

4 Feedthroughs

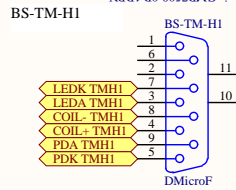
Incorporates flip to correct
flexicircuit issue!!!

TM OSEM to BF Cable
JGW-D1503901 Sheet 01

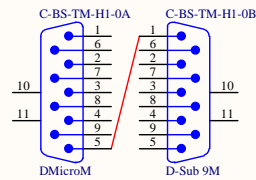
TM OSEMs

OSEM

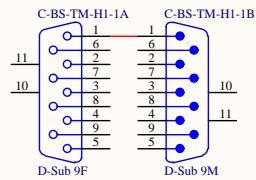
NdIairt GMR7590-9P-9P-1B1Pn



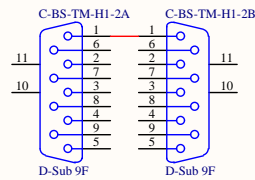
Glenair MWDML-9S5



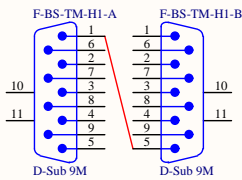
BF to F0 Signal Cable
JGW-D1503901 Sheet 08



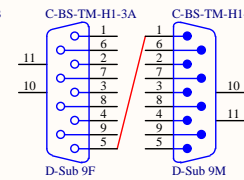
PI-Flange Signal Cable
JGW-D1503901 Sheet 11



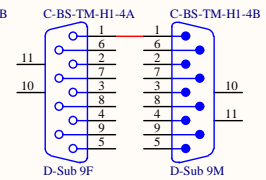
Feedthrough



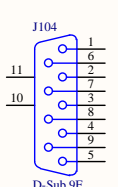
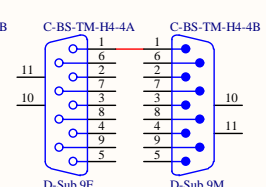
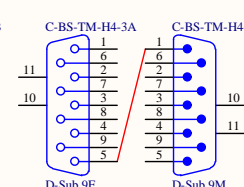
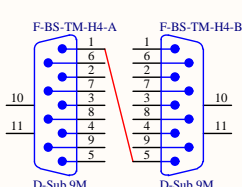
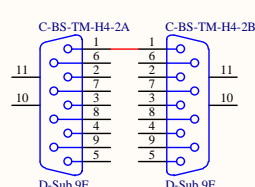
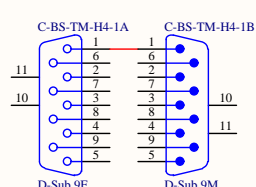
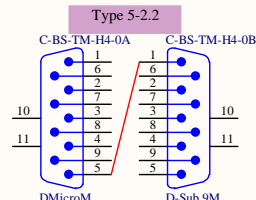
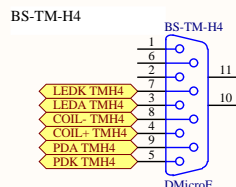
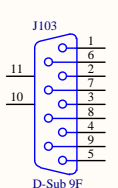
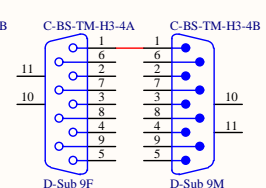
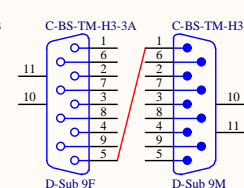
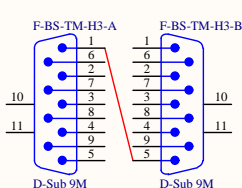
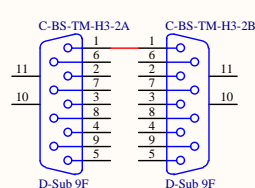
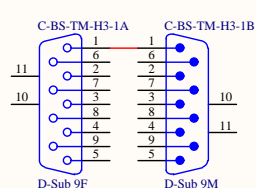
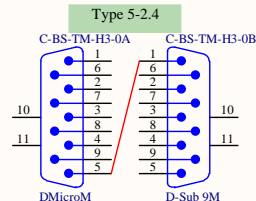
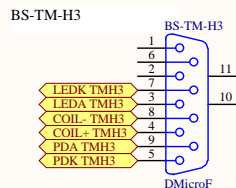
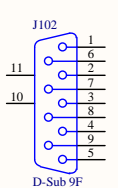
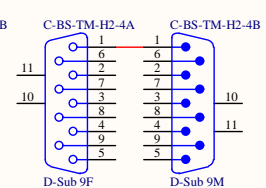
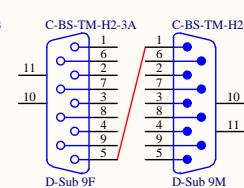
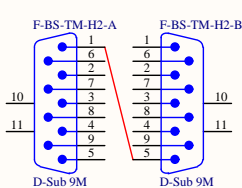
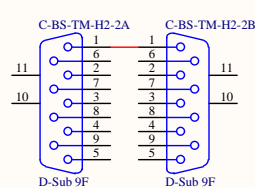
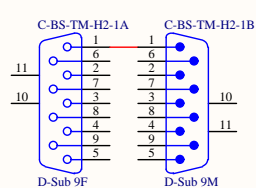
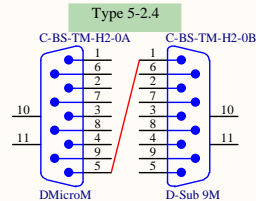
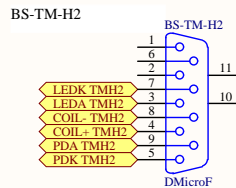
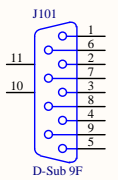
Anti-Feedthrough Adapter Cable



OSEM External Cable



Sat Amp #0
D1402809



Title BS Suspension Cabling - Test Mass OSEMs		
Size A3	Number JGW-D1503600	Revision -v13draft
Date: 20-04-2017	Sheet 1 of 18	
File: C:\Users\...01 TM OSEMs.SchDoc	Drawn By:	

6 Feedthroughs

Incorporates flip to correct flexicircuit issue!!!

IM OSEMs

IM OSEM to BF Cable
JGW-D1503901 Sheet 02

BF to F0 Signal Cable
JGW-D1503901 Sheet 08

PI-Flange Signal Cable
JGW-D1503901 Sheet 11

Feedthrough

Anti-Feedthrough Adapter Cable

OSEM External Cable

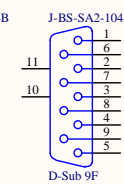
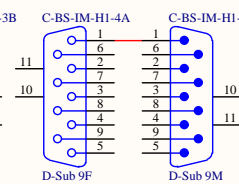
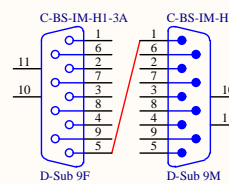
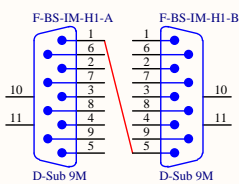
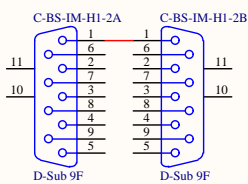
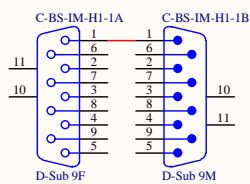
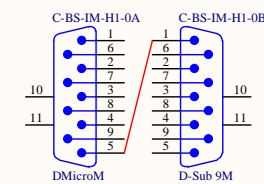
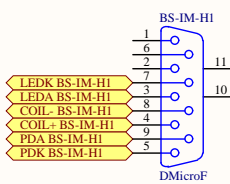
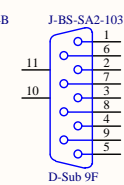
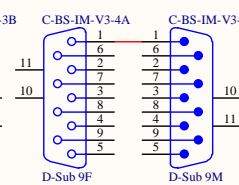
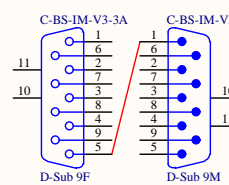
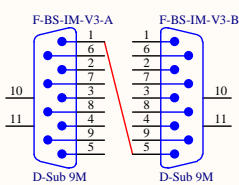
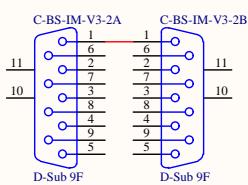
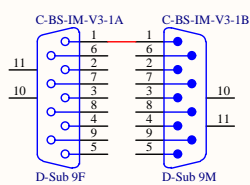
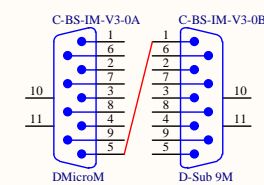
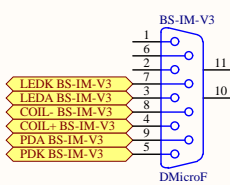
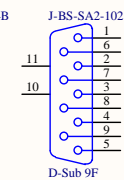
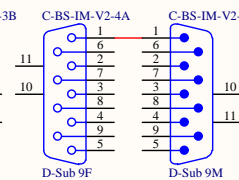
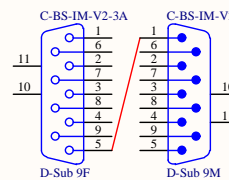
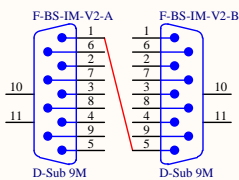
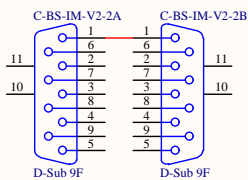
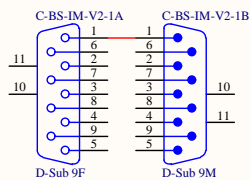
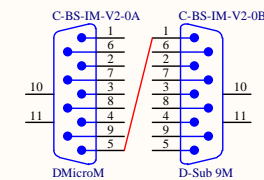
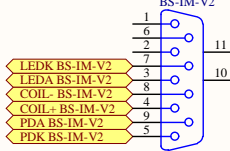
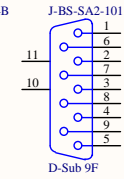
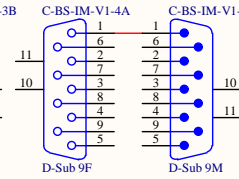
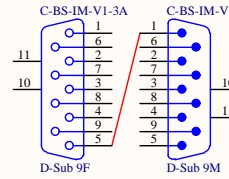
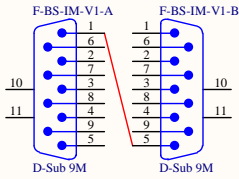
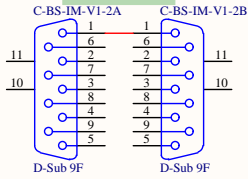
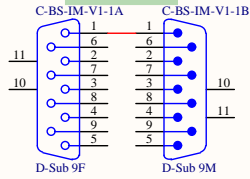
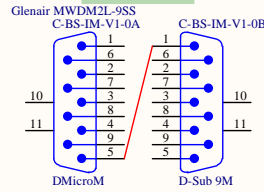
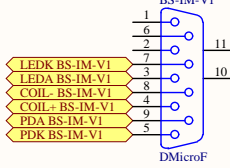
Sat Amp #1
D1402809

