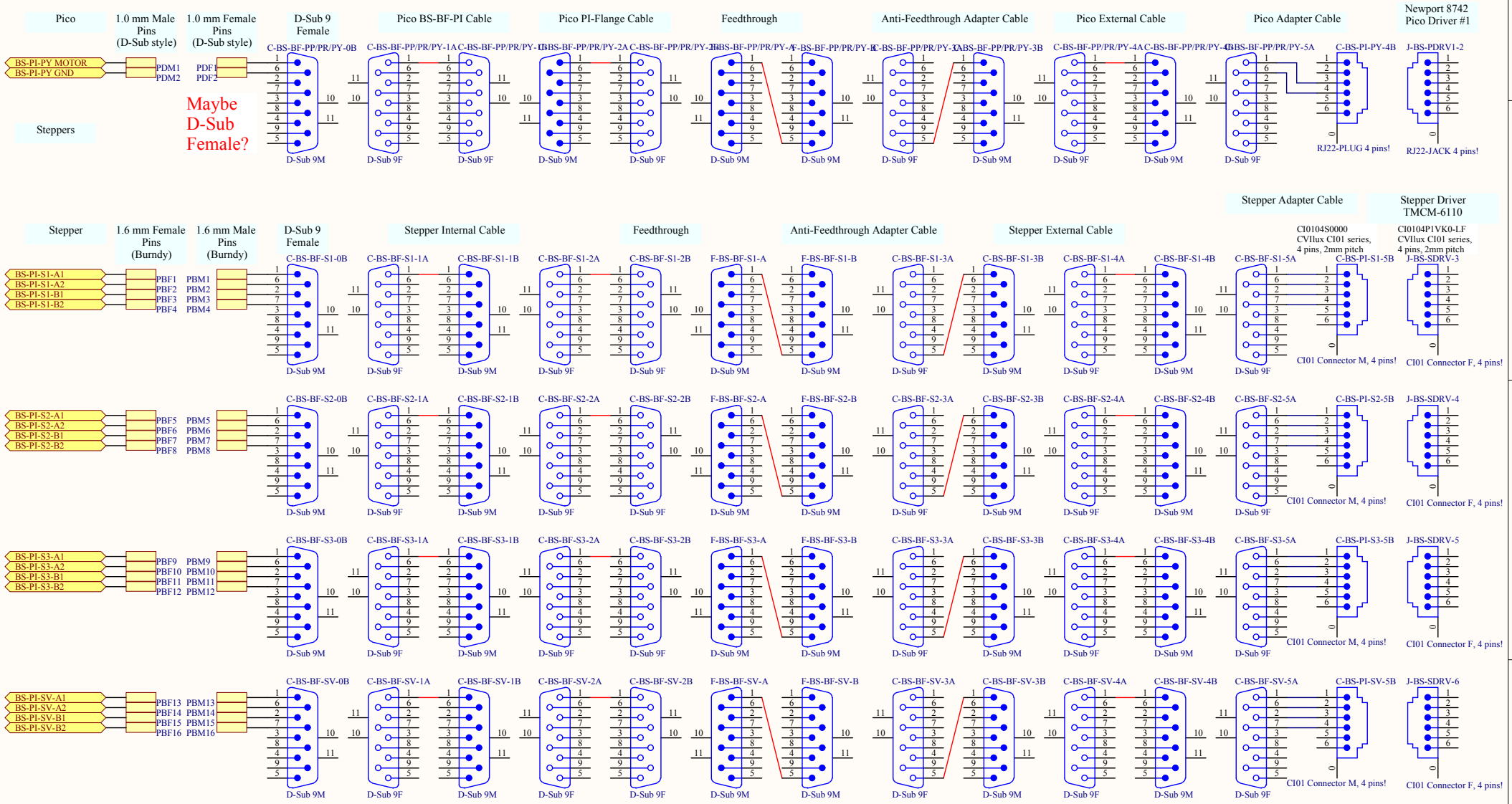


Title	BS Suspension Cabling - Preisolator LVDT/Actuators	
Size: A3	Number: JGW-D1503382	Revision: -v2
Date: 2015/06/08		Sheet of
File: Z:\Work\..\PI LVDTs.SchDoc		Drawn By:

5 Feedthroughs

Preisolator Steppers/Pico

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.



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.

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

Title	BS Suspension Cabling - Preisolator Steppers and Picomotor	
Size A3	Number JGW-D1503382	Revision -v2
Date: 2015/06/08		Sheet of
File: Z:\Work\..\PI Picos&Steppers.SchDoc		Drawn By:

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	Glenair MWDM2L-9SS						
BS-TM-H1= top							
BS-TM-H1	C-BS-TM-H1-0A / C-BS-TM-H1-0B	C-BS-TM-H1-1A / C-BS-TM-H1-1B	C-BS-TM-H1-2A / C-BS-TM-H1-2B	F-BS-TM-H1-A / F-BS-TM-H1-B	C-BS-TM-H1-3A / C-BS-TM-H1-3B	C-BS-TM-H1-4A / C-BS-TM-H1-4B	J101
BS-TM-H2 = right							
BS-TM-H2	C-BS-TM-H2-0A / C-BS-TM-H2-0B	C-BS-TM-H2-1A / C-BS-TM-H2-1B	C-BS-TM-H2-2A / C-BS-TM-H2-2B	F-BS-TM-H2-A / F-BS-TM-H2-B	C-BS-TM-H2-3A / C-BS-TM-H2-3B	C-BS-TM-H2-4A / C-BS-TM-H2-4B	J102
BS-TM-H3 = bottom							
BS-TM-H3	C-BS-TM-H3-0A / C-BS-TM-H3-0B	C-BS-TM-H3-1A / C-BS-TM-H3-1B	C-BS-TM-H3-2A / C-BS-TM-H3-2B	F-BS-TM-H3-A / F-BS-TM-H3-B	C-BS-TM-H3-3A / C-BS-TM-H3-3B	C-BS-TM-H3-4A / C-BS-TM-H3-4B	J103
BS-TM-H4 = left							
BS-TM-H4	C-BS-TM-H4-0A / C-BS-TM-H4-0B	C-BS-TM-H4-1A / C-BS-TM-H4-1B	C-BS-TM-H4-2A / C-BS-TM-H4-2B	F-BS-TM-H4-A / F-BS-TM-H4-B	C-BS-TM-H4-3A / C-BS-TM-H4-3B	C-BS-TM-H4-4A / C-BS-TM-H4-4B	J104
XX-XX	C-XX-XX-0A / F-XX-XX-A	C-XX-XX-1A / C-XX-XX-1B	C-XX-XX-2A / C-XX-XX-2B	C-XX-XX-2A' / C-XX-XX-2B		C-XX-XX-4A / C-XX-XX-4B	JXX

BS-TM-H1: PDK TMH1, PDA TMH1, COIL+ TMH1, COIL- TMH1, LEDA TMH1, LEDK TMH1

BS-TM-H2: PDK TMH2, PDA TMH2, COIL+ TMH2, COIL- TMH2, LEDA TMH2, LEDK TMH2

BS-TM-H3: PDK TMH3, PDA TMH3, COIL+ TMH3, COIL- TMH3, LEDA TMH3, LEDK TMH3

BS-TM-H4: PDK TMH4, PDA TMH4, COIL+ TMH4, COIL- TMH4, LEDA TMH4, LEDK TMH4

5 <--> 1 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	BS Suspension Cabling - Test Mass OSEMs	
Size A3	Number JGW-D1503382	Revision -v2
Date: 2015/06/08		Sheet of
File: Z:\Work\..\TM OSEMs.SchDoc		Drawn By: