

# 4 Feedthroughs

# TM OSEMs

A

### OSEM

### TM OSEM to BF Cable

### BF to PI Signal Cable

### SUS-Flange Signal Cable

### Feedthrough

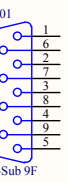
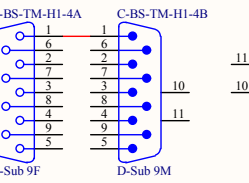
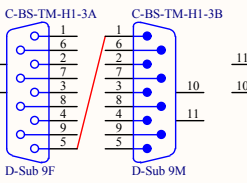
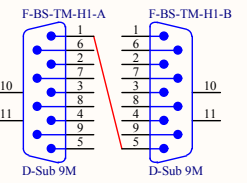
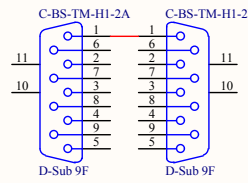
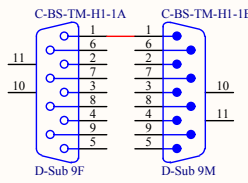
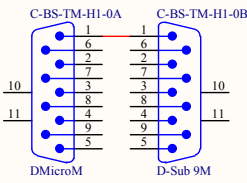
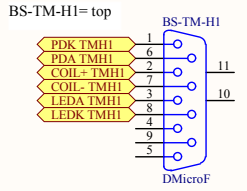
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### OSEM External Cable

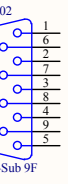
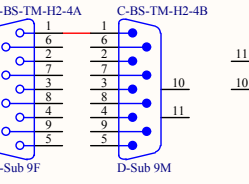
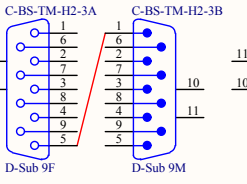
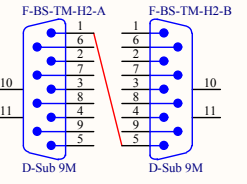
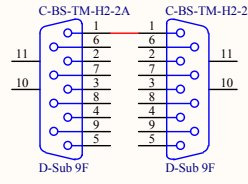
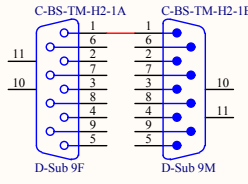
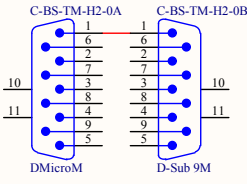
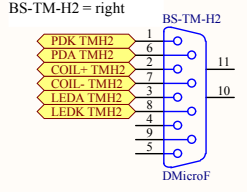
### Sat Amp #1

Glenair GMR7590-9P-1BPN

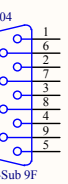
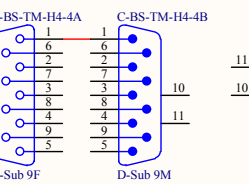
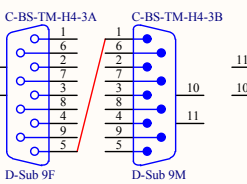
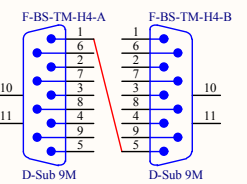
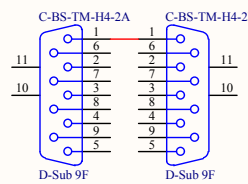
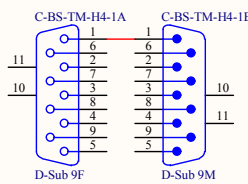
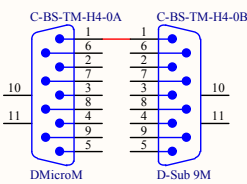
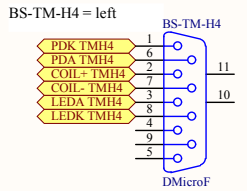
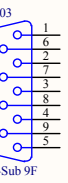
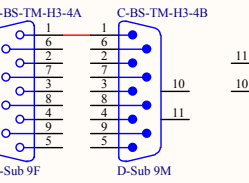
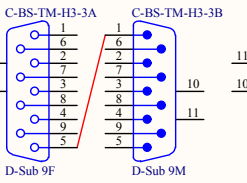
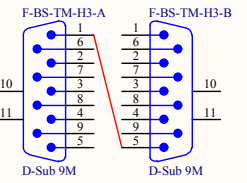
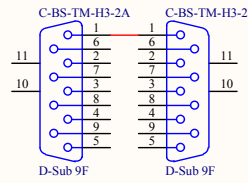
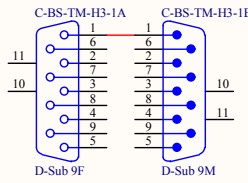
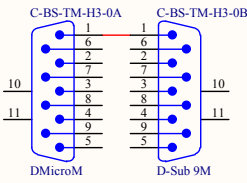
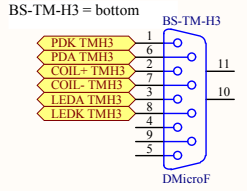
Glenair MWDML2L-9SS