OSEM

Type 5-1.6

Type 3-4

Type 1

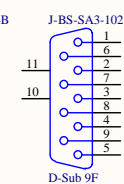
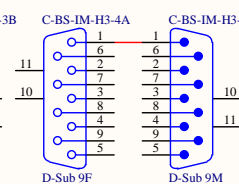
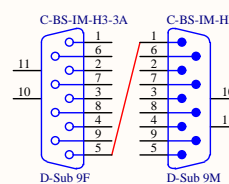
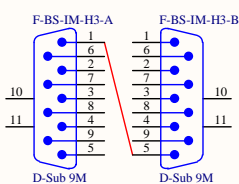
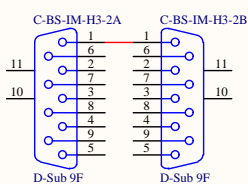
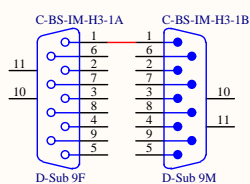
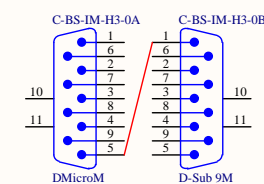
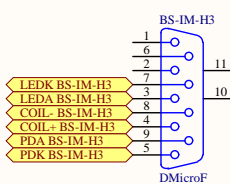
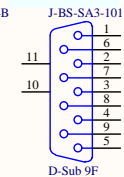
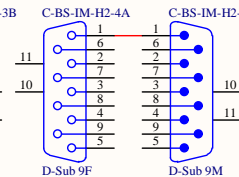
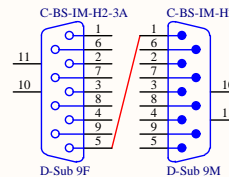
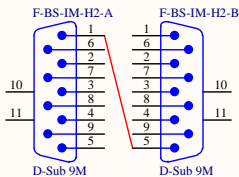
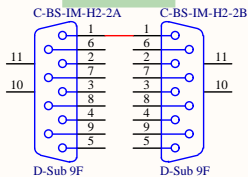
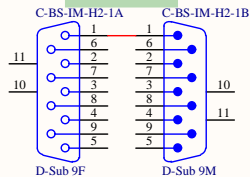
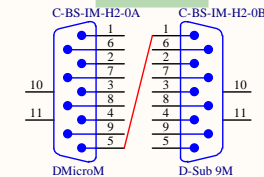
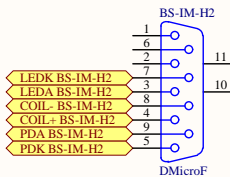


Type 5-1.6

Type 3-4

Type 1

Sat Amp #2
D1402809

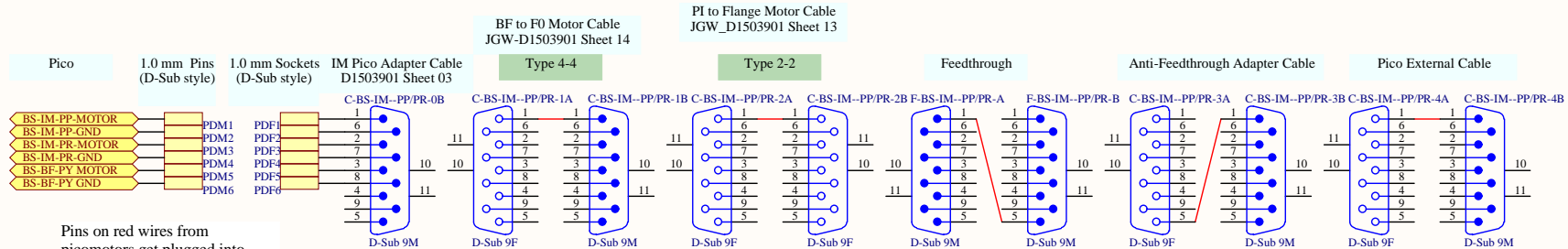


J-BS-SA3-103 and J-BS-SA3-104 not used

Title			
BS Suspension Cabling - Intermediate Mass OSEMs			
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A3	JGW-D1503600	-v13draft	
Date:	20-04-2017	Sheet 3 of 18	
File:	C:\Users\...02 IM OSEMs.SchDoc	Drawn By:	

1 Feedthrough

IM Picomotors & BF Yaw Picomotor

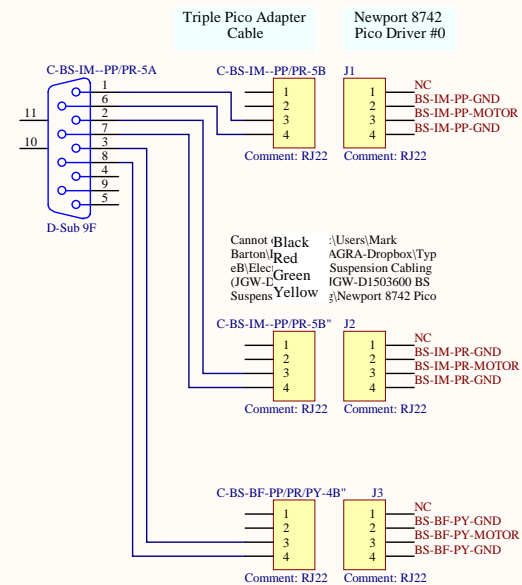


The connectors for the pico drivers are RJ22 with four pins. I couldn't find Altium versions, so I used a random four-pin connector.

The adapter cable is made by combining the cables supplied by the pico manufacturer (Newport) with a D-Sub 9 female.

Green wires from manufacturer's cables get soldered to pins 1, 2.

Yellow wires from manufacturer's cables get soldered to pins 6, 7.



In -v10, the BS Yaw Pico was moved to the IM sheet and grouped with the IM picos, because it's more physically convenient for wiring and more logical (it actually rotates the IM).

Title			
BS Suspension Cabling - IM Picos and BF Yaw Pico			
Size	Number	Revision	
A3	JGW-D1503600	-v13draft	
Date:	20-04-2017	Sheet	3of 18
File:	C:\Users\...03 IM Picos & BF Yaw Pico	Sub:Drawn By:	

