



SPIRE
HDD 1.1 Deltas

Doc #: SPIRE-RAL-NOT-001819
Issue: 2
Date: 25/9/03
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Issue 2.0 of this document includes comments on the EADS 2.6 Harness Database.

Subject: **HDD 1.1 DELTAS**

The sheets that follow show the pinout & wire name changes compared to the Spire Harness Definition Document version 1.1 that are needed to build the PFM harness. They will be issued within HDD version 1.2.

PREPARED BY: D.K. GRIFFIN **Date:**

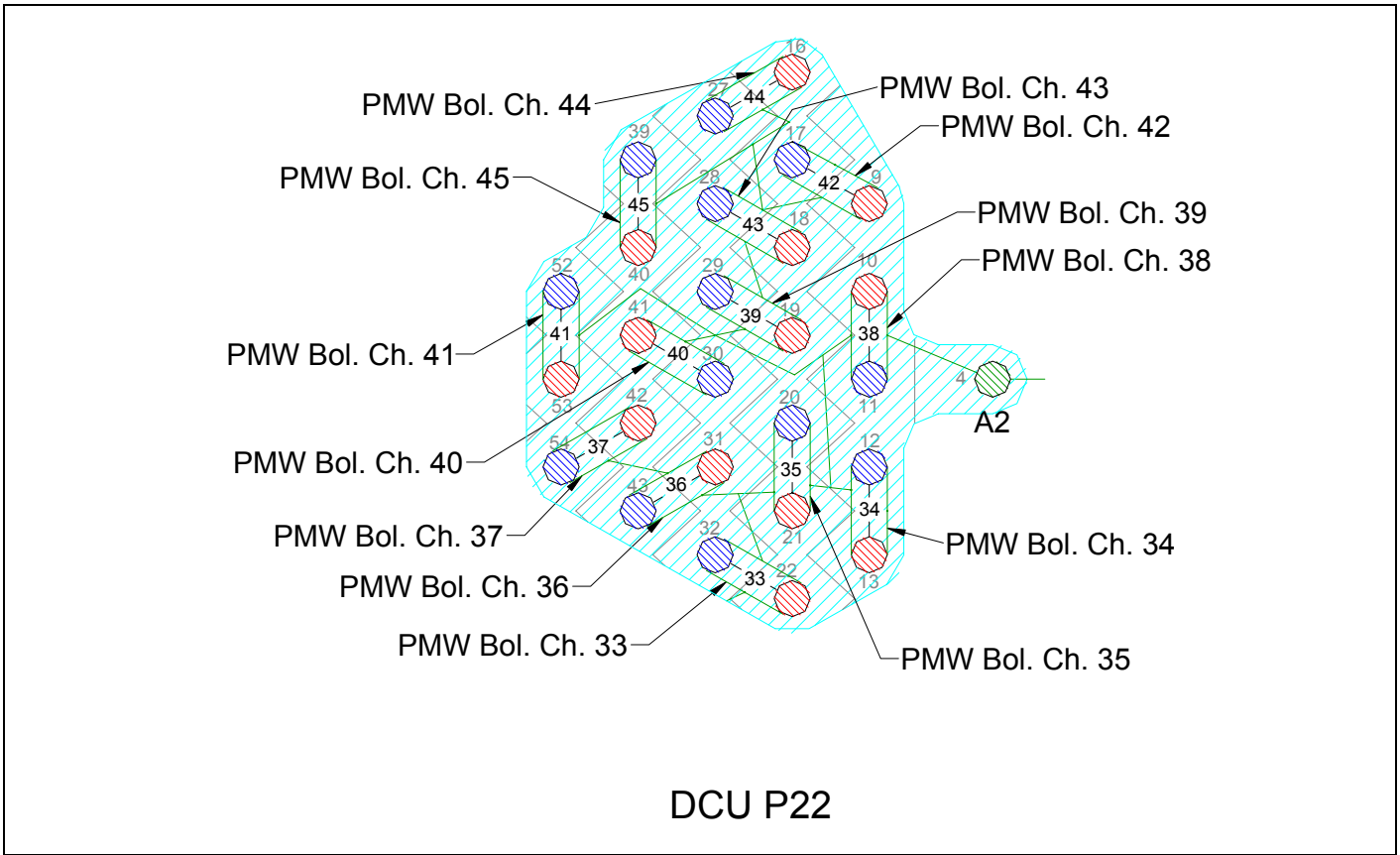
APPROVED BY: J. DELDERFIELD..... **Date:**

<u>Number</u>	<u>Pages and section from HDD 1.1</u>	<u>Description of correction</u>	<u>Notes</u>	<u>Comparison with EICD, Issue 2.6</u>
<u>1</u>	Page 58-60, S4	Corrected assignment of Channel numbers in column 2 to pixels column 3	No hardware implications. Nomenclature only	
<u>2</u>		Pixels PMW-F8, PMW-E9 corrected 128-way pin assignments		<u>Compliant (See Page 22, 23 and 24 of this doc)</u>
<u>3</u>	Pages 67-69, S6	Corrected sequence of Pixel names.	No hardware implications. Nomenclature only	
<u>4</u>	Page 172, C11	Polarity error on 128-way "SMEC Position Sensor Power Supply and Return"	Swapped 4 and 11.	<u>The polarity of the signals on the 12-way connectors in the HDD 1.2 is opposite to that adopted in EADS 2.6. This is not a S/C problem as the interfaces to the FCU and the FPU are correct in the EADS doc. See pages 25, 26, 27 and 28 of this document</u>
<u>5</u>	Page 118, 120, C1	"Channel 1 gnd shld" should be Channel 14 gnd shld" in column 2, row 2, page 119		
<u>6</u>	<u>Page 119, C1</u>	"SLW_JFETV_A2_shld" should go to pin 26 not 6	Pins 26 and 6 are both on a busbar and therefore this is an academic correction	<u>Compliant. See page 29 of this document.</u>
<u>7</u>	Page 131, C3	Reference to D2 and D4 removed. Changed to B2 / B4		<u>EADS implementation not as SPIRE intended – however the EADS design is compliant with SPIRE requirements</u>
<u>8</u>	Page 132, C3	Reference to D2 changed to B2		<u>idem</u>
<u>9</u>	Page 134, C3	References to D4 changed to B4		<u>Idem</u>
<u>10</u>	Page 146, C6	"Channel 1 gnd shld" should be Channel 14 gnd shld" in column 2, row 24, page 146		
<u>11</u>	Page 151, C8	Colum headers should be P05, P06, P07 and P08 not J05, J06, J07 and J08		
<u>12</u>	Page 152, C8	"Channel 1 gnd shld" should be Channel 14 gnd shld" in column 2, row 19, page 152		
<u>13</u>	Page 155, C9	"Channel 1 gnd shld" should be Channel 14 gnd shld" in column 2, row 27, page 155		
<u>14</u>	<u>Page 95</u>	<u>Second table should be labelled with FCU P29 not FCU P27</u>	<u>This page was in Issue 1.0 of this doc, but no mention of it was made in this table</u>	



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Contact Details

Notes:

- The shields of the STP cables carrying the ground wires (GND_WIRE) and Pins 36(A1), 4(A2), 128(A3) and 47(A4) of the 128-way connector are all joined to form a ground reference plane. Pin numbers for connector PE assume the use of a DEMA 9 connector.
- Refer to Annex 7 - PTC Cryo-harnessing that indicates graphically the means by which these signals are wired.

Cable ID		Pixel	128 Way #4	DCU P20	DCU P21	DCU P22	PE J22 Link (I/F S2/S4)
	Signal Ground		47 (A4)				
S4-STP-A1	Channel 1+	PMW-F10	26	1			
	Channel 1-		37	18			
	Channel 1 GND		36 (A1)	34			
S4-STP-A2	Channel 2+	PMW-E11	38	2			
	Channel 2-		49	19			
	Channel 2 GND		36 (A1)	35			
S4-STP-A3	Channel 3+	PMW-G11	48	3			
	Channel 3-		60	20			
	Channel 3 GND		36 (A1)	36			
S4-STP-A4	Channel 4+	PMW-F11	59	4			
	Channel 4-		71	21			
	Channel 4 GND		36 (A1)	37			
S4-STP-B1	Channel 5+	PMW-E12	50	5			
	Channel 5-		61	22			
	Channel 5 GND		36 (A1)	38			
S4-STP-B2	Channel 6+	PMW-G12	62	6			
	Channel 6-		51	23			
	Channel 6 GND		36 (A1)	39			
S4-STP-B3	Channel 7+	PMW-F12	63	7			
	Channel 7-		75	24			
	Channel 7 GND		36 (A1)	40			
S4-STP-B4	Channel 8+	PMW-G13	74	8			
	Channel 8-		73	25			



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Cable ID		Pixel	128 Way #4	DCU P20	DCU P21	DCU P22	PE J22 Link (I/F S2/S4)
	Channel 8 GND		36 (A1)	41			
	Signal Ground		36 (A1)	9			
S4-STP-C1	Channel 9+	PMW-DK2	83	26			
	Channel 9-		72	10			
	Channel 9 GND		36 (A1)	43			
S4-STP-D1	Channel 13+	PMW-E7	86	27			
	Channel 13-		87	11			
	Channel 13 GND		36 (A1)	44			
S4-STP-D2	Channel 14+	PMW-D7	97	28			
	Channel 14-		98	12			
	Channel 14 GND		36 (A1)	45			
S4-STP-D3	Channel 15+	PMW-F7	108	29			
	Channel 15-		109	13			
	Channel 15 GND		36 (A1)	46			
S4-STP-D4	Channel 16+	PMW-E8	116	30			
	Channel 16-		117	14			
	Channel 16 GND		36 (A1)	47			
S4-STP-E1	Channel 17+	PMW-G8	55	31			
	Channel 17-		66	15			
	Channel 17 GND		128 (A3)	48			
S4-STP-E2	Channel 18+	PMW-F8	67	32			
	Channel 18-		78	16			
	Channel 18 GND		128 (A3)	49			
S4-STP-E3	Channel 19+	PMW-E9	76	33			
	Channel 19-		77	17			
	Channel 19 GND		128 (A3)	50			
S4-STP-E4	Channel 20+	PMW-G9	88		1		
	Channel 20-		89		18		
	Channel 20 GND		128 (A3)		34		
S4-STP-F1	Channel 21+	PMW-D9	99		2		
	Channel 21-		100		19		
	Channel 21 GND		128 (A3)		35		
S4-STP-F2	Channel 22+	PMW-F9	110		3		
	Channel 22-		111		20		
	Channel 22 GND		128 (A3)		36		
S4-STP-F3	Channel 23+	PMW-E10	118		4		
	Channel 23-		119		21		
	Channel 23 GND		128 (A3)		37		
S4-STP-F4	Channel 24+	PMW-G10	112		5		
	Channel 24-		120		22		
	Channel 24 GND		128 (A3)		38		
S4-STP-G1	Channel 25+	PMW-C4	90		6		
	Channel 25		79		23		
	Channel 25 GND		128 (A3)		39		
S4-STP-G2	Channel 26+	PMW-B3	102		7		
	Channel 26-		101		24		
	Channel 26 GND		128 (A3)		40		
S4-STP-G3	Channel 27+	PMW-C3	92		8		
	Channel 27-		91		25		
	Channel 27 GND		128 (A3)		41		
	Signal Ground		128 (A3)		9		
S4-STP-G4	Channel 28+	PMW-B2	103		26		
	Channel 28-		113		10		
	Channel 28 GND		128 (A3)		43		
S4-STP-H1	Channel 29+	PMW-D2	58		27		
	Channel 29-		46		11		
	Channel 29 GND		128 (A3)		44		
S4-STP-H2	Channel 30+	PMW-A3	68		28		
	Channel 30-		57		12		
	Channel 30 GND		128 (A3)		45		
S4-STP-H3	Channel 31+	PMW-A2	69		29		
	Channel 31-		80		13		
	Channel 31 GND		128 (A3)		46		
S4-STP-H4	Channel 32+	PMW-C2	70		30		
	Channel 32-		81		14		
	Channel 32 GND		128 (A3)		47		
S4-STP-I1	Channel 33+	PMW-B1	23		31		
	Channel 33-		34		15		
	Channel 33 GND		4 (A2)		48		