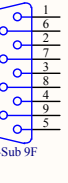
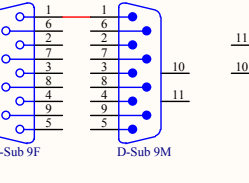
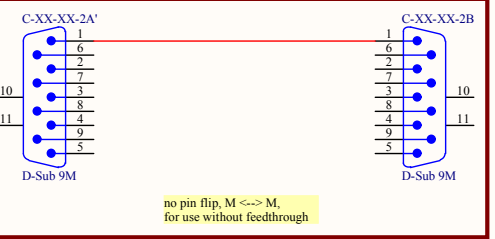
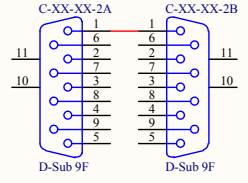
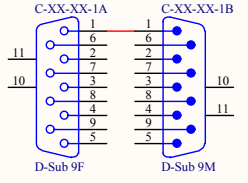
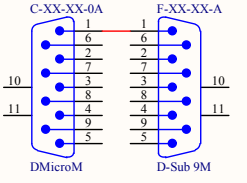
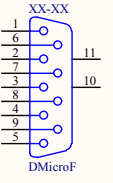
B



C



D



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	Number	Revision
A3	JGW-D1503600	-v6
Date:	2015/08/08	Sheet 1 of 8
File:	Z:\Work\TM OSEMs\SchDoc	Drawn By:

# 6 Feedthroughs

## IM OSEMs

### OSEM

### IM OSEM to BF Cable JGW-D1503901 Sheet 02

### BF to PI Signal Cable JGW-D1503901 Sheet 08

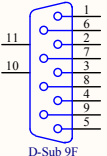
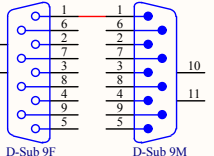
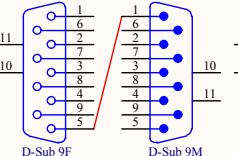
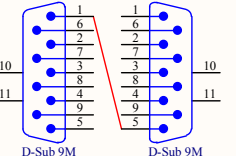
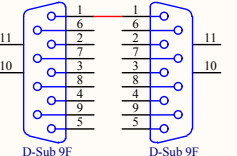
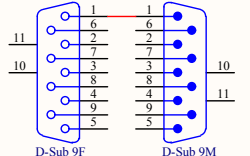
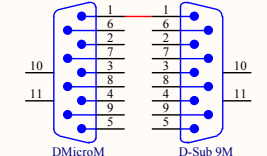
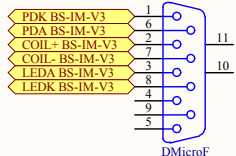
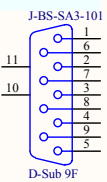
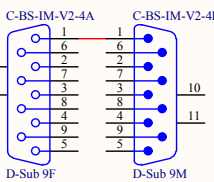
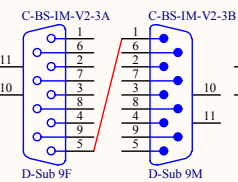
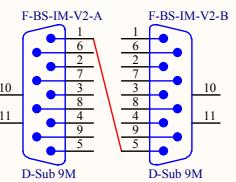
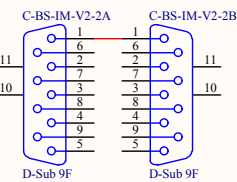
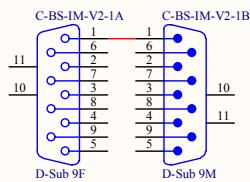
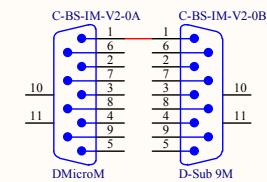
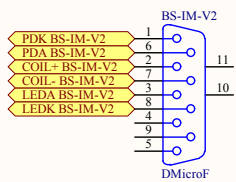
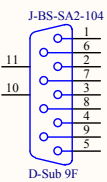
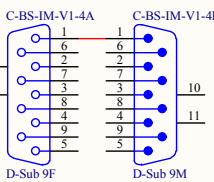
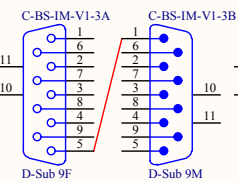
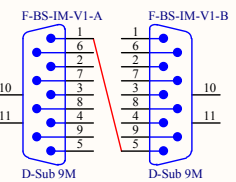
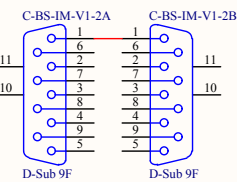
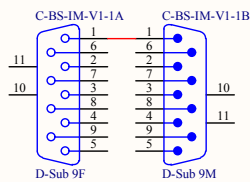
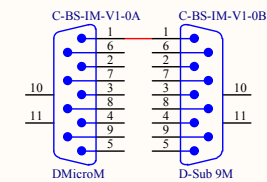
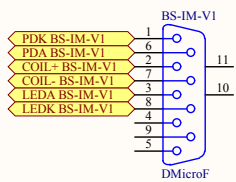
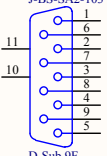
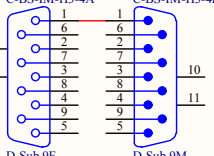
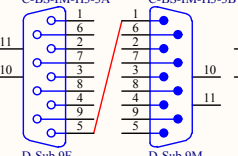
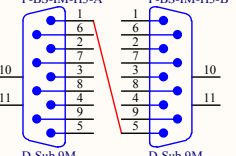
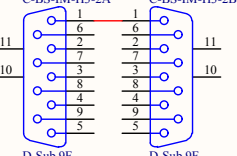
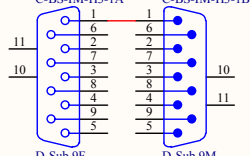
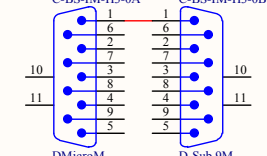
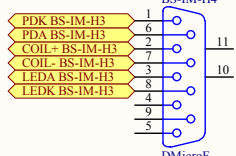
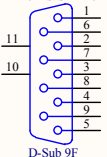
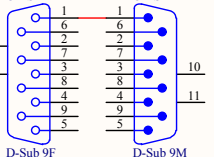
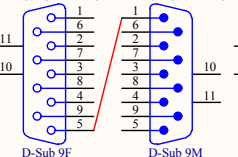
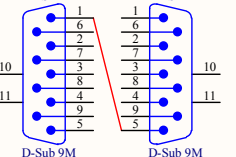
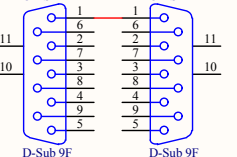
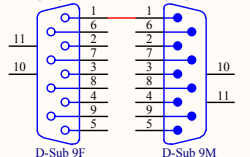
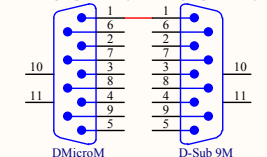
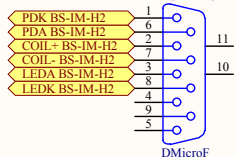
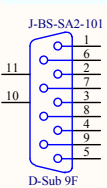
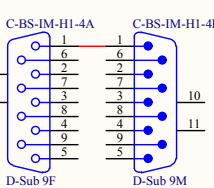
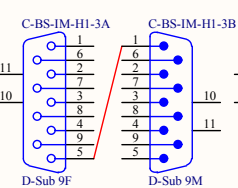
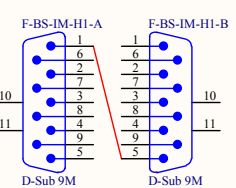
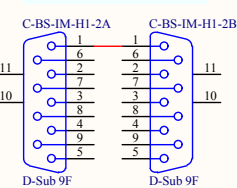
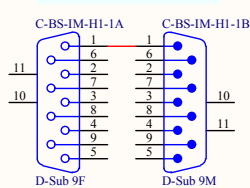
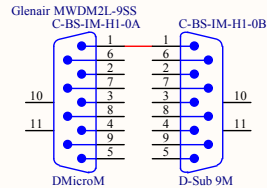
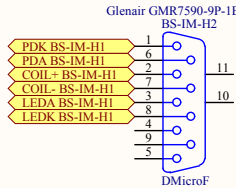
### SUS-Flange Signal Cable JGW-D1503901 Sheet 19