3 Feedthroughs

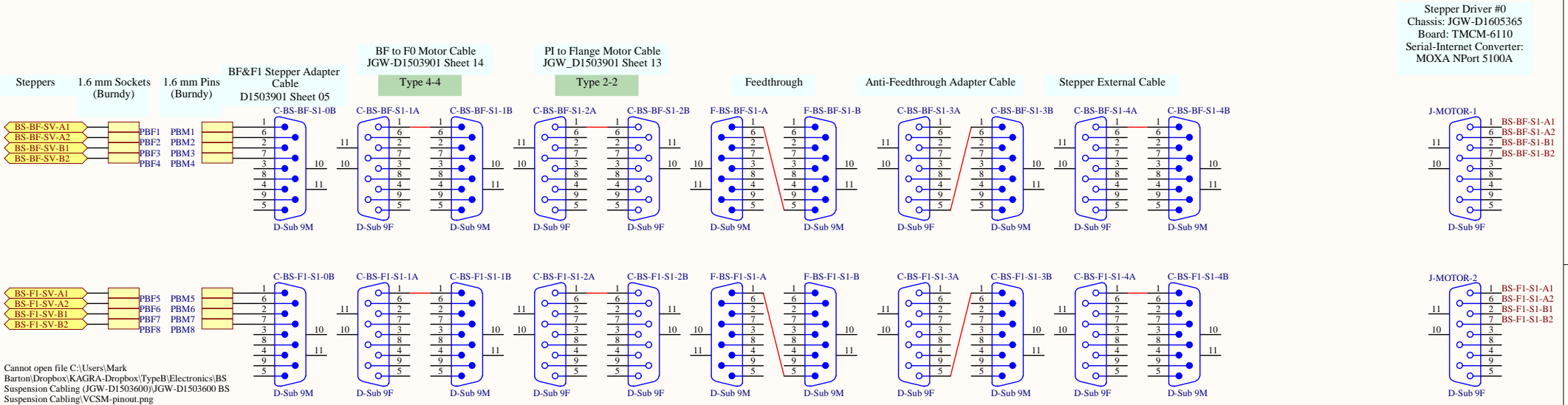
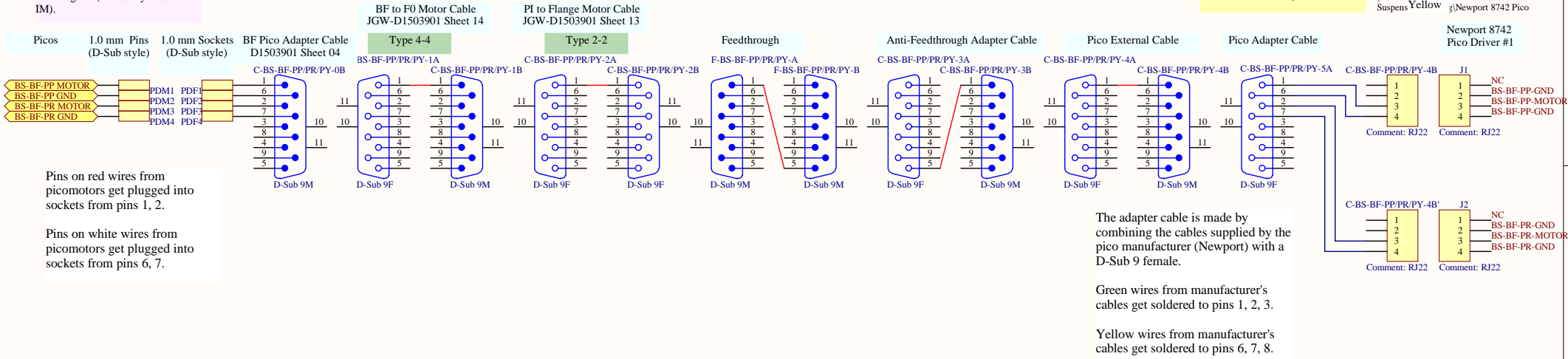
In -v10, the BS Yaw Pico was moved to the IM sheet and grouped with the IM picos, because it's more physically convenient for wiring and more logical (it actually rotates the IM).

BF and F1 Picomotors and Steppers

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

Cannot (Black Barton) Red Suspension Cabling (JGW-D1503600 BS Suspensions Yellow

(Users)Mark Agra-Dropbox)Type Suspension Cabling (JGW-D1503600 BS Newport 8742 Pico



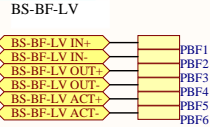
Title			
BS Suspension Cabling - Bottom and Standard Filter Picos/Steppers			
Size	Number	Revision	
A3	JGW-D1503600	-v13draft	
Date:	20-04-2017	Sheet 4of	18
File:	C:\Users\...04 BF&F1 Picos&Steppers.SchDoc	Drawn By:	

GAS (BF, F1 and F0) LVDT/ACTs

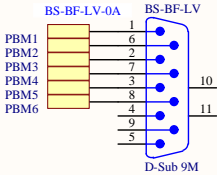
2 Feedthroughs

LVDT/ACT Distributor - see also Sheet 12
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Front Panel: JGW-D1402827
Rear Panel: JGW-D1402828
Board: JGW-D1402117

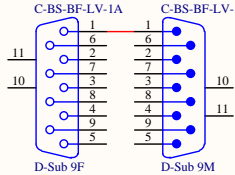
LVDT/Act
BF GAS



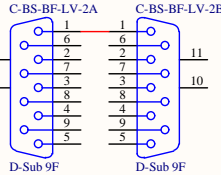
BF&F1 LVDT Adapter Cable
JGW-D1503901 Sheet 06



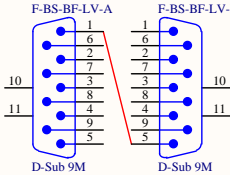
BF-F0 Signal Cable
JGW-D1503901 Sheet 08



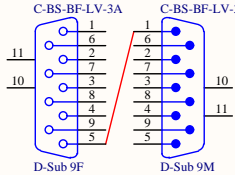
PI-Flange Signal Cable
JGW_D1503901 Sheet 11



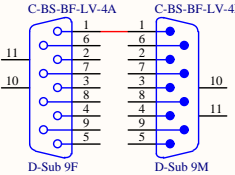
Feedthrough



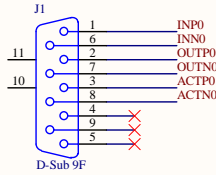
Feedthrough Adapter Cable



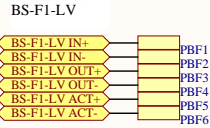
External Cable



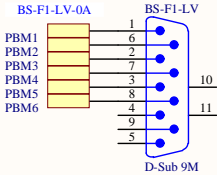
Ch 0



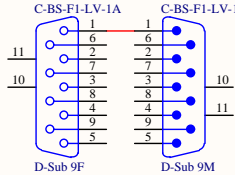
LVDT/Act
F1 GAS



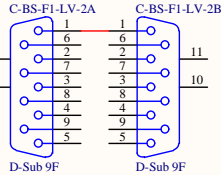
BF&F1 LVDT Adapter Cable
JGW-D1503901 Sheet 06



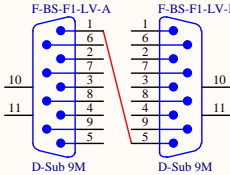
BF-F0 Signal Cable
JGW-D1503901 Sheet 08



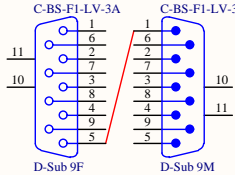
PI-Flange Signal Cable
JGW_D1503901 Sheet 13



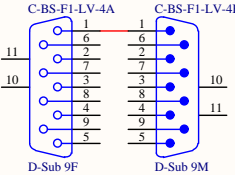
Feedthrough



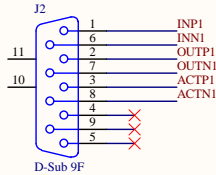
Feedthrough Adapter Cable



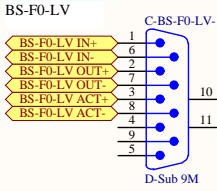
External Cable



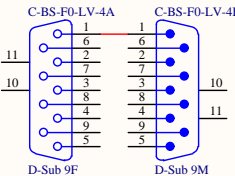
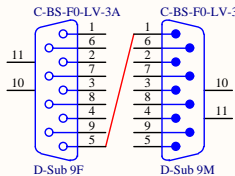
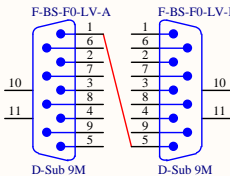
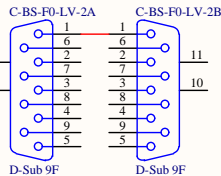
Ch 1



LVDT/Act
F0 GAS

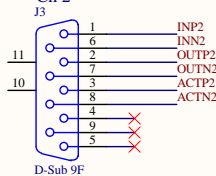


OPTIONAL
Signal Cable Extension
JGW_D1503901 Sheet 10

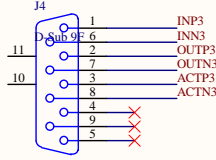


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Ch 2



Ch 3



Title BS Suspension Cabling - GAS LVDTs		
Size A3	Number JGW-D1503600	Revision -v13draft
Date: 20-04-2017	Sheet 5of 18	
File: C:\Users\...05 GAS LVDTs.SchDoc	Drawn By:	

4 Feedthroughs

Preisolator LVDT/ACTs

LVDT/ACT Distributor - see also Sheet 13
Chassis: JGW-D1402124
Front Panel: JGW-D1402827
Rear Panel: JGW-D1402828
Board: JGW-D1402117

LVDT/ACT

OPTIONAL
Signal Cable Extension
JGW_D1503901 Sheet 10

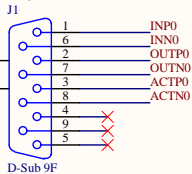
PI-Flange Signal Cable
JGW_D1503901 Sheet 11

Feedthrough

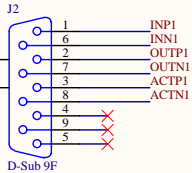
Anti-Feedthrough Adapter Cable

LVDT/ACT External Cable

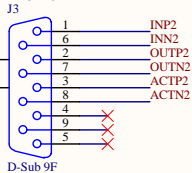
Ch 4



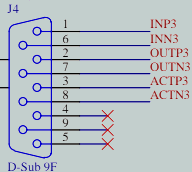
Ch 5



Ch 6



Ch 7



Cannot open file C:\Users\Mark
Barton\Dropbox\KAGRA-Dropbox\TypeB\Elect
ronics\BS Suspension Cabling
(JGW-D1503600)\JGW-D1503600 BS
Suspension Cabling\LP LVDT.png