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Cable ID		Pixel	128 Way #4	DCU P20	DCU P21	DCU P22	PE J22 Link (I/F S2/S4)
S4-STP-I2	Channel 34+	PMW-A1	33		32		
	Channel 34-		45		16		
	Channel 34 GND		4 (A2)		49		
S4-STP-I3	Channel 35+	PMW-DK1	44		33		
	Channel 35-		56		17		
	Channel 35 GND		4 (A2)		50		
S4-STP-I4	Channel 36+	PMW-C1	22			1	
	Channel 36-		32			18	
	Channel 36 GND		4 (A2)			34	
S4-STP-J1	Channel 37+	PMW-A7	13			2	
	Channel 37-		12			19	
	Channel 37 GND		4 (A2)			35	
S4-STP-J2	Channel 38+	PMW-A6	21			3	
	Channel 38-		20			20	
	Channel 38 GND		4 (A2)			36	
S4-STP-J3	Channel 39+	PMW-B6	31			4	
	Channel 39-		43			21	
	Channel 39 GND		4 (A2)			37	
S4-STP-J4	Channel 40+	PMW-C7	42			5	
	Channel 40-		54			22	
	Channel 40 GND		4 (A2)			38	
S4-STP-K1	Channel 41+	PMW-A5	10			6	
	Channel 41-		11			23	
	Channel 41 GND		4 (A2)			39	
S4-STP-K2	Channel 42+	PMW-B5	19			7	
	Channel 42-		29			24	
	Channel 42 GND		4 (A2)			40	
S4-STP-K3	Channel 43+	PMW-C6	41			8	
	Channel 43-		30			25	
	Channel 43 GND		4 (A2)			41	
	Signal Ground		4 (A2)			9	
S4-STP-K4	Channel 44+	PMW-D6	53			26	
	Channel 44-		52			10	
	Channel 44 GND		4 (A2)			43	
S4-STP-L1	Channel 45+	PMW-B4	9			27	
	Channel 45-		17			11	
	Channel 45 GND		4 (A2)			44	
S4-STP-L2	Channel 46+	PMW-C5	18			28	
	Channel 46-		28			12	
	Channel 46 GND		4 (A2)			45	
S4-STP-L3	Channel 47+	PMW-D4	16			29	
	Channel 47-		27			13	
	Channel 47 GND		4 (A2)			46	
S4-STP-L4	Channel 48+	PMW-A4	40			30	
	Channel 48-		39			14	
	Channel 48 GND		4 (A2)			47	
S4-STP-PTC1	PTC Channel 1 +	PTC-1	N.C.			31	1
	PTC Channel 1 -		N.C.			15	6
	PTC Channel 1gnd		N.C.			48	2 (A)
S4-STP-PTC2	PTC Channel 2 +	PTC-2	N.C.			32	3
	PTC Channel 2 -		N.C.			16	7
	PTC Channel 2gnd		N.C.			49	8(A)
S4-STP-PTC3	PTC Channel 3 +	PTC-3	N.C.			33	4
	PTC Channel 3 -		N.C.			17	5
	PTC Channel 3gnd		N.C.			50	8(A)
			EMC Backshell	EMC Backshell	EMC Backshell	EMC Backshell	EMC Backshell

FPU Faraday Shield Link Pins												
1	2	3	5	6	7	8	14	15	24	25	35	82
93	94	104	105	114	115	121	122	123	124	125	126	127

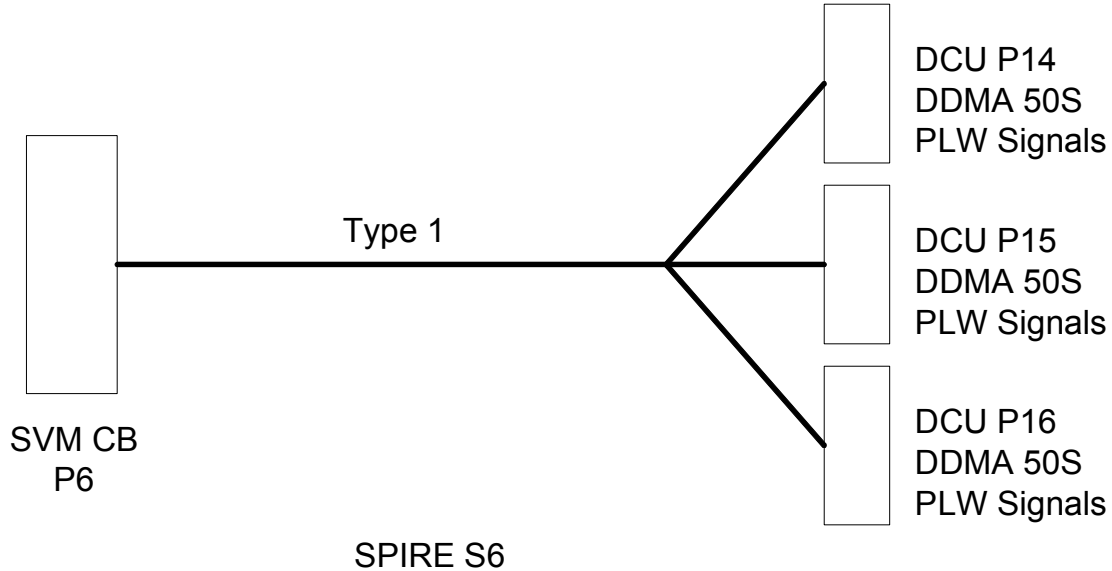


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4.2.6 S6 SVM-CB 6 – DRCU (Type 1) PLW

Overall Mechanical Drawing



Connector/Backshell Details

DDMA50S+Glenair557-B-357-M-5- TBD toDCUJ14 DCU-JFP
DDMA50S+Glenair557-E-359-M-5- TBD toDCUJ15 DCU-JFP
DDMA50S+Glenair557-B-357-M-5- TBD toDCUJ16 DCU-JFP

Harness Layup

As S5 except
Tail A = HSDCU P14
Tail B = HSDCU P15
Tail C = HSDCU P16

Contact details

	Name	Pixel	128Way #6	DCU J14	DCU J15	DCU J16
	Ground Pin		47 (A4)			
S6-STP-A1	Channel 1 +	PLW-R1	26	1		
	Channel 1 -		37	18		
	Channel 1gnd shld		36 (A1)	34		
S6-STP-A2	Channel 2 +	PLW-A8	38	2		
	Channel 2 -		49	19		
	Channel 2gnd shld		36 (A1)	35		
S6-STP-A3	Channel 3 +	PLW-A7	48	3		
	Channel 3 -		60	20		
	Channel 3gnd shld		36 (A1)	36		
S6-STP-A4	Channel 4 +	PLW-A6	59	4		
	Channel 4 -		71	21		
	Channel 4gnd shld		36 (A1)	37		
S6-STP-B1	Channel 5 +	PLW-A9	50	5		
	Channel 5 -		61	22		
	Channel 5gnd shld		36 (A1)	38		
S6-STP-B2	Channel 6 +	PLW-C9	62	6		
	Channel 6 -		51	23		
	Channel 6gnd shld		36 (A1)	39		



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	Name	Pixel	128Way #6	DCU J14	DCU J15	DCU J16
S6-STP-B3	Channel 7 +	PLW-B8	63	7		
	Channel 7 -		75	24		
	Channel 7gnd shld		36 (A1)	40		
S6-STP-B4	Channel 8 +	PLW-B7	74	8		
	Channel 8 -		73	25		
	Channel 8gnd shld		36 (A1)	41		
	GND WIRE		36 (A1)	9		
S6-STP-C1	Channel 9 +	PLW-C7	83	26		
	Channel 9 -		72	10		
	Channel 9gnd shld		36 (A1)	43		
S6-STP-C2	Channel 10 +	PLW-B5	95	27		
	Channel 10 -		84	11		
	Channel 10gnd shld		36 (A1)	44		
S6-STP-C3	Channel 11 +	PLW-B6	96	28		
	Channel 11 -		85	12		
	Channel 11gnd shld		36 (A1)	45		
S6-STP-C4	Channel 12 +	PLW-A5	106	29		
	Channel 12 -		107	13		
	Channel 12gnd shld		36 (A1)	46		
S6-STP-D1	Channel 13 +	PLW-T1	86	30		
	Channel 13 -		87	14		
	Channel 13gnd shld		36 (A1)	47		
S6-STP-D2	Channel 14 +	PLW-B4	97	31		
	Channel 14 -		98	15		
	Channel 14gnd shld		36 (A1)	48		
S6-STP-D3	Channel 15 +	PLW-C4	108	32		
	Channel 15 -		109	16		
	Channel 15gnd shld		36 (A1)	49		
S6-STP-D4	Channel 16 +	PLW-B3	116	33		
	Channel 16 -		117	17		
	Channel 16gnd shld		36 (A1)	50		
S6-STP-E1	Channel 17 +	PLW-C2	55		1	
	Channel 17 -		66		18	
	Channel 17gnd shld		128 (A2)		34	
S6-STP-E2	Channel 18 +	PLW-B2	67		2	
	Channel 18 -		78		19	
	Channel 18gnd shld		128 (A2)		35	
S6-STP-E3	Channel 19 +	PLW-B1	76		3	
	Channel 19 -		77		20	
	Channel 19gnd shld		128 (A2)		36	
S6-STP-E4	Channel 20 +	PLW-A3	88		4	
	Channel 20 -		89		21	
	Channel 20gnd shld		128 (A2)		37	
S6-STP-F1	Channel 21 +	PLW-A4	99		5	
	Channel 21 -		100		22	
	Channel 21gnd shld		128 (A2)		38	
S6-STP-F2	Channel 22 +	PLW-A1	110		6	
	Channel 22 -		111		23	
	Channel 22gnd shld		128 (A2)		39	
S6-STP-F3	Channel 23 +	PLW-DK1	118		7	
	Channel 23 -		119		24	
	Channel 23gnd shld		128 (A2)		40	
S6-STP-F4	Channel 24 +	PLW-A2	112		8	
	Channel 24 -		120		25	
	Channel 24gnd shld		128 (A2)		41	
	GND WIRE		128 (A2)	9		
S6-STP-G1	Channel 25 +	PLW-E1	90		26	
	Channel 25 -		79		10	
	Channel 25gnd shld		128 (A2)		43	
S6-STP-G2	Channel 26 +	PLW-E2	102		27	
	Channel 26 -		101		11	
	Channel 26gnd shld		128 (A2)		44	
S6-STP-G3	Channel 27 +	PLW-E3	92		28	
	Channel 27 -		91		12	
	Channel 27gnd shld		128 (A2)		45	
S6-STP-G4	Channel 28 +	PLW-E4	103		29	
	Channel 28 -		113		13	
	Channel 28gnd shld		128 (A2)		46	
S6-STP-H1	Channel 29 +	PLW-D1	58		30	
	Channel 29 -		46		14	
	Channel 29gnd shld		128 (A2)		47	



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	Name	Pixel	128Way #6	DCU J14	DCU J15	DCU J16
S6-STP-H2	Channel 30 +	PLW-D2	68		31	
	Channel 30 -		57		15	
	Channel 30gnd shld		128 (A2)		48	
S6-STP-H3	Channel 31 +	PLW-D3	69		32	
	Channel 31 -		80		16	
	Channel 31gnd shld		128 (A2)		49	
S6-STP-H4	Channel 32 +	PLW-D4	70		33	
	Channel 32 -		81		17	
	Channel 32gnd shld		128 (A2)		50	
S6-STP-I1	Channel 33 +	PLW-C1	23			1
	Channel 33 -		34			18
	Channel 33gnd shld		4 (A3)			34
S6-STP-I2	Channel 34 +	PLW-C3	33			2
	Channel 34 -		45			19
	Channel 34gnd shld		4 (A3)			35
S6-STP-I3	Channel 35 +	PLW-C5	44			3
	Channel 35 -		56			20
	Channel 35gnd shld		4 (A3)			36
S6-STP-I4	Channel 36 +	PLW-T2	22			4
	Channel 36 -		32			21
	Channel 36gnd shld		4 (A3)			37
S6-STP-J1	Channel 37 +	PLW-E5	13			5
	Channel 37 -		12			22
	Channel 37gnd shld		4 (A3)			38
S6-STP-J2	Channel 38 +	PLW-C6	21			6
	Channel 38 -		20			23
	Channel 38gnd shld		4 (A3)			39
S6-STP-J3	Channel 39 +	PLW-C8	31			7
	Channel 39 -		43			24
	Channel 39gnd shld		4 (A3)			40
S6-STP-J4	Channel 40 +	PLW-D5	42			8
	Channel 40 -		54			25
	Channel 40gnd shld		4 (A3)			41
	GND WIRE		4 (A3)			9
S6-STP-K1	Channel 41 +	PLW-D6	10			26
	Channel 41 -		11			10
	Channel 41gnd shld		4 (A3)			43
S6-STP-K2	Channel 42 +	PLW-D7	19			27
	Channel 42 -		29			11
	Channel 42gnd shld		4 (A3)			44
S6-STP-K3	Channel 43 +	PLW-D8	41			28
	Channel 43 -		30			12
	Channel 43gnd shld		4 (A3)			45
S6-STP-K4	Channel 44 +	PLW-E7	53			29
	Channel 44 -		52			13
	Channel 44gnd shld		4 (A3)			46
S6-STP-L1	Channel 45 +	PLW-E6	9			30
	Channel 45 -		17			14
	Channel 45gnd shld		4 (A3)			47
S6-STP-L2	Channel 46 +	PLW-E8	18			31
	Channel 46 -		28			15
	Channel 46gnd shld		4 (A3)			48
S6-STP-L3	Channel 47 +	PLW-DK2	16			32
	Channel 47 -		27			16
	Channel 47gnd shld		4 (A3)			49
S6-STP-L4	Channel 48 +	PLW-E9	40			33
	Channel 48 -		39			17
	Channel 48gnd shld		4 (A3)			50
	Harness Overshield		EMC Backshell	EMC Backshell	EMC Backshell	EMC Backshell