### Feedthrough

### Anti-Feedthrough Adapter Cable

### OSEM External Cable

### Sat Amp #2 D1402809

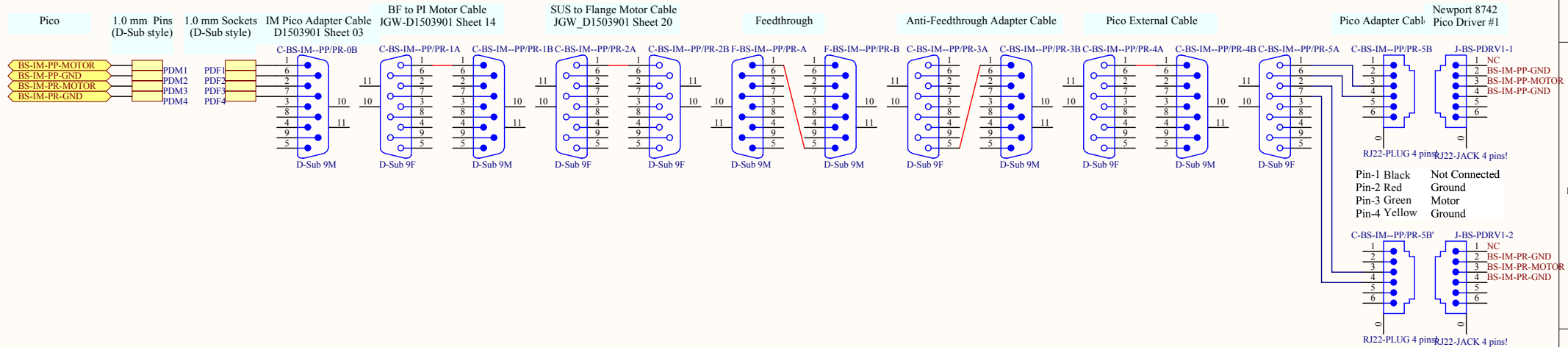


J-BS-SA3-103 and J-BS-SA3-104 not used

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Size A3	Number JGW-D1503600	Revision -v6
Date: 2015/08/08	Sheet 7 of 8	
File: Z:\Work\IM OSEMs.SchDoc	Drawn By:	