Title BS Suspension Cabling - Preisolator LVDT/Actuators			
Size A3	Number JGW-D1503600	Revision -v13draft	
Date: 20-04-2017	Sheet 6 of 18		
File: C:\Users\...06 F0 LVDTs.SchDoc	Drawn By:		

4 Feedthroughs

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

Preisolator Steppers

TMC6110
Stepper Driver #2

Stepper Splitter Cable Double Motor Version

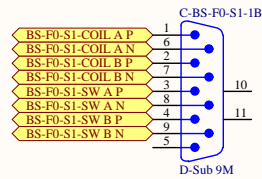
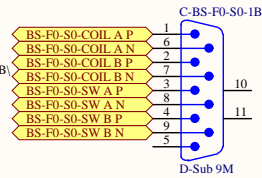
Stepper Driver #1
Chassis: JGW-D1605365
Board: TCM-6110
Serial-Internet Converter:
MOXA NPort 5100A

Stepper

F0 Stepper Adapter
JGW-D1503901 Sheet 24

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

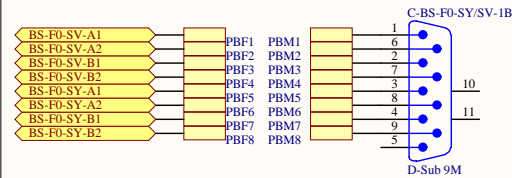
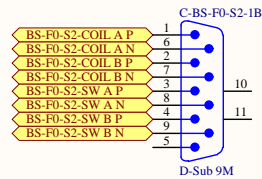
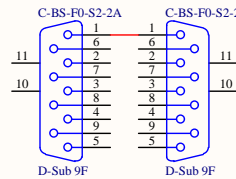
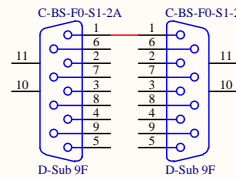
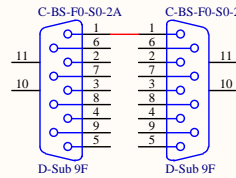
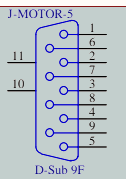
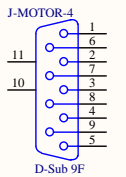
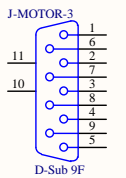
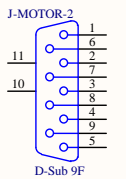
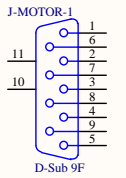
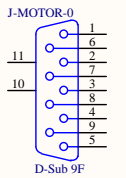
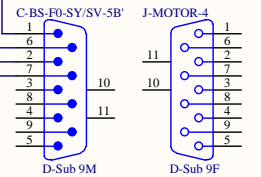
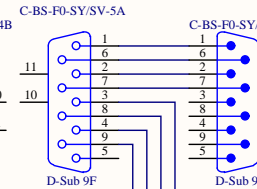
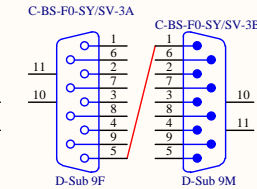
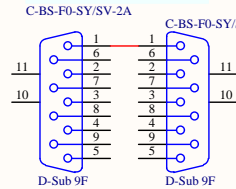
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Electronics\BS Suspension Cabling
(JGW-D1503600)\JGW-D1503600 BS
Suspension Cabling\IP Stepper.png



OPTIONAL

Motor Cable Extension

JGW_D1503901 Sheet 16

PI to Flange Motor Cable
JGW-D1503901 Sheet 13PI to Flange Motor Cable
JGW-D1503901 Sheet 13

Title	BS Suspension Cabling - Preisolator Steppers
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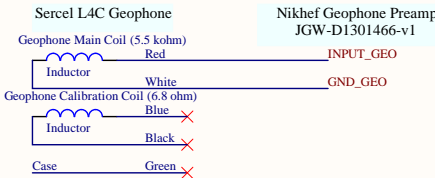
Size A3	Number JGW-D1503600	Revision -v13draft
Date:	20-04-2017	Sheet 7of 18
File:	C:\Users\...\07 F0 Steppers.SchDoc	Drawn By:

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 11

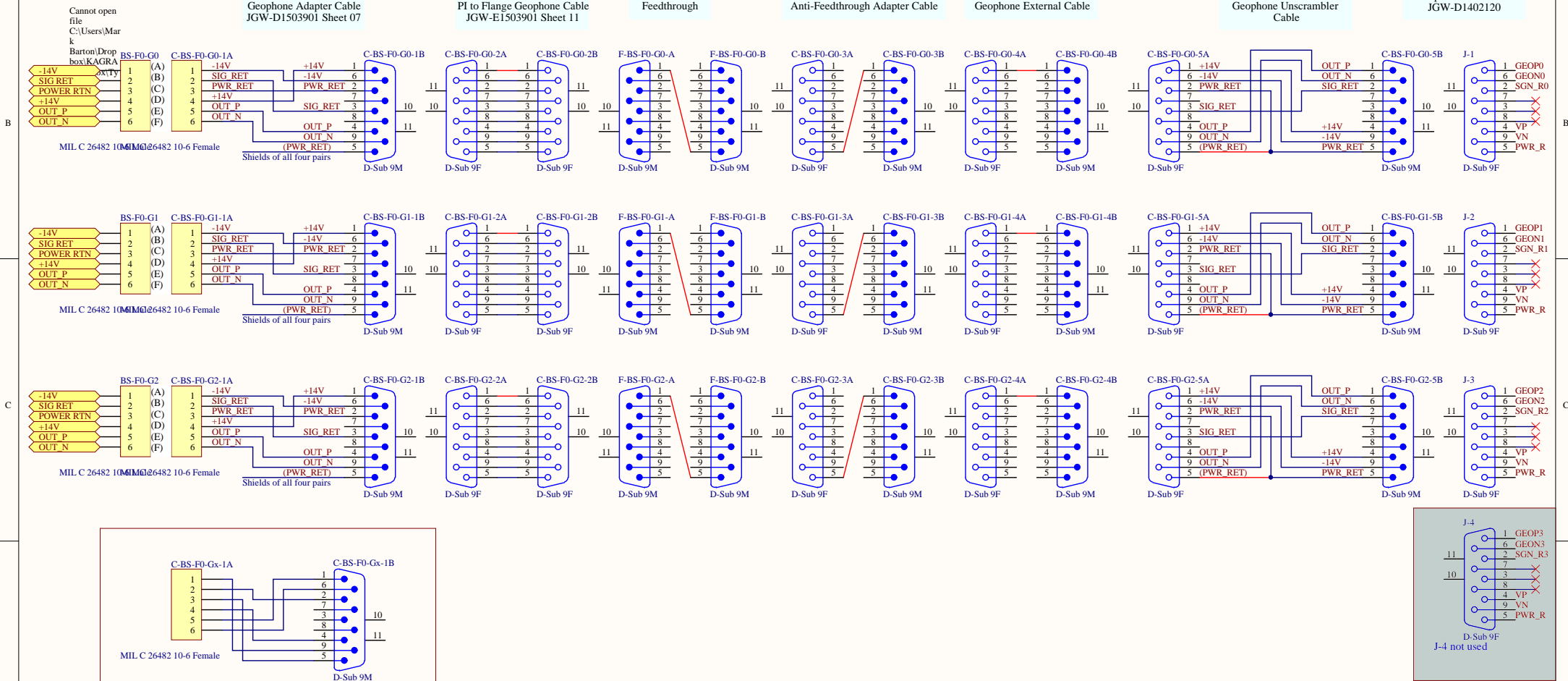
Feedthrough

Anti-Feedthrough Adapter Cable

Geophone External Cable

Geophone Unscrambler Cable

Geophone Distributor
JGW-D1402120



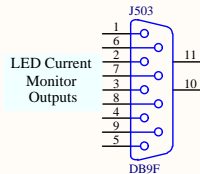
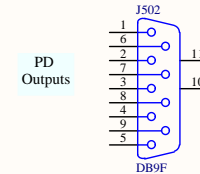
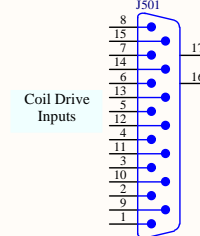
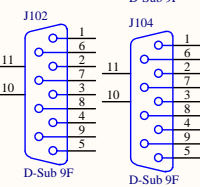
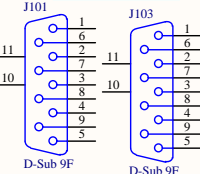
Title		
BS Suspension Cabling - Preisolator Geophones		
Size	Number	Revision
A3	JGW-D1503600	-v13draft
Date:	20-04-2017	Sheet 8 of 18
File:	C:\Users\...08 F0 Geophones.SchDoc	Drawn By:

OSEM Sat Amp and Driver - TM

Sat Amp #0

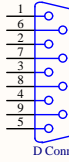
Chassis: JGW-D1503498,
Front Panel: JGW-D1503500,
Rear Panel: JGW-D1503500,
Board: JGW-D1503499

Inputs from TM
OSEMs
(see Sheet 1)