FPU Faraday Shield Link Pins

1	2	3	5	6	7	8	14	15	24	25	35	82
93	94	104	105	114	115	121	122	123	124	125	126	127

SMEC Control Tail Listing (FPU J29)

Function	37way J29	Max. current	Wire lay-up	Max Ohms	128Way #11
SMEC Drive Coil I+	1	100mA	Insulated screened twisted pair	5	12
SMEC Drive Coil I-	2	100mA		5	5
SMEC Drive Coil shld	20	N/A		N/A	A (13)
SMEC Drive Coil (Rob) I+	21	100mA	Insulated screened twisted pair	5	22
SMEC Drive Coil (Rob) I-	22	100mA		5	7
SMEC Drive Coil (Rob) shld	3	N/A		N/A	A (13)
SMEC Drive Coil Sense+	4	10 μ A	Insulated screened twisted pair	500	14
SMEC Drive Coil Sense-	5	10 μ A		500	24
SMEC Drive Coil shld	23	N/A		N/A	23
SMEC position sensor Led power supply	7	1mA	Insulated screened twisted pair	100	9
SMEC position sensor Led power return	8	1mA		100	2
SMEC position sensor Led power Shield	26	N/A		N/A	3
SMEC position sensor power supply	27	1mA	Insulated screened twisted pair	100	4
SMEC position sensor power return	28	1mA		100	11
SMEC position sensor power Shield	9	N/A		N/A	10
SMEC position sensor photodiode #1 I+	10	20 μ A	Insulated screened twisted pair	1000	18
SMEC position sensor photodiode #1 I-	11	20 μ A		1000	19
SMEC position sensor photodiode Shield	29	N/A		N/A	B (29)
SMEC pos. sensor photodiode #1 feedback +	30	10 μ A	Insulated screened twisted pair	1000	56
SMEC pos. sensor photodiode #1 feedback -	31	10 μ A		1000	55
SMEC pos. sensor photodiode feedback Shld	12	N/A		N/A	C (44)
SMEC position sensor photodiode #2 I+	13	20 μ A	Insulated screened twisted pair	1000	42
SMEC position sensor photodiode #2 I-	14	20 μ A		1000	41
SMEC position sensor photodiode Shield	32	N/A		N/A	B (30)
SMEC pos. sensor photodiode #2 feedback +	33	10 μ A	Insulated screened twisted pair	1000	34
SMEC pos. sensor photodiode #2 feedback -	34	10 μ A		1000	33
SMEC pos. sensor photodiode feedback Shld	15	N/A		N/A	C (45)
SMEC position sensor photodiode #3 I+	16	20 μ A	Insulated screened twisted pair	1000	20
SMEC position sensor photodiode #3 I-	17	20 μ A		1000	21
SMEC position sensor photodiode Shield	35	N/A		N/A	B (31)
SMEC pos. sensor photodiode #3 feedback +	36	10 μ A	Insulated screened twisted pair	1000	58
SMEC pos. sensor photodiode #3 feedback -	37	10 μ A		1000	57
SMEC pos. sensor photodiode feedback Shld	18	N/A		N/A	C (46)

29 contacts used.

SMEC above based on "Cryo_harness_010906.doc".

FPU Faraday Shield Link Pins (C11, I11 and S11)								
1	6	8	35	47	70	82	94	104
107	109	110	122	123	124	125	126	X



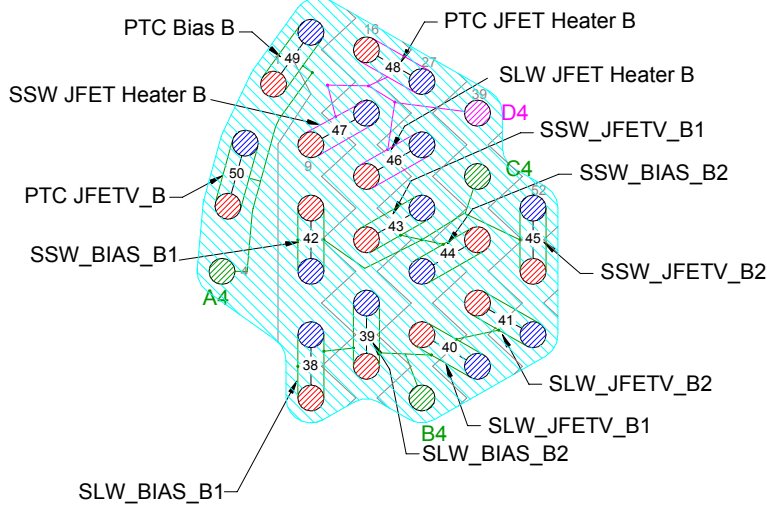
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**Bias Tail B
(JFS P10)**

Contact details

	Name	Pixel	JFS P05	JFS P06	37-Way C JFS P09	37-Way D JFS P10	CVV 128-Way #1
C1-12ax-A	Channel 1 +	SLW-R1	1				26
	Channel 1 -		14				37
	Channel 1gnd shld		13 (A)				115 (A1)
	Channel 2 +	SLW-T1	2				38
	Channel 2 -		15				49
	Channel 2gnd shld		13 (A)				115 (A1)
	Channel 3 +	SLW-C1	3				48
	Channel 3 -		16				60
	Channel 3gnd shld		13 (A)				115 (A1)
	Channel 4 +	SLW-DK1	4				59
	Channel 4 -		17				71
	Channel 4gnd shld		13 (A)				115 (A1)
C1-12ax-B	Channel 5 +	SLW-B1	5				50
	Channel 5 -		18				61
	Channel 5gnd shld		13 (A)				115 (A1)
	Channel 6 +	SLW-D1	6				62
	Channel 6 -		19				51
	Channel 6gnd shld		13 (A)				115 (A1)
	Channel 7 +	SLW-E1	20				63
	Channel 7 -		7				75
	Channel 7gnd shld		13 (A)				115 (A1)
	Channel 8 +	SLW-A1	21				74
	Channel 8 -		8				73
	Channel 8gnd shld		13 (A)				115 (A1)
Channel 9 +	SLW-C2	22				83	
Channel 9 -		9				72	
Channel 9gnd shld		13 (A)				115 (A1)	
Channel 10 +	SLW-D2	23				95	
Channel 10 -		10				84	
Channel 10gnd shld		13 (A)				115 (A1)	
Channel 11 +	SLW-B2	24				96	
Channel 11 -		11				85	
Channel 11gnd shld		13 (A)				115 (A1)	
Channel 12 +	SLW-E2	25				106	
Channel 12 -		12				107	
Channel 12gnd shld		13 (A)				115 (A1)	
C1-12ax-D	Channel 13 +	SLW-A2		1			86
	Channel 13 -			14			87
	Channel 1gnd shld			13 (A)			122 (A2)
	Channel 14 +	SLW-C3		2			97
	Channel 14 -			15			98



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	Name	Pixel	JFS P05	JFS P06	37-Way C JFS P09	37-Way D JFS P10	CVV 128-Way #1		
	Channel 14gnd shld	SLW-D3		13 (A)			122 (A2)		
	Channel 15 +			3			108		
	Channel 15 -			16			109		
	Channel 15gnd shld	SLW-B3		13 (A)			122 (A2)		
	Channel 16 +			4			116		
	Channel 16 -			17			117		
Channel 16gnd shld	C1-12ax-E	SLW-E3		13 (A)			122 (A2)		
Channel 17 +				5			55		
Channel 17 -				18			66		
Channel 17gnd shld		SLW-C4		13 (A)			122 (A2)		
Channel 18 +				6			67		
Channel 18 -				19			78		
Channel 18gnd shld		SLW-DK2		13 (A)			122 (A2)		
Channel 19 +				20			76		
Channel 19 -				7			77		
Channel 19 gnd shld		SLW-D4		13 (A)			122 (A2)		
Channel 20 +				21			88		
Channel 20 -				8			89		
Channel 20 gnd shld			C1-12ax-F	SLW-C5		13 (A)			122 (A2)
Channel 21 +						22			99
Channel 21 -						9			100
Channel 21gnd shld		SLW-B4			13 (A)			122 (A2)	
Channel 22 +					23			110	
Channel 22 -					10			111	
Channel 22gnd shld	SLW-A3			13 (A)			122 (A2)		
Channel 23 +				24			118		
Channel 23 -				11			119		
Channel 23gnd shld	SLW-T2			13 (A)			122 (A2)		
Channel 24 +				25			112		
Channel 24 -				12			120		
Channel 24gnd shld			13 (A)			122 (A2)			
STP	PTC Bias A +ve				1		7		
	PTC Bias A -ve				20		14		
	PTC Bias A Shield				2 (A3)		46 (A3)		
⊘	PTC Ground A				2 (A3)		46 (A3)		
STP	PTC JFETV Bias A +ve				21		24		
	PTC JFETV Bias A -ve				3		35		
	PTC JFETV Bias A Shield				2 (A3)		46 (A3)		
STP	SLW BIAS A1+ve				22		121		
	SLW BIAS A1-ve				4		114		
	SLW BIAS A1 shld				6(B3)		104(B3)		
STP	SLW BIAS A2 +ve				5		102		
	SLW BIAS A2 -ve				24		101		
	SLW BIAS A2 shld				23(B3)		104(B3)		
STP	SLW JFETV A1 +ve				25		92		
	SLW JFETV A1 -ve				7		91		
	SLW JFETV A1 shld				6(B3)		104(B3)		
STP	SLW JFETV A2 +ve				8		103		
	SLW JFETV A2 -ve				27		113		
	SLW JFETV A2 shld				26(B3)		104(B3)		
⊘	SLW GND WIRE A				6(B3)		104(B3)		
STP	SSW BIAS1 A +ve				28		90		
	SSW BIAS1 A -ve				10		79		
	SSW BIAS1 A shld				9(C3)		93(C3)		
STP	SSW JFETV1 A +ve				11		68		
	SSW JFETV1 A -ve				30		57		
	SSW JFETV1 A shld				29(C3)		93(C3)		
⊘	SSW GND WIRE A				12(C3)		93(C3)		
STP	SSW BIAS2 A +ve				13		69		
	SSW BIAS2 A -ve				32		80		
	SSW BIAS2 A shld				31(C3)		93(C3)		
STP	SSW JFETV2 A +ve				33		70		
	SSW JFETV2 A -ve				15		81		
	SSW JFETV2 A shld				14(C3)		93(C3)		
S	S HEATER GROUND A				NC		22(D3)		
STP	SLW JFET HEATER A +ve				17		23		
	SLW JFET HEATER A -ve				36		34		
	SLW JFET HEATER A shld				18(D3)		22(D3)		
STP	SSW JFET HEATER A +ve				37		33		
	SSW JFET HEATER A -ve				19		45		