# 1 Feedthrough

## IM Picomotors

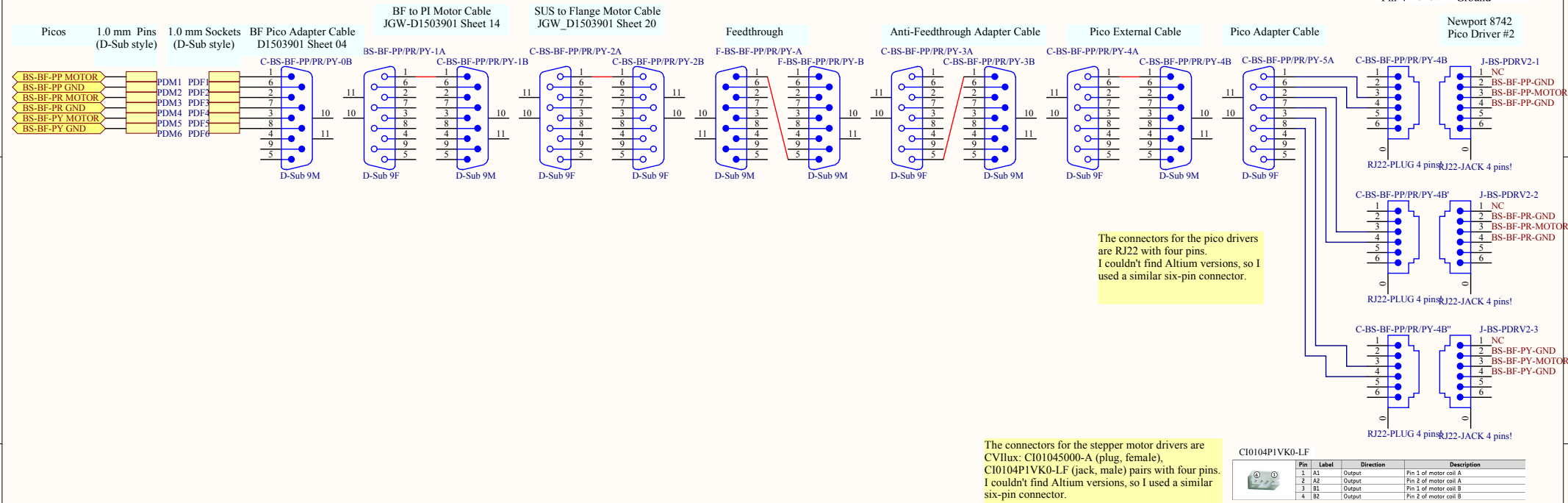


Title			
BS Suspension Cabling - Intermediate Mass Picos			
Size	Number	Revision	
A3	JGW-D1503600	-v6	
Date:	2015/08/08	Sheet 3 of 8	
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# BF and SF Picomotors and Steppers

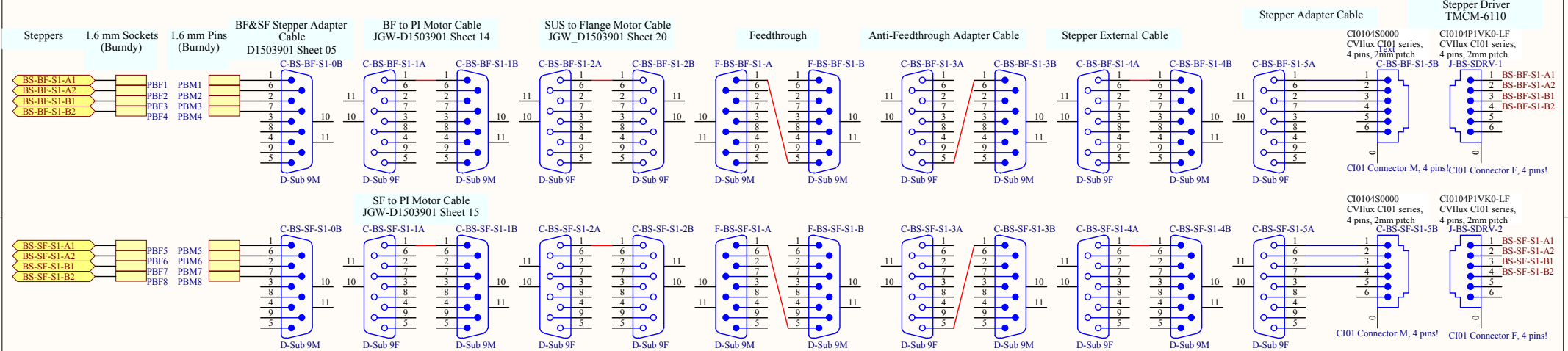
## 3 Feedthroughs

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



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.