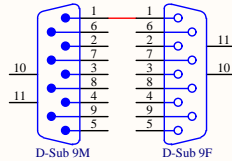


AI Chassis #0 D1100650

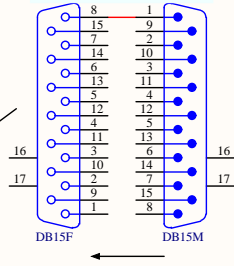
AI Out 0-3



Generic D-Sub 9 Cable M-F

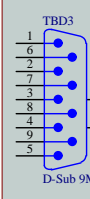


Generic D-Sub 15 Cable M-F

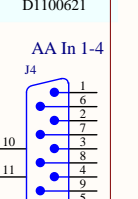


AA Chassis #1 D1100621

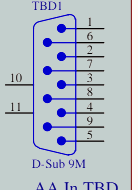
AA In TBD



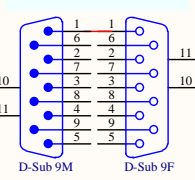
AA Chassis #0 D1100621



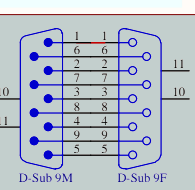
AA In TBD



Generic D-Sub 9 Cable M-F

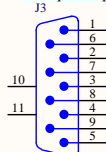


Generic D-Sub 9 Cable M-F

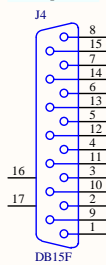


Low Power Coil Driver #0

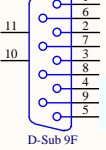
Coil Current Request Inputs



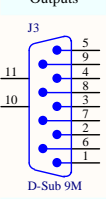
Coil Drive Outputs



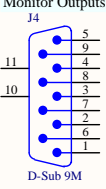
Noise Monitor Input



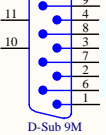
Voltage Monitor Outputs



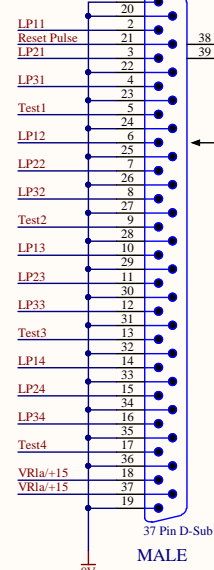
Fast Current Monitor Outputs



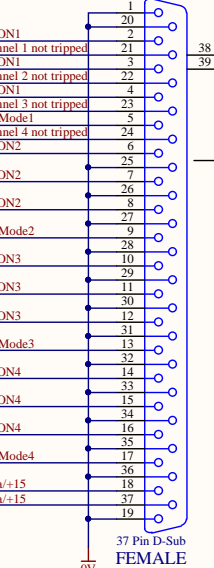
Slow Current Monitor Outputs



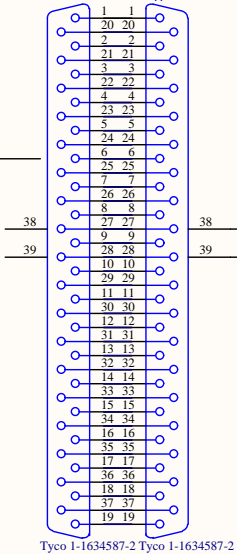
Binary IO 2 DIO Input



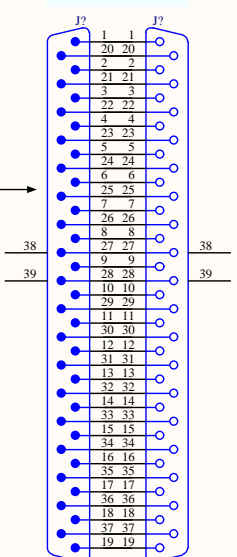
Binary IO 1 DIO Output



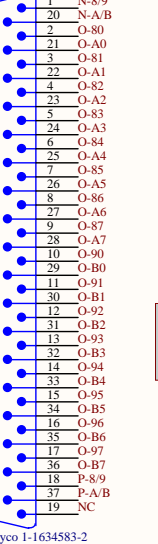
Cable F-M and Gender Bender F-F 37 pin



Cable M-F 37 pin



CNB/CNA (Output 1)



DIO Card #0

Contec DIO-6464L-PE

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C:\Users\Mark
Barton\Dropbox\KAGRA-D
ropbox\TypeB\Electronics\
BS Suspension Cabling
(JGW-D1503600)\JGW-D1
503600 BS Suspension
Cabling\DI06464L-PE.DIO

PCB100WS Cable
Cable

PCB100WS Cable

PCB100WS Cable

PCB100WS Cable

PCB100WS Cable

PCB100WS Cable

PCB100WS Cable

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PCB100WS Cable

PCB100WS Cable

PCB100WS Cable

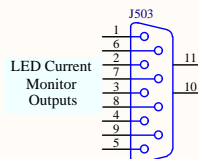
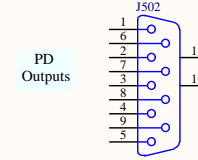
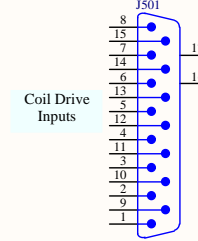
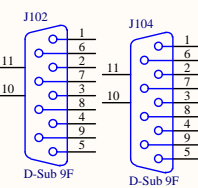
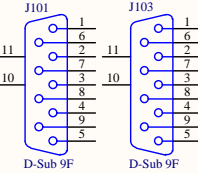
Title		
BS Suspension Cabling - OSEM Sat Amps & Drivers - TM		
Size	Number	Revision
A3	JGW-D1503600	-v13draft
Date:	20-04-2017	Sheet 9 of 18
File:	C:\Users\...09 Sat Amps & Coil Drivers\OSEM Sat Amps & Drivers - TM	

OSEM Sat Amp and Driver - IM 1

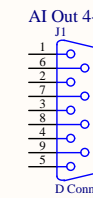
Sat Amp #1

Chassis: JGW-D1503498,
Front Panel: JGW-D1503500,
Rear Panel: JGW-D1503500,
Board: JGW-D1503499

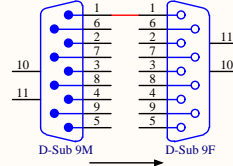
Inputs from IM OSEMs
V1, V2, V3, H1
(see Sheet 2)



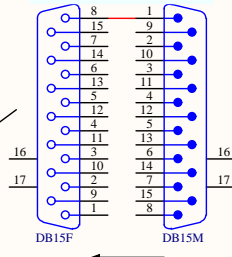
AI Chassis #0
D1100650



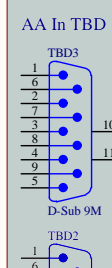
Generic D-Sub 9 Cable M-F



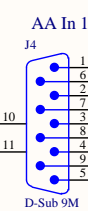
Generic D-Sub 15 Cable M-F



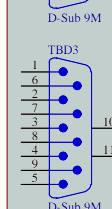
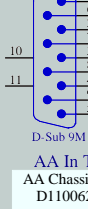
AA Chassis #1
D1100621



AA Chassis #0
D1100621

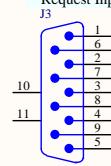


AA In TBD
TBD1

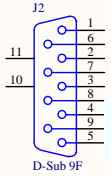
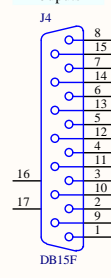


Low Power Coil Driver #1

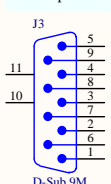
Coil Current
Request Inputs



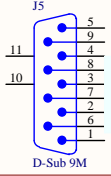
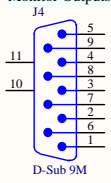
Coil Drive
Outputs



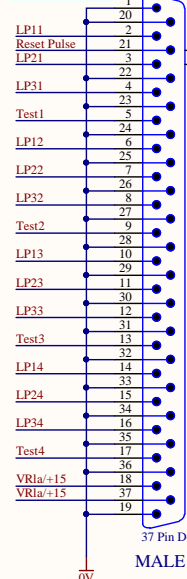
Voltage Monitor
Outputs



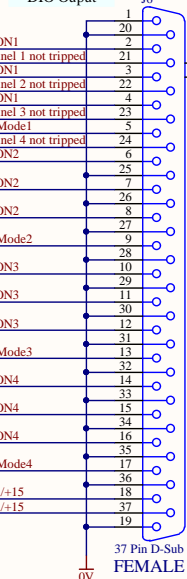
Fast Current
Monitor Outputs



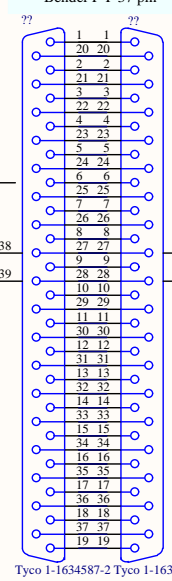
Binary IO 2
DIO Input



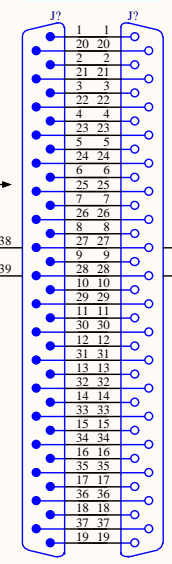
Binary IO 1
DIO Output



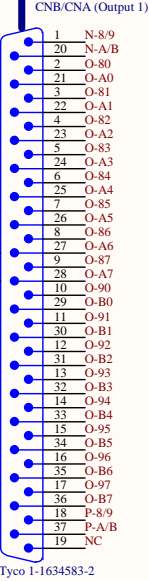
Cable F-M and Gender
Bender F-F 37 pin



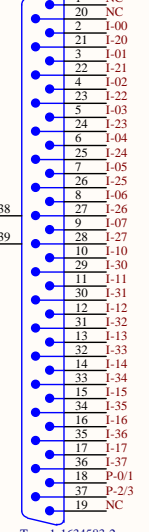
Cable M-F 37 pin



CNB/CNA (Output 1)



CNA/CNA (Input 1)



DIO Card #0

Contec DIO-6464L-PE

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Barton\Dropbox\KAGRA-D
ropbox\TypeB\Electronics\
BS Suspension Cabling
(JGW-D1503600)\JGW-D1
503600 BS Suspension
Cabling\DI06464L-PE-PCB100WS Cable

CNB/CNB (Output 2)
See Sheet 11.