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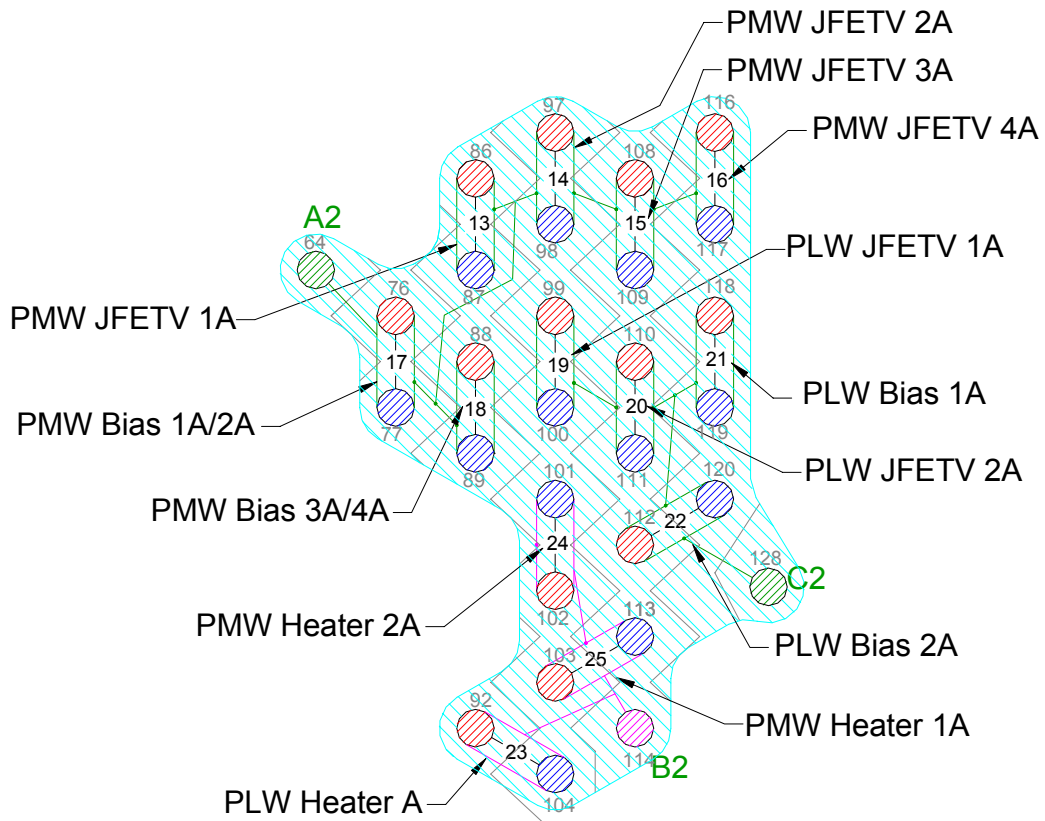
	Name	Pixel	JFS P05	JFS P06	37-Way C JFS P09	37-Way D JFS P10	CVV 128-Way #1
STP	SSW JFET HEATER A shld				18(D3)		22(D3)
	PTC JFET HEATER A +ve				16		44
	PTC JFET HEATER A -ve				35		56
	PTC JFET HEATER A shld				NC		22 (D3)
STP	PTC Bias B +ve					1	1
	PTC Bias B -ve					20	8
	PTC Bias B Shield					2 (A4)	4(A4)
S	PTC Ground B				2 (A4)	4(A4)	
STP	PTC JFETV Bias B +ve					21	3
	PTC JFETV Bias B -ve					3	2
	PTC JFETV Bias B Shield					2 (A4)	4(A4)
STP	SLW BIAS B1+ve					22	13
	SLW BIAS B1-ve					4	12
	SLW BIAS B1 shld					6(B4)	32(B4)
STP	SLW BIAS B2+ve					5	21
	SLW BIAS B2 -ve					24	20
	SLW BIAS B2 shld					23(B4)	32(B4)
STP	SLW JFETV B1 +ve					25	31
	SLW JFETV B1 -ve					7	43
	SLW JFETV B1 shld					6(B4)	32(B4)
STP	SLW JFETV B2 +ve					8	42
	SLW JFETV B2 -ve					27	54
	SLW JFETV B2 shld					6(B4)	32(B4)
S	SLW GND WIRE B				6(B4)	32(B4)	
S	SSW GND WIRE B				12(C4)	40(C4)	
STP	SSW BIAS1 B +ve					28	10
	SSW BIAS1 B -ve					10	11
	SSW BIAS1 B shld					9(C4)	40(C4)
STP	SSW JFETV1 B +ve					11	19
	SSW JFETV1 B -ve					30	29
	SSW JFETV1 B shld					29(C4)	40(C4)
STP	SSW BIAS2 B +ve					13	41
	SSW BIAS2 B -ve					32	30
	SSW BIAS2 B shld					31(C4)	40(C4)
STP	SSW JFETV2 B +ve					33	53
	SSW JFETV2 B -ve					15	52
	SSW JFETV2 B shld					14(C4)	40 (C4)
S	S HEATER GROUND B				NC	39(D4)	
STP	SLW HEATER B +ve					17	18
	SLW HEATER B -ve					36	28
	SLW HEATER B shld					18(D4)	39(D4)
STP	SSW HEATER B +ve					37	9
	SSW HEATER B -ve					19	17
	SSW HEATER B shld					18(D4)	39(D4)
STP	PTC JFET HEATER A +ve					16	16
	PTC JFET HEATER A -ve					35	27
	PTC JFET HEATER A shld					NC	39(D4)
	Harness Overshield		EMC Backshell	EMC Backshell	EMC Backshell	EMC Backshell	

FPU Faraday Shield Link Pins S1/I1/C1								
5	6	15	22	25	36	39	47	58
82	94	105	123	124	125	126	127	128

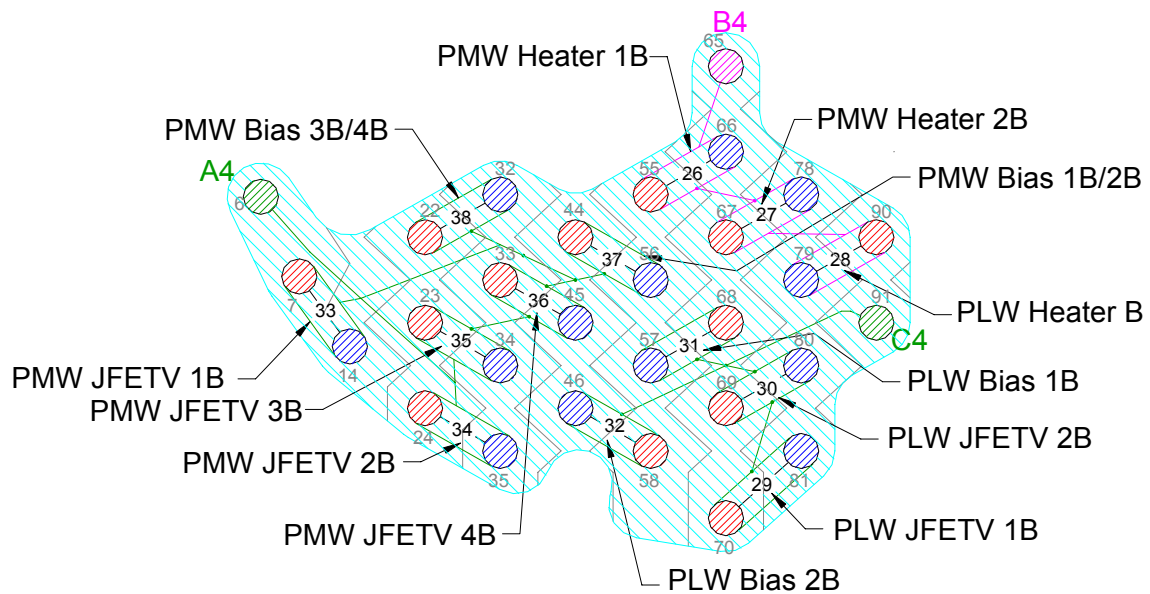


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**PMW/PLW Biases A (JFP P27)
Prime**



**PMW/PLW Biases B (JFP P28)
Redundant**



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Name	37-way P25 (PSW Bias A)	37-way P27 (PMW/PLW Bias A)	37-Way P26 (PSW Bias B)	37-Way P28 (PMW/PLW Bias B)	128-Way #3
PSW JFETV1 A +	20				26
PSW JFETV1 A -	2				37
PSW JFETV1 A shld	1 (A1)				36 (A1)
PSW JFETV2 A +	3				38
PSW JFETV2 A -	22				49
PSW JFETV2 A shld	21 (A1)				36 (A1)
PSW JFETV3 A +	23				48
PSW JFETV3 A -	5				60
PSW JFETV3 A shld	4 (A1)				36 (A1)
PSW JFETV4 A +	6				59
PSW JFETV4 A -	25				71
PSW JFETV4 A shld	24 (A1)				36 (A1)
PSW JFETV5 A +	26				50
PSW JFETV5 A -	8				61
PSW JFETV5 A shld	7 (A1)				36 (A1)
PSW JFETV6 A +	9				62
PSW JFETV6 A -	28				51
PSW JFETV6 A shld	27 (A1)				36 (A1)
PSW GRND A	10 (A1)				36 (A1)
PSW BIAS1/2 A +	11				63
PSW BIAS1/2 A -	29				75
PSW BIAS1/2 A shld	30 (A1)				36 (A1)
PSW BIAS3/4 A +	31				74
PSW BIAS3/4 A -	12				73
PSW BIAS3/4 A shld	13 (A1)				36 (A1)
PSW BIAS5/6 A +	14				83
PSW BIAS5/6 A -	32				72
PSW BIAS5/6 A shld	33 (A1)				36 (A1)
PSW HEATER A1 +	34				95
PSW HEATER A1 -	15				84
PSW HEATER A1 shld	16 (B1)				105 (B1)
PSW HEATER A2 +	17				96
PSW HEATER A2 -	35				85
PSW HEATER A2 shld	36 (B1)				105 (B1)
PSW HEATER A3 +	37				106
PSW HEATER A3 -	18				107
PSW HEATER A3 shld	36 (B1)				105 (B1)
PMW JFETV1 A +		20			86
PMW JFETV1 A -		2			87
PMW JFETV1 A shld		1 (A2)			64 (A2)
PMW JFETV2 A +		3			97
PMW JFETV2 A -		22			98
PMW JFETV2 A shld		21 (A2)			64 (A2)
PMW JFETV3 A +		23			108
PMW JFETV3 A -		5			109
PMW JFETV3 A shld		4 (A2)			64 (A2)
PMW JFETV4 A +		6			116
PMW JFETV4 A -		25			117
PMW JFETV4 A shld		24 (A2)			64 (A2)
PMW BIAS1/2 A +		26			76
PMW BIAS1/2 A -		8			77
PMW BIAS1/2 A shld		7 (A2)			64 (A2)
PMW BIAS3/4 A +		27			88
PMW BIAS3/4 A -		9			89
PMW BIAS3/4 A shld		28 (A2)			64(A2)
PMW GND WIRE A		28 (A2)			64 (A2)
PMW HEATER A1 +		29			103
PMW HEATER A1 -		10			113
PMW HEATER A1 shld		11(B2)			114 (B2)
PMW HEATER A2 +		12			102
PMW HEATER A2 -		30			101
PMW HEATER A2 shld		11(B2)			114 (B2)
PLW HEATER A +		13			92
PLW HEATER A -		31			104
PLW HEATER A shld		11(B2)			93 (B2)



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Name	37-way P25 (PSW Bias A)	37-way P27 (PMW/PLW Bias A)	37-Way P26 (PSW Bias B)	37-Way P28 (PMW/PLW Bias B)	128-Way #3
PLW JFETV1 A +		14			99
PLW JFETV1 A -		32			100
PLW JFETV1 A shld		33 (C2)			128 (C2)
PLW JFETV2 A +		34			110
PLW JFETV2 A -		15			111
PLW JFETV2 A shld		16 (C2)			128 (C2)
PLW BIAS1 A +		17			118
PLW BIAS1 A -		35			119
PLW BIAS1 A shld		36 (C2)			128 (C2)
PLW BIAS2 A +		37			112
PLW BIAS2 A -		18			120
PLW BIAS2 A shld		19 (C2)			128 (C2)
PLW GROUND WIRE A		19 (C2)			128 (C2)
PSW JFETV1 B +			20		42
PSW JFETV1 B -			2		54
PSW JFETV1 B shld			1 (A3)		1 (A3)
PSW JFETV2 B +			3		53
PSW JFETV2 B -			22		52
PSW JFETV2 B shld			21 (A3)		1 (A3)
PSW JFETV3 B +			23		41
PSW JFETV3 B -			5		30
PSW JFETV3 B shld			4 (A3)		1 (A3)
PSW JFETV4 B +			6		10
PSW JFETV4 B -			25		11
PSW JFETV4 B shld			24 (A3)		1 (A3)
PSW JFETV5 B +			26		19
PSW JFETV5 B -			8		29
PSW JFETV5 B shld			7 (A3)		1 (A3)
PSW JFETV6 B +			9		16
PSW JFETV6 B -			28		27
PSW JFETV6 B shld			27 (A3)		1 (A3)
PSW GRND B			10 (A3)		1 (A3)
PSW BIAS1/2 B +			11		40
PSW BIAS1/2 B -			29		39
PSW BIAS1/2 B shld			30 (A3)		1 (A3)
PSW BIAS3/4 B +			31		18
PSW BIAS3/4 B -			12		28
PSW BIAS3/4 B shld			13 (A3)		1 (A3)
PSW BIAS5/6 B +			14		9
PSW BIAS5/6 B -			32		17
PSW BIAS5/6 B shld			33 (A3)		1 (A3)
PSW HEATER B1 +			34		13
PSW HEATER B1 -			15		12
PSW HEATER B1 shld			16 (B3)		5 (B3)
PSW HEATER B2 +			17		21
PSW HEATER B2 -			35		20
PSW HEATER B2 shld			36 (B3)		5 (B3)
PSW HEATER B3 +			37		31
PSW HEATER B3 -			18		43
PSW HEATER B3 shld			36 (B3)		5 (B3)
PMW JFETV1 B +				20	7
PMW JFETV1 B -				2	14
PMW JFETV1 B shld				1 (A4)	6 (A4)
PMW JFETV2 B +				3	24
PMW JFETV2 B -				22	35
PMW JFETV2 B shld				21 (A4)	6 (A4)
PMW JFETV3 B +				23	23
PMW JFETV3 B -				5	34
PMW JFETV3 B shld				4 (A4)	6 (A4)
PMW JFETV4 B +				6	33
PMW JFETV4 B -				25	45
PMW JFETV4 B shld				24 (A4)	6 (A4)
PMW BIAS1/2 B +				26	44
PMW BIAS1/2 B -				8	56
PMW BIAS1/2 B shld				7 (A4)	6 (A4)
PMW BIAS3/4 B +				27	22
PMW BIAS3/4 B -				9	32
PMW BIAS3/4 B shld				28 (A4)	6 (A4)
PMW GND WIRE B				28 (A4)	6 (A4)
PMW HEATER B1 +				29	55