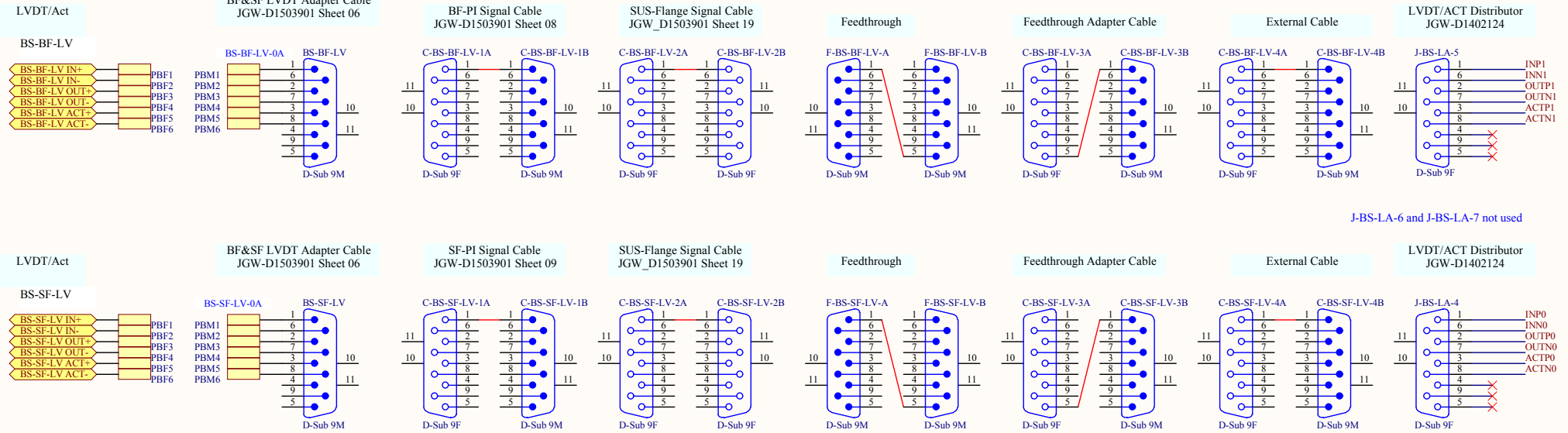
Pin	Label	Direction	Description
1	A1	Output	Pin 1 of motor coil A
2	A2	Output	Pin 2 of motor coil A
3	B1	Output	Pin 1 of motor coil B
4	B2	Output	Pin 2 of motor coil B



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

# BF and SF LVDT/ACTs

## 2 Feedthroughs



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

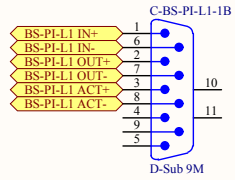
Title			
BS Suspension Cabling - Bottom and Standard Filter LVDTs			
Size	Number	Revision	
A3	JGW-D1503600	-v6	
Date:	2015/08/08	Sheet 5 of 8	
File:	Z:\Work\BF&SF LVDTs.SchDoc	Drawn By:	

# 4 Feedthroughs

# Preisolator LVDT/ACTs

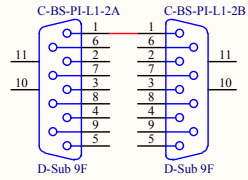
OPTIONAL  
Signal Cable Extension  
JGW\_D1503901 Sheet 20