CNA/CNB (Input 2)
See Sheet 11.

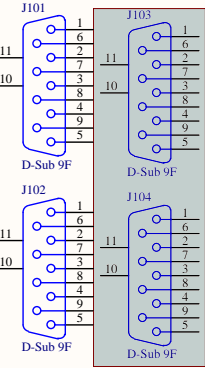
Title BS Suspension Cabling - OSEM Sat Amps & Drivers - IM 1		
Size A3	Number JGW-D1503600	Revision -v13draft
Date: 20-04-2017	Sheet10of 18	
File: C:\Users\10\Sat Amps & Coil Drivers\IM1\SubDoc		

OSEM Sat Amp and Driver - IM 2

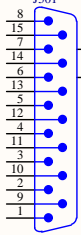
Sat Amp #1

Chassis: JGW-D1503498,
Front Panel: JGW-D1503500,
Rear Panel: JGW-D1503500,
Board: JGW-D1503499

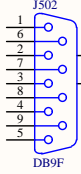
Inputs from IM
OSEMs H2, H3
(see Sheet 2)



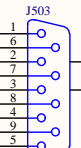
Coil Drive
Inputs



PD
Outputs

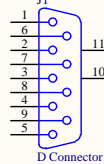


LED Current
Monitor
Outputs

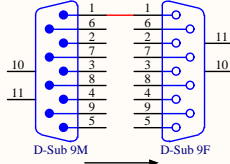


AI Chassis #0
D1100650

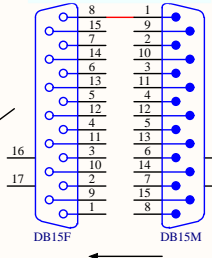
AI Out 8-11



Generic D-Sub 9 Cable M-F



Generic D-Sub 15 Cable M-F



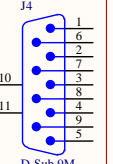
AA Chassis #1
D1100621

AA In TBD



AA Chassis #0
D1100621

AA In 1-4



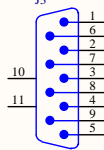
AA Chassis #1
D1100621

AA In TBD

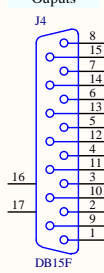


Low Power Coil Driver #2

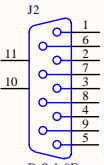
Coil Current
Request Inputs



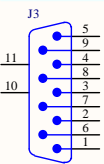
Coil Drive
Outputs



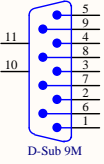
Noise
Monitor
Input



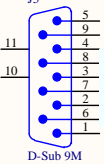
Voltage Monitor
Outputs



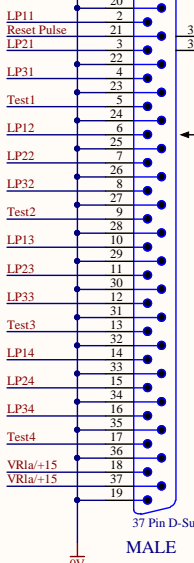
Fast Current
Monitor Outputs



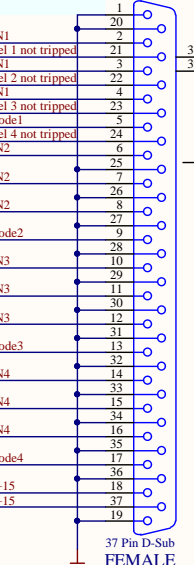
Slow
Current
Monitor
Outputs



Binary IO 2
DIO Input

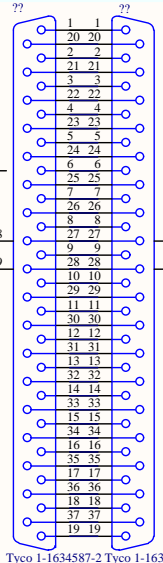


Binary IO 1
DIO Output

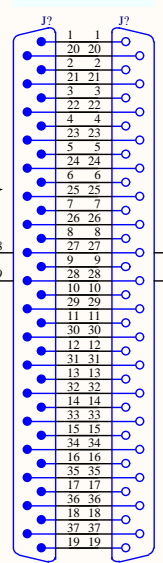


Chassis: JGW-D1503506,
Front Panel: JGW-D1503508,
Main Board: JGW-D1503507
BIO Board: JGW-D1504332

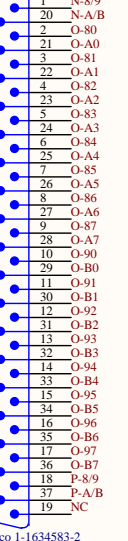
Cable F-M and Gender
Bender F-F 37 pin



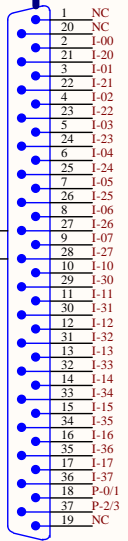
Cable M-F 37 pin



CNB/CNB (Output 2)



CNA/CNB (Input 2)



DIO Card #1

Contec DIO-6464L-PE

See also Sheet 10.

See Sheet 10.

CNB/CNB (Output 1)

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Barton\Dropbox\KAGRA-D

ropbox\TypeB\Electronics\

See also Sheet 10.

See also Sheet 10.

PCB100WS Cable

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

See also Sheet 10.

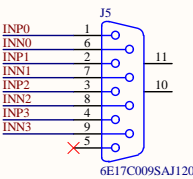
See also Sheet 10.

BS&F1 LVDT Drivers

Inputs from
BS&F1
LVDTs
(see Sheet 5)

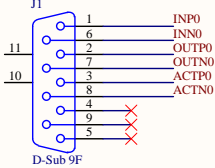
LVDT/ACT Distributor - see also Sheet 13
Chassis: JGW-D1402124
Front Panel: JGW-D1402827
Rear Panel: JGW-D1402828
Board: JGW-D1402117

Ch 0-3 LVDT-IN



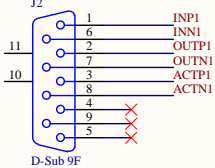
6E17C009SAJ120

Ch 0



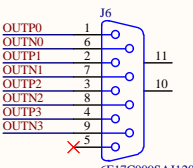
D-Sub 9F

Ch 1



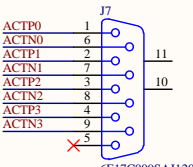
D-Sub 9F

Ch 0-3 LVDT-OUT



6E17C009SAJ120

Ch 0-3 ACT



6E17C009SAJ120

1734348-1

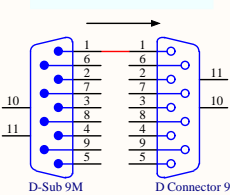
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2 inputs
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Ch 2

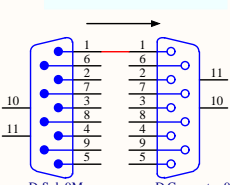
Ch 3

Generic D-Sub 9 Cable M-F



D-Sub 9M

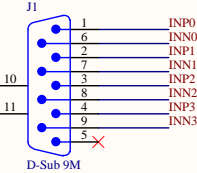
Generic D-Sub 9 Cable M-F



D-Sub 9M

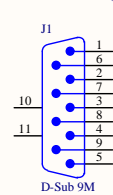
D Connector 9

LVDT CARD 1 (Left)



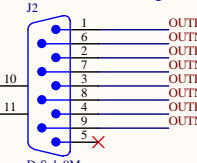
D-Sub 9M

LVDT MAIN (Left)



D-Sub 9M

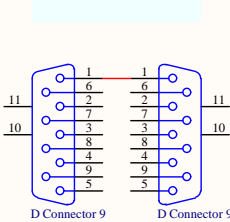
LVDT CARD 1 (Right)



D-Sub 9M

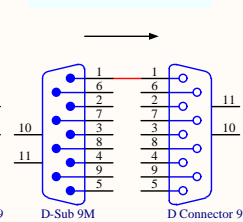


Gender Bender F-F



D Connector 9

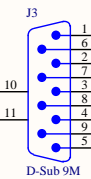
Generic D-Sub 9 Cable M-F



D-Sub 9M

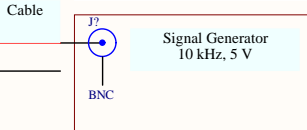
AA Chassis #1
JGW-D1100621

AA In 12-15



D-Sub 9M

The LVDT Chassis has provision for an oscillator card, but until such time as the cards are available, an external oscillator will be required



See conections in sheet 13.