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PMW HEATER B1 -				10	66
PMW HEATER B1 shld				11 (B4)	65 (B4)
PMW HEATER B2 +				12	67
PMW HEATER B2 -				30	78
PMW HEATER B2 shld				11 (B4)	65 (B4)
PLW HEATER B +				13	90
PLW HEATER B -				31	79
PLW HEATER B shld				11 (B4)	65 (B4)
PLW JFETV1 B +				14	70
PLW JFETV1 B -				32	81
PLW JFETV1 B shld				33 (C4)	91 (C4)
PLW JFETV2 B +				34	69
PLW JFETV2 B -				15	80
PLW JFETV2 B shld				16 (C4)	91 (C4)
PLW BIAS1 B +				17	68
PLW BIAS1 B -				35	57
PLW BIAS1 B shld				36 (C4)	91 (C4)
PLW BIAS2 B +				37	58
PLW BIAS2 B -				18	46
PLW BIAS2 B shld				19 (C4)	91 (C4)
PLW GROUND WIRE B				19 (C4)	91 (C4)
Harness Over-shield	EMC Backshell	EMC Backshell	EMC Backshell	EMC Backshell	EMC Backshell

FPU Faraday Shield Link Pins												
2	3	4	5	7	8	15	25	47	65	82	93	94
105	114	115	121	122	123	124	125	126	127	X	X	X



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	Name	Pixel	JFP P13	JFP P14	JFP P15	JFP P16	128Way #6	
	Channel 7 -	PLW-B7	7				75	
	Channel 7gnd		13 (A1)				36 (A1)	
	Channel 8 +		21				74	
	Channel 8 -		8				73	
	Channel 8gnd		13 (A1)				36 (A1)	
C6-12ax-C	Channel 9 +	PLW-C7	22				83	
	Channel 9 -		9				72	
	Channel 9gnd		13 (A1)				36 (A1)	
	Channel 10 +	PLW-B5	23				95	
	Channel 10 -		10				84	
	Channel 10gnd		13 (A1)				36 (A1)	
	Channel 11 +	PLW-B6	24				96	
	Channel 11 -		11				85	
	Channel 11gnd		13 (A1)				36 (A1)	
	Channel 12 +	PLW-A5	25				106	
	Channel 12 -		12				107	
	Channel 12gnd		13 (A1)				36 (A1)	
	C6-12ax-D	Channel 13 +	PLW-T1		1			86
		Channel 13 -			14			87
Channel 13gnd				13 (A2)			128 (A2)	
Channel 14 +		PLW-B4		2			97	
Channel 14 -				15			98	
Channel 14gnd				13 (A2)			128 (A2)	
Channel 15 +		PLW-C4		3			108	
Channel 15 -				16			109	
Channel 15gnd				13 (A2)			128 (A2)	
Channel 16 +		PLW-B3		4			116	
Channel 16 -				17			117	
Channel 16gnd				13 (A2)			128 (A2)	
C6-12ax-E		Channel 17 +	PLW-C2		5			55
		Channel 17 -			18			66
	Channel 17gnd			13 (A2)			128 (A2)	
	Channel 18 +	PLW-B2		6			67	
	Channel 18 -			19			78	
	Channel 18gnd			13 (A2)			128 (A2)	
	Channel 19 +	PLW-B1		20			76	
	Channel 19 -			7			77	
	Channel 19gnd			13 (A2)			128 (A2)	
	Channel 20 +	PLW-A3		21			88	
	Channel 20 -			8			89	
	Channel 20gnd			13 (A2)			128 (A2)	
	C6-12ax-F	Channel 21 +	PLW-A4		22			99
		Channel 21 -			9			100
Channel 21gnd				13 (A2)			128 (A2)	
Channel 22 +		PLW-A1		23			110	
Channel 22 -				10			111	
Channel 22gnd				13 (A2)			128 (A2)	
Channel 23 +		PLW-DK1		24			118	
Channel 23 -				11			119	
Channel 23gnd				13 (A2)			128 (A2)	
Channel 24 +		PLW-A2		25			112	
Channel 24 -				12			120	
Channel 24gnd				13 (A2)			128 (A2)	
C6-12ax-G		Channel 25 +	PLW-E1			1		90
		Channel 25 -				14		79
	Channel 25gnd				13 (A3)		47 (A3)	
	Channel 26 +	PLW-E2			2		102	
	Channel 26 -				15		101	
	Channel 26gnd				13 (A3)		47 (A3)	
	Channel 27 +	PLW-E3			3		92	
	Channel 27 -				16		91	
	Channel 27gnd				13 (A3)		47 (A3)	
	Channel 28 +	PLW-E4			4		103	
	Channel 28 -				17		113	
	Channel 28gnd				13 (A3)		47 (A3)	
	C6-12ax-H	Channel 29 +	PLW-D1			5		58
		Channel 29 -				18		46
Channel 29gnd					13 (A3)		47 (A3)	
Channel 30 +		PLW-D2			6		68	
Channel 30 -					19		57	
	Channel 30gnd				13 (A3)		47 (A3)	

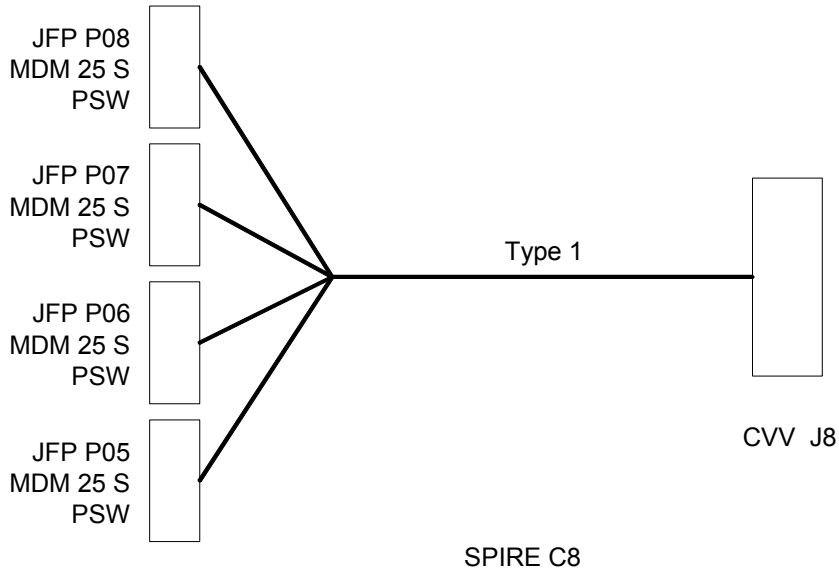


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4.4.8 C8 CVV8 to HSJFP Type1

Overall Mechanical Drawing



Connector/Backshell Details

MDM25S+Glenair507-T-139-M-37 to	JFPJ5	PSW Signals
MDM25S+Glenair507-T-139-M-37 to	JFPJ6	PSW Signals
MDM25S+Glenair507-T-139-M-37 to	JFPJ7	PSW Signals
MDM25S+Glenair507-T-139-M-37 to	JFPJ8	PSW Signals

Harness Layup

As C4.

	Name		JFP P05	JFP P06	JFP P07	JFP P08	128Way #8
C8-12ax-A	Channel 1 +	PSW-D6	1				26
	Channel 1 -		14				37
	Channel 1gnd		13 (A1)				36 (A1)
	Channel 2 +	PSW-B6	2				38
	Channel 2 -		15				49
	Channel 2gnd		13 (A1)				36 (A1)
	Channel 3 +	PSW-C5	3				48
	Channel 3 -		16				60
	Channel 3gnd		13 (A1)				36 (A1)
	Channel 4 +	PSW-A5	4				59
	Channel 4 -		17				71
	Channel 4gnd		13 (A1)				36 (A1)
C8-12ax-B	Channel 5 +	PSW-E5	5				50
	Channel 5 -		18				61
	Channel 5gnd		13 (A1)				36 (A1)
	Channel 6 +	PSW-B5	6				62
	Channel 6 -		19				51
	Channel 6gnd		13 (A1)				36 (A1)
	Channel 7 +	PSW-D5	20				63
	Channel 7 -		7				75
	Channel 7gnd		13 (A1)				36 (A1)
	Channel 8 +	PSW-C4	21				74
	Channel 8 -		8				73
	Channel 8gnd		13 (A1)				36 (A1)



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	Name		JFP P05	JFP P06	JFP P07	JFP P08	128Way #8
C8-12ax-C	Channel 9 +	PSW-A4	22				83
	Channel 9 -		9				72
	Channel 9gnd		13 (A1)				36 (A1)
	Channel 10 +	PSW-D4	23				95
	Channel 10 -		10				84
	Channel 10gnd		13 (A1)				36 (A1)
	Channel 11 +	PSW-B4	24				96
	Channel 11 -		11				85
	Channel 11gnd		13 (A1)				36 (A1)
	Channel 12 +	PSW-C3	25				106
Channel 12 -	12					107	
Channel 12gnd	13 (A1)					36 (A1)	
C8-12ax-D	Channel 13 +	PSW-B3		1			86
	Channel 13 -			14			87
	Channel 13gnd			13 (A2)			128 (A2)
	Channel 14 +	PSW-A3		2			97
	Channel 14 -			15			98
	Channel 14gnd			13 (A2)			128 (A2)
	Channel 15 +	PSW-A2		3			108
	Channel 15 -			16			109
	Channel 15gnd			13 (A2)			128 (A2)
	Channel 16 +	PSW-D3		4			116
Channel 16 -			17			117	
Channel 16gnd			13 (A2)			128 (A2)	
C8-12ax-E	Channel 17 +	PSW-C2		5			55
	Channel 17 -			18			66
	Channel 17gnd			13 (A2)			128 (A2)
	Channel 18 +	PSW-B2		6			67
	Channel 18 -			19			78
	Channel 18gnd			13 (A2)			128 (A2)
	Channel 19 +	PSW-D2		20			76
	Channel 19 -			7			77
	Channel 19gnd			13 (A2)			128 (A2)
	Channel 20 +	PSW-A1		21			88
Channel 20 -			8			89	
Channel 20gnd			13 (A2)			128 (A2)	
C8-12ax-F	Channel 21 +	PSW-C1		22			99
	Channel 21 -			9			100
	Channel 21gnd			13 (A2)			128 (A2)
	Channel 22 +	PSW-B1		23			110
	Channel 22 -			10			111
	Channel 22gnd			13 (A2)			128 (A2)
	Channel 23 +	PSW-DK1		24			118
	Channel 23 -			11			119
	Channel 23gnd			13 (A2)			128 (A2)
	Channel 24 +	PSW-D1		25			112
Channel 24 -			12			120	
Channel 24gnd			13 (A2)			128 (A2)	
C8-12ax-G	Channel 25 +	PSW-F12			1		90
	Channel 25 -				14		79
	Channel 25gnd				13 (A3)		47 (A3)
	Channel 26 +	PSW-J11			2		102
	Channel 26 -				15		101
	Channel 26gnd				13 (A3)		47 (A3)
	Channel 27 +	PSW-E12			3		92
	Channel 27 -				16		91
	Channel 27gnd				13 (A3)		47 (A3)
	Channel 28 +	PSW-H12			4		103
Channel 28 -				17		113	
Channel 28gnd				13 (A3)		47 (A3)	
C8-12ax-H	Channel 29 +	PSW-G12			5		58
	Channel 29 -				18		46
	Channel 29gnd				13 (A3)		47 (A3)
	Channel 30 +	PSW-F13			6		68
	Channel 30 -				19		57
	Channel 30gnd				13 (A3)		47 (A3)
	Channel 31 +	PSW-E13			20		69
	Channel 31 -				7		80
Channel 31gnd				13 (A3)		47 (A3)	
Channel 32 +	PSW-J12			21		70	

Photometer Stimulus Heater P13

Function	P13	Max. Current	Wire Lay-up	MaxOhms	128Way #11
Photometer Point Stim. Heater I+ _A	2	7 mA	Screened twisted quad	10	48
Photometer Point Stim.Heater I+ _B	3	7 mA		10	71
Photometer Point Stim.Heater I- _A	7	7 mA		10	60
Photometer Point Stim.Heater I- _B	8	7 mA		10	59
Screen	4				36
Harness Overshield		EMC Backshell			

4 pins used

SMEC Launch Tail Listing (FCU P29)