LVDT/ACT

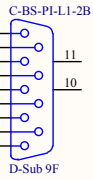


D-Sub 9M

TR-Flange Signal Cable  
JGW\_D1503901 Sheet 19

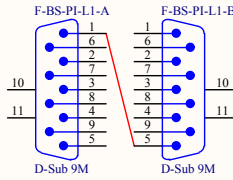


D-Sub 9F

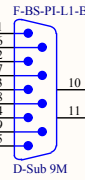


D-Sub 9F

Feedthrough

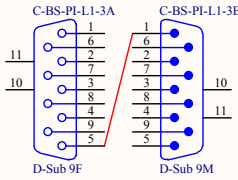


D-Sub 9M

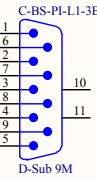


D-Sub 9M

Anti-Feedthrough Adapter Cable

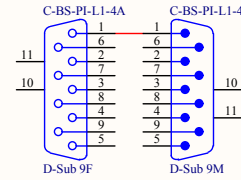


D-Sub 9F

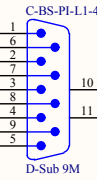


D-Sub 9M

LVDT/ACT External Cable

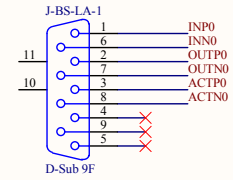


D-Sub 9F

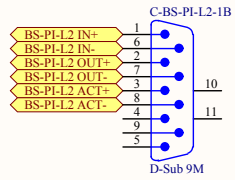


D-Sub 9M

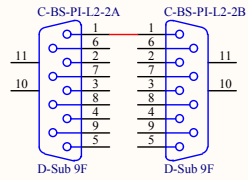
LVDT/ACT Distributor  
JGW D1402124



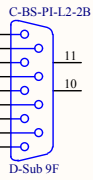
D-Sub 9F



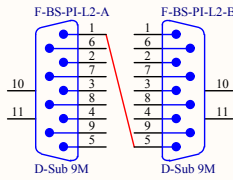
D-Sub 9M



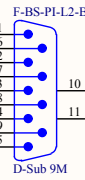
D-Sub 9F



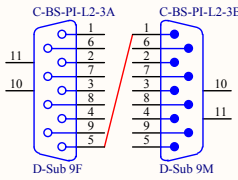
D-Sub 9F



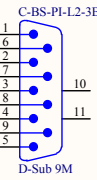
D-Sub 9M



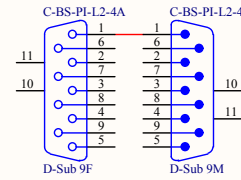
D-Sub 9M



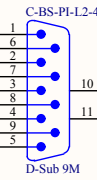
D-Sub 9F



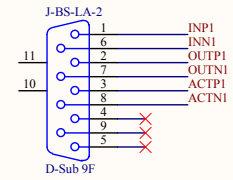
D-Sub 9M



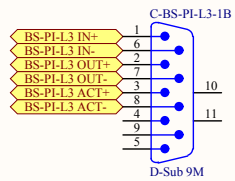
D-Sub 9F



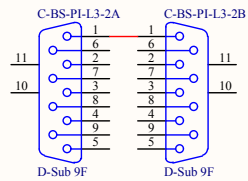
D-Sub 9M



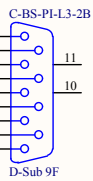
D-Sub 9F



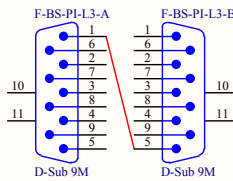
D-Sub 9M



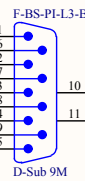
D-Sub 9F



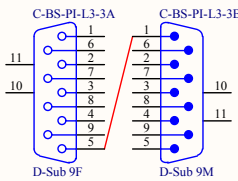
D-Sub 9F



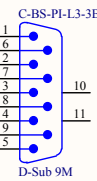
D-Sub 9M



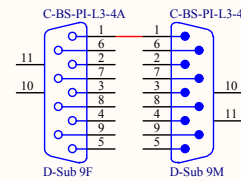
D-Sub 9M



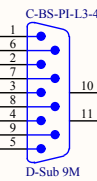
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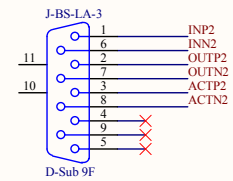
D-Sub 9M



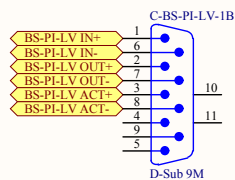
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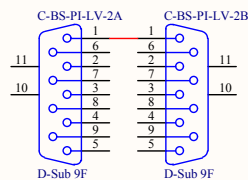
D-Sub 9M



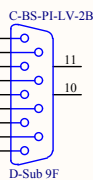
D-Sub 9F



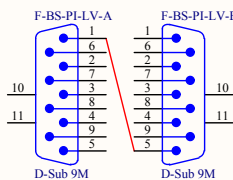
D-Sub 9M



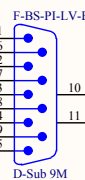
D-Sub 9F



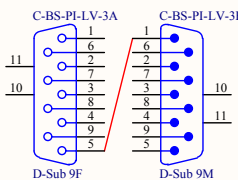
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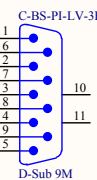
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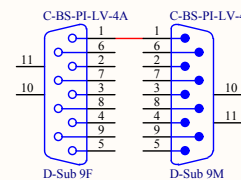
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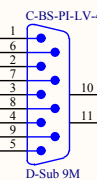
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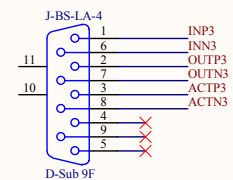
D-Sub 9M



D-Sub 9F



D-Sub 9M



D-Sub 9F

## 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	

Title BS Suspension Cabling - Preisolator LVDT/Actuators			
Size A3	Number JGW-D1503600	Revision -v6	
Date: 2015/08/08	Sheet 6 of 8	File: Z:\Work\PI LVDTs.SchDoc	Drawn By:

# 4 Feedthroughs

# Preisolator Steppers/Pico

OPTIONAL

Motor Cable Extension  
JGW\_D1503901 Sheet 16

TR to Flange Motor Cable  
JGW-D1503901 Sheet 20

Feedthrough

Anti-Feedthrough Adapter Cable

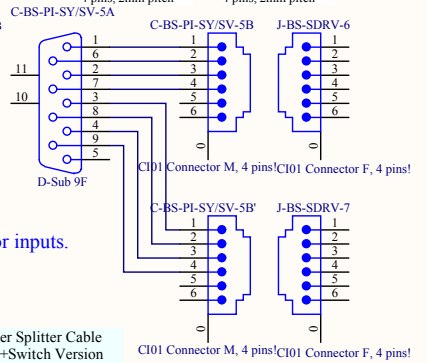
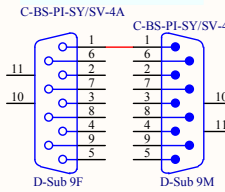
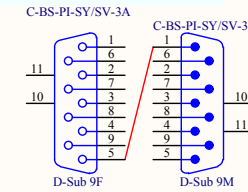
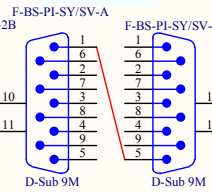
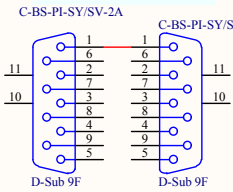
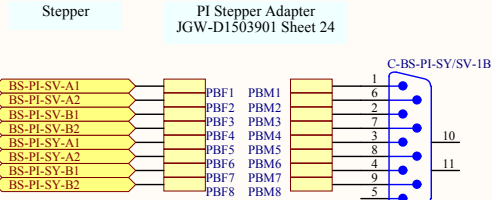
Stepper External Cable