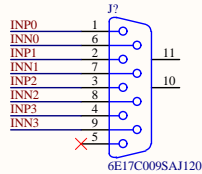
Title			BS Suspension Cabling - BS&F1 LVDT Drivers	
Size	Number	JGW-D1503600		Revision
A3				-v13draft
Date:	20-04-2017	Sheet of 12		18
File:	C:\Users\12 BS&F1 LVDT Drive.Sch	Drawn By:		

BS&F1 LVDT Drivers Part 2

Inputs from
BS&F1
LVDTs
(see Sheet 5)

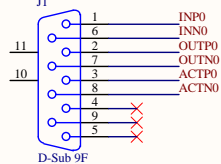
LVDT/ACT Distributor - see also Sheet 13
Chassis: JGW-D1402124
Front Panel: JGW-D1402827
Rear Panel: JGW-D1402828
Board: JGW-D1402117

Ch 0-3 LVDT-IN

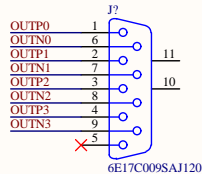


See connections in sheet 12.

Ch 0

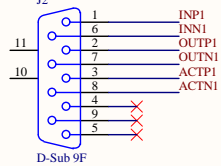


Ch 0-3 LVDT-OUT



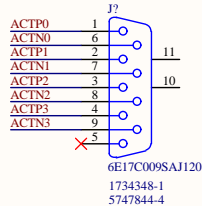
See connections in sheet 12.

Ch 1

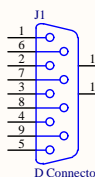


2 inputs
unused
Ch 2
Ch 3

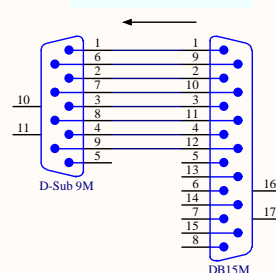
Ch 0-3 ACT

AI Chassis #1
D1101521

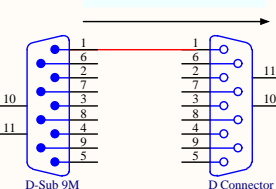
AI Out 1-4



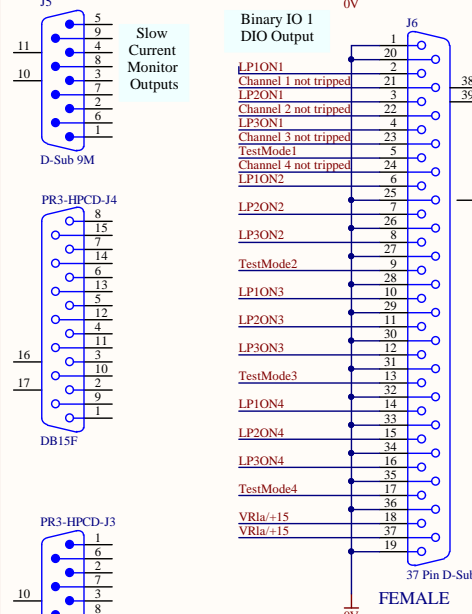
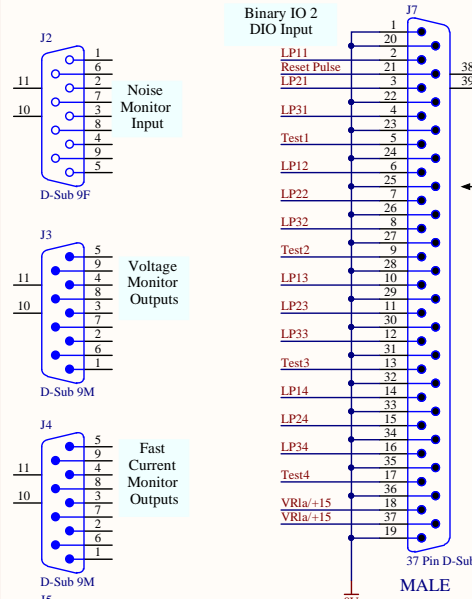
LVDT-Coil Driver Cable



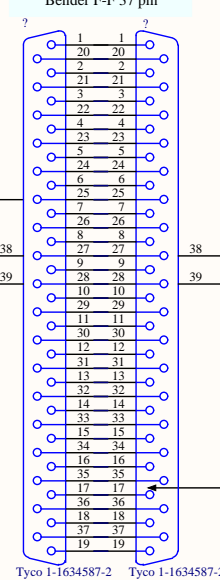
Generic D-Sub 9 Cable M-F



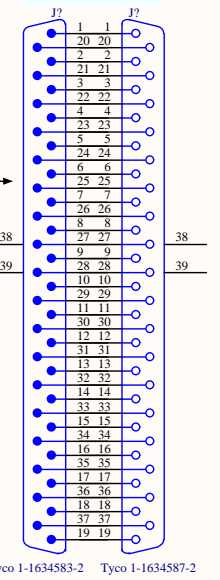
High Power Coil Driver #0



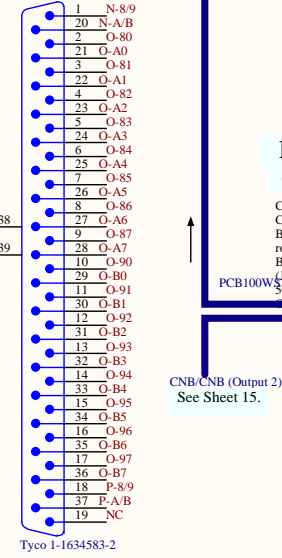
High Power Coil Driver #2
Chassis: JGW-D1503504
Front Panel: JGW-D1503502
Rear Panel: JGW-D1503505,
Monitor Board: JGW-D1503510
Coil Driver Interface Board: JGW-D1504332
Main Board: JGW-D1503503

Cable F-M and Gender
Bender F-F 37 pin

Cable M-F 37 pin



CNB/CNA (Output 1)

CNB/CNB (Output 2)
See Sheet 15.

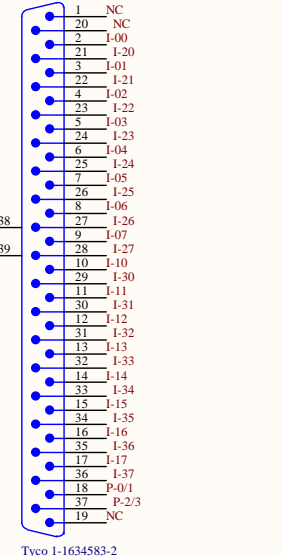
DIO Card #2

Contec DIO-6464L-PE

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Barton\Dropbox\KAGRA-D
ropbox\TypeB\Electronics\
BS Suspension Cabling
(JGW-D1503600)\JGW-D1
503600 BS Suspension
Cabling\DIO6464L-PE

CNA/CNB (Input 2)
See Sheet 15.

CNA/CNA (Input 1)



Title
BS Suspension Cabling - BS&F1 LVDT Drivers

Size	Number	Revision
A3	JGW-D1503600 13	-v13draft
Date:	20-04-2017	Sheet of 18
File:	C:\Users\Mark Barton\Dropbox\KAGRA-Dropbox\TypeB\Electronics\BS Suspension Cabling\JGW-D1503600 BS Suspension Cabling\DIO6464L-PE	Drawn By:

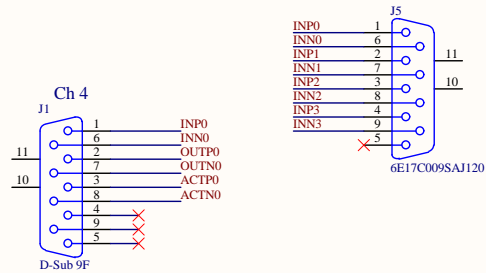
Inputs from F0
LVDTs
(see Sheet 6)

(LVDT/ACT Distributor - see Sheet 12)
Chassis: JGW-D1402124,
Front Panel: JGW-D1402827
Rear Panel: JGW-D1402828,
Board: JGW-D1402117 #1

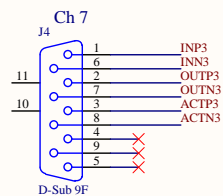
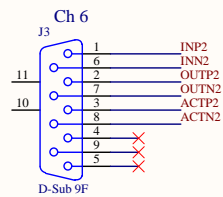
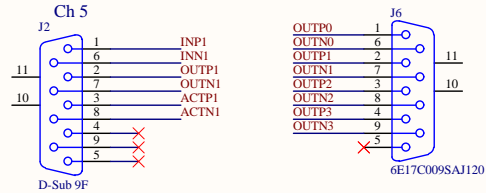
Front Panel

Rear Panel

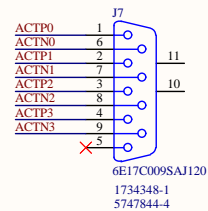
Ch 4-7 LVDT-IN



Ch 4-7 LVDT-OUT



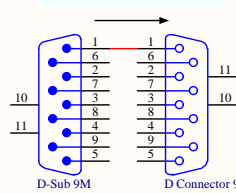
Ch 4-7 ACT



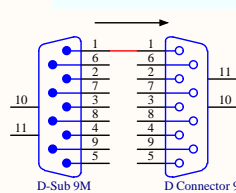
F0 LVDT Drivers

(LVDT Driver - see Sheet 12)
Chassis: JGW-D1402826,
Main Board: JGW-D1301467
Input Boards (2): JGW-D1301467
Front Panel: JGW-D1402827

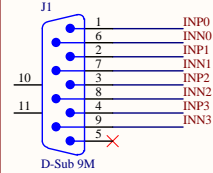
Generic D-Sub 9 Cable M-F



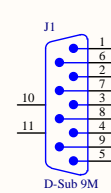
Generic D-Sub 9 Cable M-F



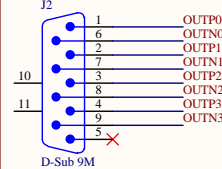
LVDT CARD 2 (Left)