Function	Signal Name	37-Way P29	Max. Current	Wire lay-up	Max Ohms	128Way #11
SMEC launch latch #1 power supply A	S_LL#1_Coil_P	1	400 mA / 50ms	Insulated screened twisted pair	5	67
SMEC launch latch #1 power return A	S_LL#1_Coil_N	2	400 mA / 50ms		5	66
SMEC launch latch #1 power Shield A	S_LL#1_Coil_Shd	20	N/A		N/A	78
SMEC launch latch #1 power supply B		21	400 mA / 50ms	Insulated screened twisted pair	5	69
SMEC launch latch #1 power return B		22	400 mA / 50ms		5	68
SMEC launch latch #1 power Shield B		3	N/A		N/A	80
SMEC launch latch #2 power supply A		4	400 mA / 50ms	Insulated screened twisted pair	5	90
SMEC launch latch #2 power return A		5	400 mA / 50ms		5	91
SMEC launch latch #2 power Shield A		23	N/A		N/A	79
SMEC launch latch #2 power supply B	S_LL#2_Coil_P	24	400 mA / 50ms	Insulated screened twisted pair	5	92
SMEC launch latch #2 power return B	S_LL#2_Coil_N	25	400 mA / 50ms		5	93
SMEC launch latch #2 power Shield B	S_LL#2_Coil_Shd	6	N/A		N/A	81
SMEC LVDT primary coil power supply (P)	LVDT_PRIM_P	13	5 mA	Insulated screened twisted pair	5	101
SMEC LVDT primary coil power supply (N)	LVDT_PRIM_N	14	5 mA		5	102
SMEC LVDT primary coil power supply Shld	LVDT_PRIM_Shd	32	N/A		N/A	112
SMEC LVDT secondary coil # 1 signal (P)	LVDT_SECA_P	15	50 μ A	Insulated screened twisted pair	5	127
SMEC LVDT secondary coil # 1 signal (N)	LVDT_SECA_N	16	50 μ A		5	120
SMEC LVDT secondary coil # 1 signal Shield	LVDT_SECA_Shd	34	N/A		N/A	128
SMEC LVDT secondary coil # 2 signal (P)	LVDT_SECB_P	17	50 μ A	Insulated screened twisted pair	5	114
SMEC LVDT secondary coil # 2 signal (N)	LVDT_SECB_N	18	50 μ A		5	113
SMEC LVDT secondary coil # 2 signal Shield	LVDT_SECB_Shd	36	N/A		N/A	121
Harness Overshield		EMC Backshell				



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	Name	Pixel	JFP P01	JFP P02	JFP P03	JFP P04	128Way #9	
	Channel 6 -	PSW-D15	19				51	
	Channel 6gnd		13 (A1)				36 (A1)	
	Channel 7 +		20				63	
	Channel 7 -		7				75	
	Channel 7gnd		13 (A1)				36 (A1)	
	Channel 8 +		PSW-B15	21				74
	Channel 8 -			8				73
Channel 8gnd	13 (A1)					36 (A1)		
C9-12ax-C	Channel 9 +	PSW-C14	22				83	
	Channel 9 -		9				72	
	Channel 9gnd		13 (A1)				36 (A1)	
	Channel 10 +	PSW-D14	23				95	
	Channel 10 -		10				84	
	Channel 10gnd	PSW-A14	13 (A1)				36 (A1)	
	Channel 11 +		24				96	
	Channel 11 -		11				85	
	Channel 11gnd	PSW-A13	13 (A1)				36 (A1)	
	Channel 12 +		25				106	
Channel 12 -	12					107		
Channel 12gnd	13 (A1)					36 (A1)		
C9-12ax-D	Channel 13 +	PSW-B14		1			86	
	Channel 13 -			14			87	
	Channel 13gnd			13 (A2)			128 (A2)	
	Channel 14 +	PSW-C13		2			97	
	Channel 14 -			15			98	
	Channel 14gnd			13 (A2)			128 (A2)	
	Channel 15 +	PSW-B13		3			108	
	Channel 15 -			16			109	
	Channel 15gnd			13 (A2)			128 (A2)	
	Channel 16 +	PSW-D13		4			116	
Channel 16 -			17			117		
Channel 16gnd			13 (A2)			128 (A2)		
C9-12ax-E	Channel 17 +	PSW-A12		5			55	
	Channel 17 -			18			66	
	Channel 17gnd			13 (A2)			128 (A2)	
	Channel 18 +	PSW-C12		6			67	
	Channel 18 -			19			78	
	Channel 18gnd			13 (A2)			128 (A2)	
	Channel 19 +	PSW-D12		20			76	
	Channel 19 -			7			77	
	Channel 19gnd			13 (A2)			128 (A2)	
	Channel 20 +		PSW-B12		21			88
Channel 20 -		8				89		
Channel 20gnd		13 (A2)				128 (A2)		
C9-12ax-F	Channel 21 +	PSW-E11		22			99	
	Channel 21 -			9			100	
	Channel 21gnd			13 (A2)			128 (A2)	
	Channel 22 +	PSW-A11		23			110	
	Channel 22 -			10			111	
	Channel 22gnd			13 (A2)			128 (A2)	
	Channel 23 +	PSW-C11		24			118	
	Channel 23 -			11			119	
	Channel 23gnd			13 (A2)			128 (A2)	
Channel 24 +	PSW-B11		25			112		
Channel 24 -			12			120		
Channel 24gnd			13 (A2)			128 (A2)		
C9-12ax-G	Channel 25 +	PSW-E1			1		90	
	Channel 25 -				14		79	
	Channel 25gnd				13 (A3)		47 (A3)	
	Channel 26 +	PSW-F1			2		102	
	Channel 26 -				15		101	
	Channel 26gnd				13 (A3)		47 (A3)	
	Channel 27 +	PSW-T2			3		92	
	Channel 27 -				16		91	
	Channel 27gnd				13 (A3)		47 (A3)	
	Channel 28 +	PSW-H1			4		103	
Channel 28 -				17		113		
Channel 28gnd				13 (A3)		47 (A3)		
C9-12ax-H	Channel 29 +	PSW-G1			5		58	
	Channel 29 -				18		46	

Pin Allocation List (Harness)

Connector: 312100 P03

Function: SPIRE SVM CB1 (SPIRE Bundle 04)

Conn.-Type: MS27484T24F-35S (PI+ShI)

Item: HSSVMCB1

Location: 27 / I/F CB ab. SVM Panel 7 (SPI/CCU CB)

Backshell: 380 FS 007 M24 05

EMC-Category: 2S/Sig H fr SVMCB to W. Units

Pin	Signal Designation	Interface-Code			Ch. ID	Wiring	Grouping:			Comment	Target-Item	Location	Connector	Pin	New
		Circuit	Signal	Pos.			Shd	Cable	Twist						
078	SPIRE PMW Ch17 to 19 . 18-		SPB.5	-	S073	021CC-28	5				HSDCU	17	122300 P20	016	
128	SPIRE PMW Ch17 to 19 . 18gnd		SPB.5	-	S073	021CC-28	5			Daisy ch to Pin 128 (A3)	HSDCU	17	122300 P20	049	
076	SPIRE PMW Ch17 to 19 . 19+		SPB.5	-	S073	021CC-28	5			PMW-E9	HSDCU	17	122300 P20	033	
077	SPIRE PMW Ch17 to 19 . 19-		SPB.5	-	S073	021CC-28	5				HSDCU	17	122300 P20	017	
128	SPIRE PMW Ch17 to 19 . 19gnd		SPB.5	-	S073	021CC-28	5			Daisy ch to Pin 128 (A3)	HSDCU	17	122300 P20	050	
-	P20 Cable Faraday shd									Cable P20 Faraday Shd con to Busbar					
-	P20 Insulating Jacket									Cable P20 Insulating Jacket tbd					
-	P20 Cable Overall Shd									Cable P20 Overall Shd not forseen, may be added later					
088	SPIRE PMW Ch 20 . 20+		SPB.3	-	S73A	021CC-28	5			PMW-G9	HSDCU	17	122300 P21	001	
089	SPIRE PMW Ch 20 . 20-		SPB.3	-	S73A	021CC-28	5				HSDCU	17	122300 P21	018	
128	SPIRE PMW Ch 20 . 20gnd		SPB.3	-	S73A	021CC-28	5			Daisy ch to Pin 128 (A3)	HSDCU	17	122300 P21	034	
099	SPIRE PMW Ch21 to 24 . 21+		SPB.S	-	S074	021CC-28	6			PMW-D9	HSDCU	17	122300 P21	002	
100	SPIRE PMW Ch21 to 24 . 21-		SPB.S	-	S074	021CC-28	6				HSDCU	17	122300 P21	019	
128	SPIRE PMW Ch21 to 24 . 21gnd		SPB.S	-	S074	021CC-28	6			Daisy ch to Pin 128 (A3)	HSDCU	17	122300 P21	035	
110	SPIRE PMW Ch21 to 24 . 22+		SPB.S	-	S074	021CC-28	6			PMW-F9	HSDCU	17	122300 P21	003	
111	SPIRE PMW Ch21 to 24 . 22-		SPB.S	-	S074	021CC-28	6				HSDCU	17	122300 P21	020	
128	SPIRE PMW Ch21 to 24 . 22gnd		SPB.S	-	S074	021CC-28	6			Daisy ch to Pin 128 (A3)	HSDCU	17	122300 P21	036	
118	SPIRE PMW Ch21 to 24 . 23+		SPB.S	-	S074	021CC-28	6			PMW-E10	HSDCU	17	122300 P21	004	
119	SPIRE PMW Ch21 to 24 . 23-		SPB.S	-	S074	021CC-28	6				HSDCU	17	122300 P21	021	
128	SPIRE PMW Ch21 to 24 . 23gnd		SPB.S	-	S074	021CC-28	6			Daisy ch to Pin 128 (A3)	HSDCU	17	122300 P21	037	
112	SPIRE PMW Ch21 to 24 . 24+		SPB.S	-	S074	021CC-28	6			PMW-G10	HSDCU	17	122300 P21	005	
120	SPIRE PMW Ch21 to 24 . 24-		SPB.S	-	S074	021CC-28	6				HSDCU	17	122300 P21	022	
128	SPIRE PMW Ch21 to 24 . 24gnd		SPB.S	-	S074	021CC-28	6			Daisy ch to Pin 128 (A3)	HSDCU	17	122300 P21	038	
090	SPIRE PMW Ch25 to 28 . 25+		SPB.S	-	S076	021CC-28	8			PMW-C4	HSDCU	17	122300 P21	006	

These two corrections are as per SPIRE HDD 1.2

Pin Allocation List (Harness)

Connector: 312100 P03

Function: SPIRE SVM CB1 (SPIRE Bundle 04)

Conn.-Type: MS27484T24F-35S (PI+ShI)

Item: HSSVMCB1

Location: 27 / I/F CB ab. SVM Panel 7 (SPI/CCU CB)

Backshell: 380 FS 007 M24 05

EMC-Category: 2S/Sig H fr SVMCB to W. Units

Pin	Signal Designation	Interface-Code			Ch. ID	Wiring	Grouping:			Comment	Target-Item	Location	Connector	Pin	New
		Circuit	Signal	Pos.			Shd	Cable	Twist						
078	SPIRE PMW Ch17 to 19 . 18-		SPB.5 -		S073	021CC-28	5				HSDCU	17	122300 P20	016	
128	SPIRE PMW Ch17 to 19 . 18gnd		SPB.5 -		S073	021CC-28	5			Daisy ch to Pin 128 (A3)	HSDCU	17	122300 P20	049	
076	SPIRE PMW Ch17 to 19 . 19+		SPB.5 -		S073	021CC-28	5			PMW-E9	HSDCU	17	122300 P20	033	
077	SPIRE PMW Ch17 to 19 . 19-		SPB.5 -		S073	021CC-28	5				HSDCU	17	122300 P20	017	
128	SPIRE PMW Ch17 to 19 . 19gnd		SPB.5 -		S073	021CC-28	5			Daisy ch to Pin 128 (A3)	HSDCU	17	122300 P20	050	
-	P20 Cable Faraday shd									Cable P20 Faraday Shd con to Busbar					
-	P20 Insulating Jacket									Cable P20 Insulating Jacket tbd					
-	P20 Cable Overall Shd									Cable P20 Overall Shd not forseen, may be added later					
088	SPIRE PMW Ch 20 . 20+		SPB.3 -		S73A	021CC-28	5			PMW-G9	HSDCU	17	122300 P21	001	
089	SPIRE PMW Ch 20 . 20-		SPB.3 -		S73A	021CC-28	5				HSDCU	17	122300 P21	018	
128	SPIRE PMW Ch 20 . 20gnd		SPB.3 -		S73A	021CC-28	5			Daisy ch to Pin 128 (A3)	HSDCU	17	122300 P21	034	
099	SPIRE PMW Ch21 to 24 . 21+		SPB.S -		S074	021CC-28	6			PMW-D9	HSDCU	17	122300 P21	002	
100	SPIRE PMW Ch21 to 24 . 21-		SPB.S -		S074	021CC-28	6				HSDCU	17	122300 P21	019	
128	SPIRE PMW Ch21 to 24 . 21gnd		SPB.S -		S074	021CC-28	6			Daisy ch to Pin 128 (A3)	HSDCU	17	122300 P21	035	
110	SPIRE PMW Ch21 to 24 . 22+		SPB.S -		S074	021CC-28	6			PMW-F9	HSDCU	17	122300 P21	003	
111	SPIRE PMW Ch21 to 24 . 22-		SPB.S -		S074	021CC-28	6				HSDCU	17	122300 P21	020	
128	SPIRE PMW Ch21 to 24 . 22gnd		SPB.S -		S074	021CC-28	6			Daisy ch to Pin 128 (A3)	HSDCU	17	122300 P21	036	
118	SPIRE PMW Ch21 to 24 . 23+		SPB.S -		S074	021CC-28	6			PMW-E10	HSDCU	17	122300 P21	004	
119	SPIRE PMW Ch21 to 24 . 23-		SPB.S -		S074	021CC-28	6				HSDCU	17	122300 P21	021	
128	SPIRE PMW Ch21 to 24 . 23gnd		SPB.S -		S074	021CC-28	6			Daisy ch to Pin 128 (A3)	HSDCU	17	122300 P21	037	
112	SPIRE PMW Ch21 to 24 . 24+		SPB.S -		S074	021CC-28	6			PMW-G10	HSDCU	17	122300 P21	005	
120	SPIRE PMW Ch21 to 24 . 24-		SPB.S -		S074	021CC-28	6				HSDCU	17	122300 P21	022	
128	SPIRE PMW Ch21 to 24 . 24gnd		SPB.S -		S074	021CC-28	6			Daisy ch to Pin 128 (A3)	HSDCU	17	122300 P21	038	
090	SPIRE PMW Ch25 to 28 . 25+		SPB.S -		S076	021CC-28	8			PMW-C4	HSDCU	17	122300 P21	006	