Stepper Splitter Cable  
Double Motor Version

Stepper Driver  
TMCM-6110

C10104S0000  
CVIlux C101 series,  
4 pins, 2mm pitch

C10104P1VK0-LF  
CVIlux C101 series,  
4 pins, 2mm pitch

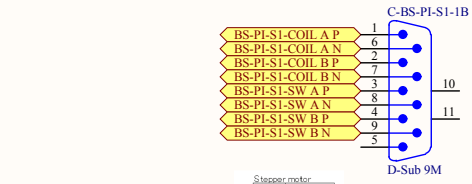


The vertical and yaw steppers have no limit switches and are combined on a single cable that VIS needs to provide.

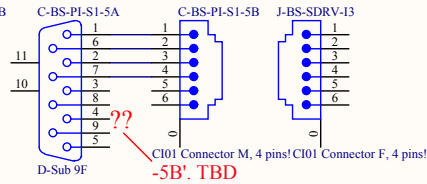
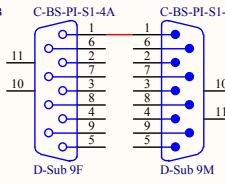
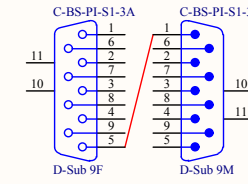
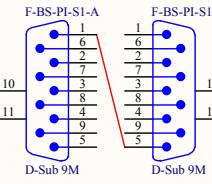
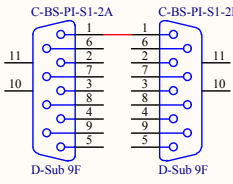
The horizontal steppers have limit switches and will be wired as indicated by the IP manufacturer.

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

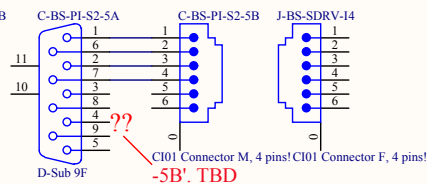
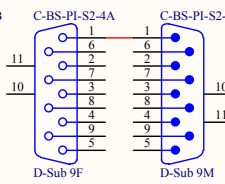
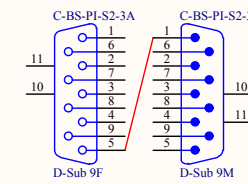
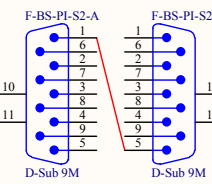
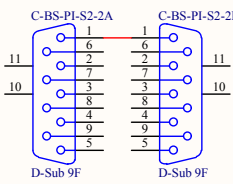
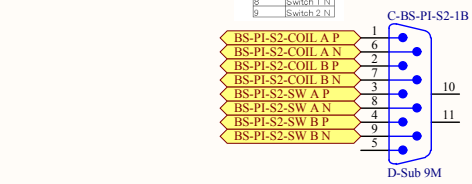
Controller motor inputs.



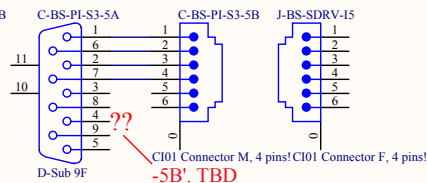
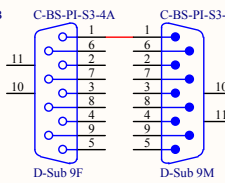
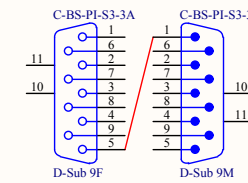
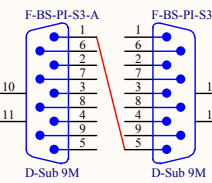
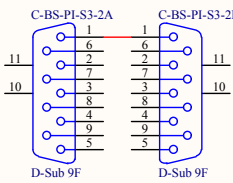
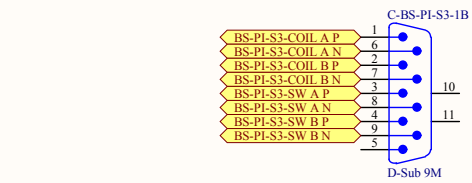
Stepper motor	Pin	Function
	1	COIL A P
	2	COIL B P
	3	Switch 1 LP
	4	Switch 2 P
	5	
	6	COIL A N
	7	COIL B N
	8	Switch 1 N
	9	Switch 2 N



??  
C101 Connector M, 4 pins! C101 Connector F, 4 pins!  
-5B'. TBD connector for limit switches



??  
C101 Connector M, 4 pins! C101 Connector F, 4 pins!  
-5B'. TBD connector for limit switches



??  
C101 Connector M, 4 pins! C101 Connector F, 4 pins!  
-5B'. TBD connector for limit switches

Title		
BS Suspension Cabling - Preisolator Steppers and Picomotor		
Size	Number	Revision
A3	JGW-D1503600	-v6
Date:	2015/08/08	Sheet 7 of 8
File:	Z:\Work\PI Picos&Steppers.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  
JGW-D1503901 Sheet 07