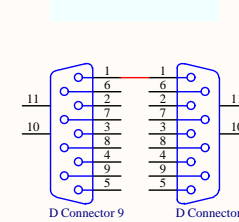
LVDT MAIN (Right)



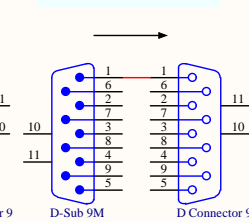
LVDT CARD 2 (Right)



Gender Bender F-F

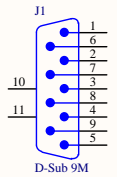


Generic D-Sub 9 Cable M-F



AA Chassis #1
JGW-D1100621

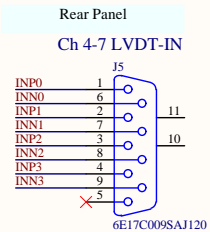
AA In 16-20



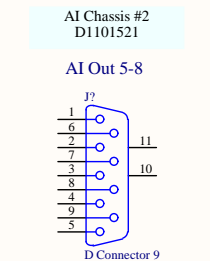
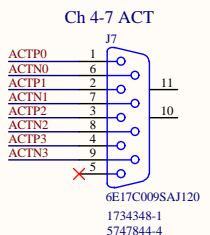
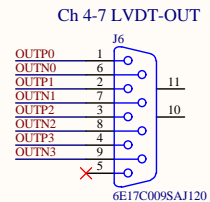
See connections in sheet 15

Title			BS Suspension Cabling - F0 LVDT Drivers	
Size	Number	JGW-D1503600		Revision
A3				-v13draft
Date:	20-04-2017	Sheet 14 of 18		
File:	C:\Users\...\14 F0 LVDT Drive.SchDoc	Drawn By:		

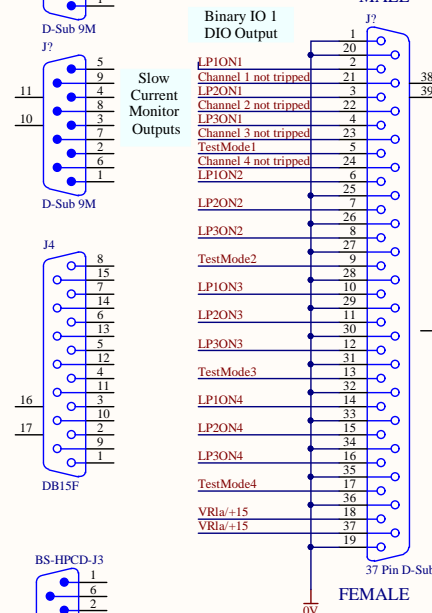
(LVDT/ACT Distributor - see Sheet 12)
Chassis: JGW-D1402124,
Front Panel: JGW-D1402827
Rear Panel: JGW-D1402828,
Board: JGW-D1402117 #1



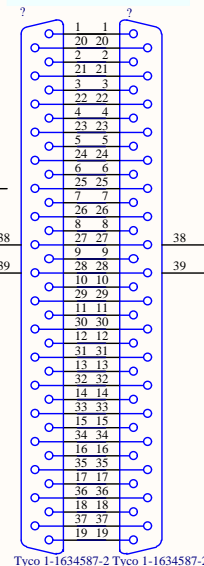
See connections in sheet 14.



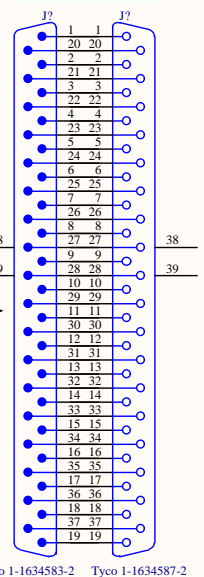
High Power Coil Driver #1



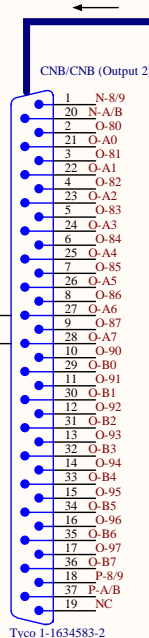
Cable F-M and Gender
Bender E-E 37 pin



Cable M-F 37 pin



Tyco 1-1634583-2 Tyco 1-1634587-2



See Sheet 13.

See Sheet 13.
Cannot open file
C:\Users\Mark
Barton\Dropbox\KAGRA-D
ropbox\TypeB\Electronics\
Sheet 13, Suspension Cablr See Sheet 13.
503600 BS Suspension (PCB100WS Cable)
Cabling\DI06464L-PE.png

See Sheet 13.

Title	BS Suspension Cabling - F0 LVDT Drivers
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Size A3	Number JGW-D1503600	Revision -v13draft
Date: 20-04-2017	Sheet of 15	18
File: C:\Users\...15 F0 LVDT Drive.SchDoc	Drawn By:	

Pico and Stepper Drivers

Outputs to
IM Picos
(see Sheet 3)



Newport 8742
Pico Driver #0
"BS_IM"
10.68.150.16



AC

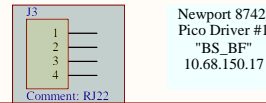


The connectors for the pico drivers
are RJ22 with four pins.
I couldn't find Altium versions, so I
used a random four-pin connector.

Outputs to
BF Picos
(see Sheet 4)

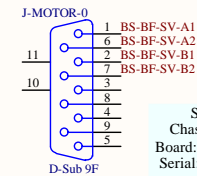


AC



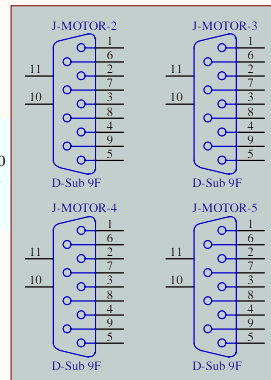
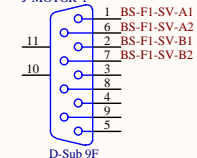
Newport 8742
Pico Driver #1
"BS_BF"
10.68.150.17

Output to BF
Stepper
(see Sheet 4)



Stepper Driver #0:
Chassis: JGW-D1605365
Board: Newport TMC6110
Serial: MOXA NPort 5100A
10.68.150.50

Output to F1
Stepper
(see Sheet 4)



Ethernet
Hub

PoE

LAN Cable

LAN Cable

LAN Cable

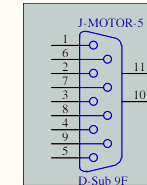
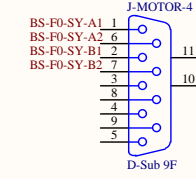
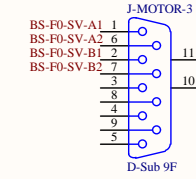
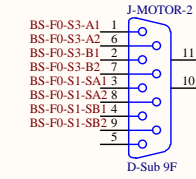
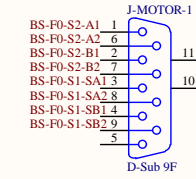
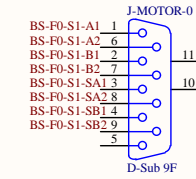
LAN Cable

LAN Cable

LAN Cable

Stepper Driver #1
Chassis: JGW-D1605365
Board: TMC6110
Serial: MOXA NPort 5100A
10.68.150.51

NOTE: 3 channels use switches



Outputs to F0
Steppers
(see Sheet 7)

Title BS Suspension Cabling - Pico and Stepper Drivers		
Size A3	Number JGW-D1503600	Revision -v13draft
Date: 20-04-2017	Sheet 16	of 18
File: C:\Users\116\Pico&Stepper Drive Sch\Drawn By:		

3 Feedthroughs

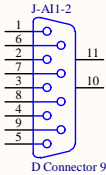
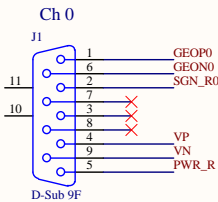
Geophone Readout

Inputs from F0
Geophones
(see Sheet 8)

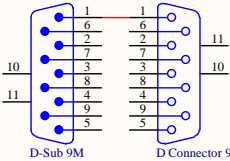
Geophone Distributor
D1402120
Front Panel
D1402122
Board
D1402121

Geophone Distributor
D1402120
Rear Panel
D1402123
Board
D1402121

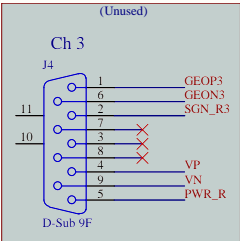
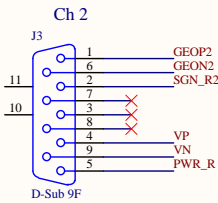
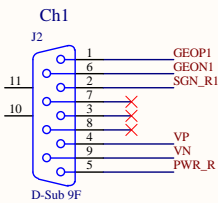
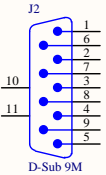
AA Chassis #0
JGW-D1100621



Generic D-Sub 9 Cable M-F



AA In 21-24



Title			BS Suspension Cabling - Geophone Readout	
Size	Number	Revision		
A3	JGW-D1503600	17	-v13draft	
Date:	20-04-2017	Sheet	of	18
File:	C:\Users\...\17 Geophone Readout.SchDoc	Drawn By:		

OpLev Etc