Compliant with
SPIRE HDD 1.2

Pin Allocation List (Harness)

Connector: 211121 J22
Item: CVVUCR
EMC-Category: 2C/Sig H in Cryostat

Function: UFThr 193.0° (SPIRE XS-04JFP21,22,23,24)
Location: 33 / CVV I/F CB Top PFM (CVVUCR)

Conn.-Type: 197-011P24-35P (Junct.)
Backshell: HERSKT 58-0050

Pin	Signal Designation	Interface-Code			Ch. ID	Wiring	Grouping:			Comment	Target-Item	Location	Connector	Pin	New
		Circuit	Signal	Pos.			Shd	Cable	Twist						
108	SPIRE PMW Ch 13 to 16 . 15+		SPB.-	-	S072	12AXD-38	4	D		PMW-F7	HSJFP	75	121210 P23	003	
109	SPIRE PMW Ch 13 to 16 . 15-		SPB.-	-	S072	12AXD-38	4	D			HSJFP	75	121210 P23	016	
128	SPIRE PMW Ch 13 to 16 . 15gnd		SPB.-	-	S072	12AXD-38	4	D		Daisy ch to Pin 128 (A2)	HSJFP	75	121210 P23	013	
-															
116	SPIRE PMW Ch 13 to 16 . 16+		SPB.-	-	S072	12AXD-38	4	D		PMW-E8	HSJFP	75	121210 P23	004	
117	SPIRE PMW Ch 13 to 16 . 16-		SPB.-	-	S072	12AXD-38	4	D			HSJFP	75	121210 P23	017	
128	SPIRE PMW Ch 13 to 16 . 16gnd		SPB.-	-	S072	12AXD-38	4	D		Daisy ch to Pin 128 (A2)	HSJFP	75	121210 P23	013	
128	SPIRE PMW Ch 13 to 16 . SHD01		SPB.-	-	S072	12AXD-38	4	D		Cable S072 inner Shd daisy ch to Pin 128 (A2)	HSJFP	75	121210 P23	013	
-	Cable S072 12 AXD Outer Shield									Cable S072 outer Shd con to Busbar (Faraday)					
-															
-															
055	SPIRE PMW Ch17 to 19 . 17+		SPB.-	-	S073	12AXD-38	5	E		PMW-G8	HSJFP	75	121210 P23	005	
066	SPIRE PMW Ch17 to 19 . 17-		SPB.-	-	S073	12AXD-38	5	E			HSJFP	75	121210 P23	018	
128	SPIRE PMW Ch17 to 19 . 17gnd		SPB.-	-	S073	12AXD-38	5	E		Daisy ch to Pin 128 (A2)	HSJFP	75	121210 P23	013	
067	SPIRE PMW Ch17 to 19 . 18+		SPB.-	-	S073	12AXD-38	5	E		PMW-F8	HSJFP	75	121210 P23	006	
078	SPIRE PMW Ch17 to 19 . 18-		SPB.-	-	S073	12AXD-38	5	E			HSJFP	75	121210 P23	019	
128	SPIRE PMW Ch17 to 19 . 18gnd		SPB.-	-	S073	12AXD-38	5	E		Daisy ch to Pin 128 (A2)	HSJFP	75	121210 P23	013	
-															
076	SPIRE PMW Ch17 to 19 . 19+		SPB.-	-	S073	12AXD-38	5	E		PMW-E9	HSJFP	75	121210 P23	020	
077	SPIRE PMW Ch17 to 19 . 19-		SPB.-	-	S073	12AXD-38	5	E			HSJFP	75	121210 P23	007	
128	SPIRE PMW Ch17 to 19 . 19gnd		SPB.-	-	S073	12AXD-38	5	E		Daisy ch to Pin 128 (A2)	HSJFP	75	121210 P23	013	
-															
088	SPIRE PMW Ch 20 . 20+		SPB.-	-	S73A	12AXD-38	5	E		PMW-G9	HSJFP	75	121210 P23	021	
089	SPIRE PMW Ch 20 . 20-		SPB.-	-	S73A	12AXD-38	5	E			HSJFP	75	121210 P23	008	
128	SPIRE PMW Ch 20 . 20gnd		SPB.-	-	S73A	12AXD-38	5	E		Daisy ch to Pin 128 (A2)	HSJFP	75	121210 P23	013	
128	SPIRE PMW Ch17 to 19 . SHD02		SPB.-	-	S073	12AXD-38	5	E		Cable S073 inner Shd daisy ch to Pin 128 (A2)	HSJFP	75	121210 P23	013	
-	Cable S073 12 AXD Outer Shield									Cable S063 outer Shd con to Busbar (Faraday)					
-															
-															
099	SPIRE PMW Ch21 to 24 . 21+		SPB.-	-	S074	12AXD-38	6	F		PMW-D9	HSJFP	75	121210 P23	022	
100	SPIRE PMW Ch21 to 24 . 21-		SPB.-	-	S074	12AXD-38	6	F			HSJFP	75	121210 P23	009	
128	SPIRE PMW Ch21 to 24 . 21gnd		SPB.-	-	S074	12AXD-38	6	F		Daisy ch to Pin 128 (A2)	HSJFP	75	121210 P23	013	
-															
110	SPIRE PMW Ch21 to 24 . 22+		SPB.-	-	S074	12AXD-38	6	F		PMW-F9	HSJFP	75	121210 P23	023	

No worries - compliant with SPIRE HDD 1.2

Pin Allocation List (Harness)

Connector: 312300 P04

Function: SPIRE SVM CB3 (SPIRE Bundle 11)

Conn.-Type: MS27484T24F-35S (PI+ShI)

Item: HSSVMCB3

Location: 27 / I/F CB ab. SVM Panel 7 (SPI/CCU CB)

Backshell: 380 FS 007 M24 05

EMC-Category: 2S/Sig H fr SVMCB to W. Units

Pin	Signal Designation	Interface-Code			Ch. ID	Wiring	Grouping:			Comment	Target-Item	Location	Connector	Pin	New
		Circuit	Signal	Pos.			Shd	Cable	Twist						
-															
014	SPIRE SMEC Drv Sense (N) . Sen+		SMG.S -		S278	021CC-28	24				HSFCU	17	122200 P17	004	
024	SPIRE SMEC Drv Sense (N) . Sen-		SMG.S -		S278	021CC-28	24				HSFCU	17	122200 P17	005	
023	SPIRE SMEC Drv Sense (N) . SHD03		SMG.S -		S278	021CC-28	24		Cable S278 Shd		HSFCU	17	122200 P17	023	
-															
009	SPIRE SMEC PosSeLEDPwr(N) . S		SMH.S -		S279	021CC-28	25				HSFCU	17	122200 P17	007	
002	SPIRE SMEC PosSeLEDPwr(N) . R		SMH.S -		S279	021CC-28	25				HSFCU	17	122200 P17	008	
003	SPIRE SMEC PosSeLEDPwr(N) . SHD04		SMH.S -		S279	021CC-28	25		Cable S279 Shd		HSFCU	17	122200 P17	026	
-															
011	SPIRE SMEC PosSensPwr(N) . S		SMH.S -		S280	021CC-28	26				HSFCU	17	122200 P17	027	
004	SPIRE SMEC PosSensPwr(N) . R		SMH.S -		S280	021CC-28	26				HSFCU	17	122200 P17	028	
010	SPIRE SMEC PosSensPwr(N) . SHD05		SMH.S -		S280	021CC-28	26		Cable S280 Shd		HSFCU	17	122200 P17	009	
-															
018	SPIRE SMEC PosPhDi#1FB(N) . S		SMJ.S -		S281	021CC-28	27				HSFCU	17	122200 P17	010	
019	SPIRE SMEC PosPhDi#1FB(N) . R		SMJ.S -		S281	021CC-28	27				HSFCU	17	122200 P17	011	
029	SPIRE SMEC PosPhDi#1FB(N) . SHD09		SMJ.S -		S281	021CC-28	27		Cable S281Shd		HSFCU	17	122200 P17	029	
-															
056	SPIRE SMEC PosPhDi#1FB(N) . S		SMK.S -		S282	021CC-28	30				HSFCU	17	122200 P17	030	
055	SPIRE SMEC PosPhDi#1FB(N) . R		SMK.S -		S282	021CC-28	30				HSFCU	17	122200 P17	031	
044	SPIRE SMEC PosPhDi#1FB(N) . SHD09		SMK.S -		S282	021CC-28	30		Cable S282 Shd		HSFCU	17	122200 P17	012	
-															
042	SPIRE SMEC PosPhDi#2(N) . I+		SMJ.S -		S283	021CC-28	28				HSFCU	17	122200 P17	013	
041	SPIRE SMEC PosPhDi#2(N) . I-		SMJ.S -		S283	021CC-28	28				HSFCU	17	122200 P17	014	
030	SPIRE SMEC PosPhDi#2(N) . SHD07		SMJ.S -		S283	021CC-28	28		Cable S283 Shd		HSFCU	17	122200 P17	032	
-															
034	SPIRE SMEC PosPhDi#2FB(N) . S		SMK.S -		S284	021CC-28	31				HSFCU	17	122200 P17	033	
033	SPIRE SMEC PosPhDi#2FB(N) . R		SMK.S -		S284	021CC-28	31				HSFCU	17	122200 P17	034	
045	SPIRE SMEC PosPhDi#2FB(N) . SHD10		SMK.S -		S284	021CC-28	31		Cable S284 Shd		HSFCU	17	122200 P17	015	
-															
020	SPIRE SMEC PosPhDi#3(N) . I+		SMJ.S -		S285	021CC-28	29				HSFCU	17	122200 P17	016	
021	SPIRE SMEC PosPhDi#3(N) . I-		SMJ.S -		S285	021CC-28	29				HSFCU	17	122200 P17	017	
031	SPIRE SMEC PosPhDi#3(N) . SHD08		SMJ.S -		S285	021CC-28	29		Cable S285 Shd		HSFCU	17	122200 P17	035	
-															

This matches the interface to the FPU

The pin allocations on the S/C 128-way connectors all match

Pin Allocation List (Harness)

Connector: 211121 J30
Item: CVVUCR
EMC-Category: 2C/Sig H in Cryostat

Function: UFThr. 283.0° (SPIRE XS-11 FPU 25,27,29)
Location: 33 / CVV I/F CB Top PFM (CVVUCR)