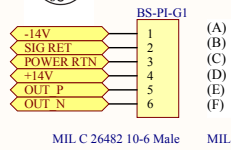
PI to Flange Geophone Cable  
JGW-E1503901 Sheet 12

Feedthrough

Anti-Feedthrough Adapter Cable

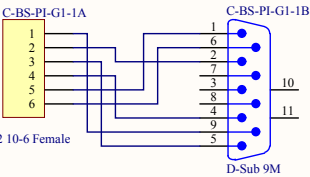
Geophone External Cable

Geophone Distributor  
JGW-D1402120



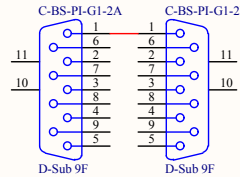
(A)  
(B)  
(C)  
(D)  
(E)  
(F)

MIL C 26482 10-6 Male



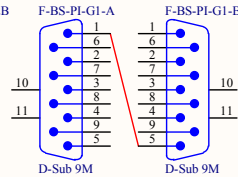
MIL C 26482 10-6 Female

D-Sub 9M



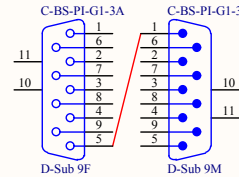
D-Sub 9F

D-Sub 9F



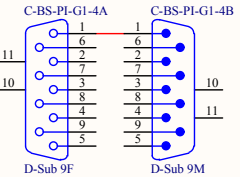
D-Sub 9M

D-Sub 9M



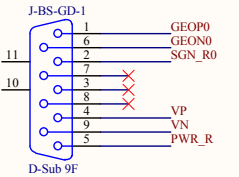
D-Sub 9F

D-Sub 9M

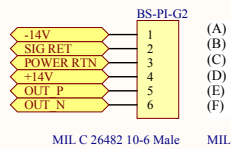


D-Sub 9F

D-Sub 9M

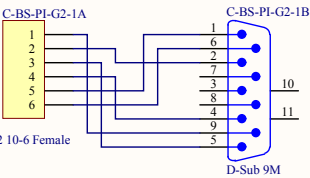


D-Sub 9F



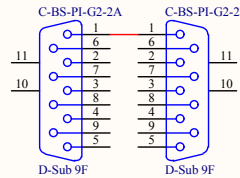
(A)  
(B)  
(C)  
(D)  
(E)  
(F)

MIL C 26482 10-6 Male



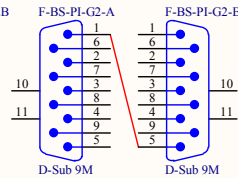
MIL C 26482 10-6 Female

D-Sub 9M



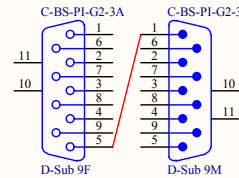
D-Sub 9F

D-Sub 9F



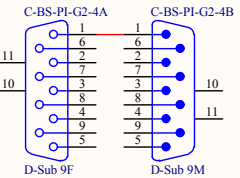
D-Sub 9M

D-Sub 9M



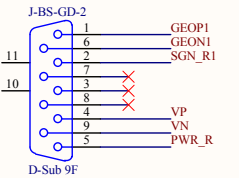
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D-Sub 9M

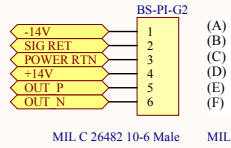


D-Sub 9F

D-Sub 9M

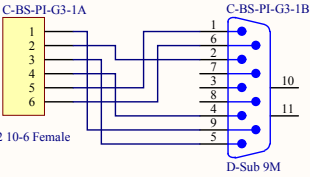


D-Sub 9F



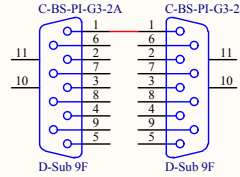
(A)  
(B)  
(C)  
(D)  
(E)  
(F)

MIL C 26482 10-6 Male



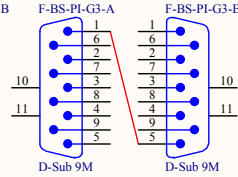
MIL C 26482 10-6 Female

D-Sub 9M



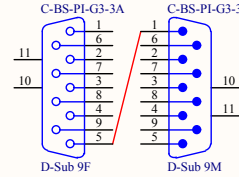
D-Sub 9F

D-Sub 9F



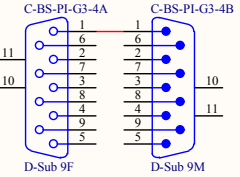
D-Sub 9M

D-Sub 9M



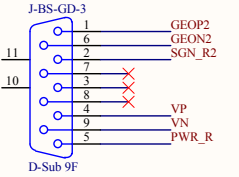
D-Sub 9F

D-Sub 9M



D-Sub 9F

D-Sub 9M



D-Sub 9F

J-BS-GD-4 not used

Title			BS Suspension Cabling - Preisolator Geophones		
Size	Number	JGW-D1503600		Revision	-v6
A3					
Date:	2015/08/08	Sheet	8 of 8	Drawn By:	
File:	Z:\Work\PI Geophones.SchDoc				