Conn.-Type: 197-011P24-35P (Junct.)
Backshell: HERSKT 58-0050

Pin	Signal Designation	Interface-Code			Ch. ID	Wiring	Grouping:			Comment	Target-Item	Location	Connector	Pin	New
		Circuit	Signal	Pos.			Shd	Cable	Twist						
011	SPIRE SMEC PosSensPwr(N) . S		SMH.-	-	S280	021BS-38	26			HSFPU	70	121100 P29	027		
004	SPIRE SMEC PosSensPwr(N) . R		SMH.-	-	S280	021BS-38	26			HSFPU	70	121100 P29	028		
010	SPIRE SMEC PosSensPwr(N) . SHD05		SMH.-	-	S280	021BS-38	26		Cable S280 Shd	HSFPU	70	121100 P29	009		
018	SPIRE		SMJ.-	-	S281	021SS-38	27			HSFPU	70	121100 P29	010		
019	SPIRE		SMJ.-	-	S281	021SS-38	27			HSFPU	70	121100 P29	011		
029	SPIRE		SMJ.-	-	S281	021SS-38	27		Cable S281, 283,285 Shd con together (B) (Pin 29, 30,31)	HSFPU	70	121100 P29	012		
056	SPIRE SMEC PosPhDi#1FB(N) . S		SMK.-	-	S282	021SS-38	30			HSFPU	70	121100 P29	030		
055	SPIRE SMEC PosPhDi#1FB(N) . R		SMK.-	-	S282	021SS-38	30			HSFPU	70	121100 P29	031		
044	SPIRE SMEC PosPhDi#1FB(N) . SHD09		SMK.-	-	S282	021SS-38	30		Cable S282, 284,286 Shd con together (C) (Pin 44,45,46)	HSFPU	70	121100 P29	012		
042	SPIRE SMEC PosPhDi#2(N) . I+		SMJ.-	-	S283	021SS-38	28			HSFPU	70	121100 P29	013		
041	SPIRE SMEC PosPhDi#2(N) . I-		SMJ.-	-	S283	021SS-38	28			HSFPU	70	121100 P29	014		
030	SPIRE SMEC PosPhDi#2(N) . SHD07		SMJ.-	-	S283	021SS-38	28		Cable S281, 283,285 Shd con together (B) (Pin 29,30,31)	HSFPU	70	121100 P29	032		
034	SPIRE SMEC PosPhDi#2FB(N) . S		SMK.-	-	S284	021SS-38	31			HSFPU	70	121100 P29	033		
033	SPIRE SMEC PosPhDi#2FB(N) . R		SMK.-	-	S284	021SS-38	31			HSFPU	70	121100 P29	034		
045	SPIRE SMEC PosPhDi#2FB(N) . SHD10		SMK.-	-	S284	021SS-38	31		Cable S282, 284,286 Shd con together (C) (Pin 44,45,46)	HSFPU	70	121100 P29	015		
020	SPIRE SMEC PosPhDi#3(N) . I+		SMJ.-	-	S285	021SS-38	29			HSFPU	70	121100 P29	016		
021	SPIRE SMEC PosPhDi#3(N) . I-		SMJ.-	-	S285	021SS-38	29			HSFPU	70	121100 P29	017		
031	SPIRE SMEC PosPhDi#3(N) . SHD08		SMJ.-	-	S285	021SS-38	29		Cable S281, 283,285 Shd con together (B) (Pin 29,30,31)	HSFPU	70	121100 P29	035		
058	SPIRE SMEC PosPhDi#3FB(N) . S		SMK.-	-	S286	021SS-38	32			HSFPU	70	121100 P29	036		
057	SPIRE SMEC PosPhDi#3FB(N) . R		SMK.-	-	S286	021SS-38	32			HSFPU	70	121100 P29	037		

The pin allocations on the S/C 128-way connectors all match

This matches the I/F to the FCU

Pin Allocation List

(Harness)

Connector: 211121 P30**Function:** UFThr. 283.0° (SPIRE XS-11 FPU 25,27,29)**Conn.-Type:** 197-012P24-35S (Plug)**Item:** CVVUCR**Location:** 33 / CVV I/F CB Top PFM (CVVUCR)**Backshell:** G 9254 F 24 M**EMC-Category:** 2I/Sig H fr CVVFT to SVMCB

Pin	Signal Designation	Interface-Code			Ch. ID	Wiring	Grouping:			Comment	Target-Item	Location	Connector	Pin	New
		Circuit	Signal	Pos.			Shd	Cable	Twist						
-	-														
011	SPIRE SMEC PosSensPwr(N) . S		SMH.-	-	S280	021BS-38	26				HSSVMCB3	27	312300 J04	011	
004	SPIRE SMEC PosSensPwr(N) . R		SMH.-	-	S280	021BS-38	26				HSSVMCB3	27	312300 J04	004	
010	SPIRE SMEC PosSensPwr(N) . SHD05		SMH.-	-	S280	021BS-38	26		Cable S280 Shd		HSSVMCB3	27	312300 J04	010	
-	-														
018	SPIRE SMEC PosPhDi#1(N) . I+		SMJ.-	-	S281	021SS-38	27				HSSVMCB3	27	312300 J04	018	
019	SPIRE SMEC PosPhDi#1(N) . I-		SMJ.-	-	S281	021SS-38	27				HSSVMCB3	27	312300 J04	019	
029	SPIRE SMEC PosPhDi#1(N) . SHD06		SMJ.-	-	S281	021SS-38	27		Cable S281, 283,285 Shd con together (B)		HSSVMCB3	27	312300 J04	029	
-	-														
056	SPIRE SMEC PosPhDi#1FB(N) . S		SMK.-	-	S282	021SS-38	30				HSSVMCB3	27	312300 J04	056	
055	SPIRE SMEC PosPhDi#1FB(N) . R		SMK.-	-	S282	021SS-38	30				HSSVMCB3	27	312300 J04	055	
044	SPIRE SMEC PosPhDi#1FB(N) . SHD09		SMK.-	-	S282	021SS-38	30		Cable S282, 284,286 Shd con together (C)		HSSVMCB3	27	312300 J04	044	
-	-														
042	SPIRE SMEC PosPhDi#2(N) . I+		SMJ.-	-	S283	021SS-38	28				HSSVMCB3	27	312300 J04	042	
041	SPIRE SMEC PosPhDi#2(N) . I-		SMJ.-	-	S283	021SS-38	28				HSSVMCB3	27	312300 J04	041	
030	SPIRE SMEC PosPhDi#2(N) . SHD07		SMJ.-	-	S283	021SS-38	28		Cable S281, 283,285 Shd con together (B)		HSSVMCB3	27	312300 J04	030	
-	-														
034	SPIRE SMEC PosPhDi#2FB(N) . S		SMK.-	-	S284	021SS-38	31				HSSVMCB3	27	312300 J04	034	
033	SPIRE SMEC PosPhDi#2FB(N) . R		SMK.-	-	S284	021SS-38	31				HSSVMCB3	27	312300 J04	033	
045	SPIRE SMEC PosPhDi#2FB(N) . SHD10		SMK.-	-	S284	021SS-38	31		Cable S282, 284,286 Shd con together (C)		HSSVMCB3	27	312300 J04	045	
-	-														
020	SPIRE SMEC PosPhDi#3(N) . I+		SMJ.-	-	S285	021SS-38	29				HSSVMCB3	27	312300 J04	020	
021	SPIRE SMEC PosPhDi#3(N) . I-		SMJ.-	-	S285	021SS-38	29				HSSVMCB3	27	312300 J04	021	
031	SPIRE SMEC PosPhDi#3(N) . SHD08		SMJ.-	-	S285	021SS-38	29		Cable S281, 283,285 Shd con together (B)		HSSVMCB3	27	312300 J04	031	
-	-														
058	SPIRE SMEC PosPhDi#3FB(N) . S		SMK.-	-	S286	021SS-38	32				HSSVMCB3	27	312300 J04	058	
057	SPIRE SMEC PosPhDi#3FB(N) . R		SMK.-	-	S286	021SS-38	32				HSSVMCB3	27	312300 J04	057	

Pin Allocation List (Harness)

Connector: 312300 J04

Function: SPIRE SVM CB3 (SPIRE Bundle 11)

Conn.-Type: MS27497T24-35P (Jun.Sh)

Item: HSSVMCB3

Location: 27 / I/F CB ab. SVM Panel 7 (SPI/CCU CB)

Backshell: 440 FS 110 M 24 03

EMC-Category: 2I/Sig H fr CVVFT to SVMCB

Pin	Signal Designation	Interface-Code			Ch. ID	Wiring	Grouping:			Comment	Target-Item	Location	Connector	Pin	New
		Circuit	Signal	Pos.			Shd	Cable	Twist						
-															
011	SPIRE SMEC PosSensPwr(N) . S		SMH.-	-	S280	021BS-38	26				CVVUCR	33	211121 P30	011	
004	SPIRE SMEC PosSensPwr(N) . R		SMH.-	-	S280	021BS-38	26				CVVUCR	33	211121 P30	004	
010	SPIRE SMEC PosSensPwr(N) . SHD05		SMH.-	-	S280	021BS-38	26		Cable S280 Shd		CVVUCR	33	211121 P30	010	
-															
018	SPIRE SMEC PosPhDi#1(N) . I+		SMJ.-	-	S281	021SS-38	27				CVVUCR	33	211121 P30	018	
019	SPIRE SMEC PosPhDi#1(N) . I-		SMJ.-	-	S281	021SS-38	27				CVVUCR	33	211121 P30	019	
029	SPIRE SMEC PosPhDi#1(N) . SHD06		SMJ.-	-	S281	021SS-38	27		Cable S281, 283,285 Shd con together (B)		CVVUCR	33	211121 P30	029	
-															
056	SPIRE SMEC PosPhDi#1FB(N) . S		SMK.-	-	S282	021SS-38	30				CVVUCR	33	211121 P30	056	
055	SPIRE SMEC PosPhDi#1FB(N) . R		SMK.-	-	S282	021SS-38	30				CVVUCR	33	211121 P30	055	
044	SPIRE SMEC PosPhDi#1FB(N) . SHD09		SMK.-	-	S282	021SS-38	30		Cable S282, 284,286 Shd con together (C)		CVVUCR	33	211121 P30	044	
-															
042	SPIRE SMEC PosPhDi#2(N) . I+		SMJ.-	-	S283	021SS-38	28				CVVUCR	33	211121 P30	042	
041	SPIRE SMEC PosPhDi#2(N) . I-		SMJ.-	-	S283	021SS-38	28				CVVUCR	33	211121 P30	041	
030	SPIRE SMEC PosPhDi#2(N) . SHD07		SMJ.-	-	S283	021SS-38	28		Cable S281, 283,285 Shd con together (B)		CVVUCR	33	211121 P30	030	
-															
034	SPIRE SMEC PosPhDi#2FB(N) . S		SMK.-	-	S284	021SS-38	31				CVVUCR	33	211121 P30	034	
033	SPIRE SMEC PosPhDi#2FB(N) . R		SMK.-	-	S284	021SS-38	31				CVVUCR	33	211121 P30	033	
045	SPIRE SMEC PosPhDi#2FB(N) . SHD10		SMK.-	-	S284	021SS-38	31		Cable S282, 284,286 Shd con together (C)		CVVUCR	33	211121 P30	045	
-															
020	SPIRE SMEC PosPhDi#3(N) . I+		SMJ.-	-	S285	021SS-38	29				CVVUCR	33	211121 P30	020	
021	SPIRE SMEC PosPhDi#3(N) . I-		SMJ.-	-	S285	021SS-38	29				CVVUCR	33	211121 P30	021	
031	SPIRE SMEC PosPhDi#3(N) . SHD08		SMJ.-	-	S285	021SS-38	29		Cable S281, 283,285 Shd con together (B)		CVVUCR	33	211121 P30	031	
-															
058	SPIRE SMEC PosPhDi#3FB(N) . S		SMK.-	-	S286	021SS-38	32				CVVUCR	33	211121 P30	058	
057	SPIRE SMEC PosPhDi#3FB(N) . R		SMK.-	-	S286	021SS-38	32				CVVUCR	33	211121 P30	057	

Pin Allocation List (Harness)

Connector: 211121 J32

Function: UFThr. 305.7° (SPIRE XS-01 JFS 5,6,9,10)

Conn.-Type: 197-011P24-35P (Junct.)

Item: CVVUCR

Location: 33 / CVV I/F CB Top PFM (CVVUCR)

Backshell: HERSKT 58-0050

EMC-Category: 2C/Sig H in Cryostat

Pin	Signal Designation	Interface-Code			Ch. ID	Wiring	Grouping:			Comment	Target-Item	Location	Connector	Pin	New
		Circuit	Signal	Pos.			Shd	Cable	Twist						
104	SPIRE SLW Bias A1 . SHD03		SSD.-	-	S025	022BS-38	25			Cable S025 inner Shd daisy ch to Pin 104 at CVV side (B3)	HSJFS	76	121220 P09	006	
-	Cable S025 outer Shield									Cable S025 outer Shd con to Busbar (Faraday)					
102	SPIRE SLW Bias A2 . +ve		SSD.-	-	S026	022BS-38	26				HSJFS	76	121220 P09	005	
101	SPIRE SLW Bias A2 . -ve		SSD.-	-	S026	022BS-38	26				HSJFS	76	121220 P09	024	
104	SPIRE SLW Bias A2 . SHD04		SSD.-	-	S026	022BS-38	26			Cable S026 inner Shd daisy ch to Pin 104 at CVV side (B3)	HSJFS	76	121220 P09	023	
-	Cable S026 outer Shield									Cable S026 outer Shd con to Busbar (Faraday)					
104	SPIRE SLW GND WIRE B3		SSX.-	-	S405	010B0-38				SLW GND Wire B3 con to cable 25,26,11,12 Shd	HSJFS	76	121220 P09	006	
092	SPIRE SLW JFETV A1 . +ve		SSF.-	-	S011	022BS-38	11				HSJFS				
091	SPIRE SLW JFETV A1 . -ve		SSF.-	-	S011	022BS-38	11				HSJFS				
104	SPIRE SLW JFETV A1 . SHD05		SSF.-	-	S011	022BS-38	11			Cable S011 inner Shd daisy ch to Pin 104 at CVV side (B3)	HSJFS				
-	Cable S011 outer Shield									Cable S011 outer Shd con to Busbar (Faraday)					
103	SPIRE SLW JFETV A2 . +ve		SSF.-	-	S012	022BS-38	12				HSJFS	76	121220 P09	008	
113	SPIRE SLW JFETV A2 . -ve		SSF.-	-	S012	022BS-38	12				HSJFS	76	121220 P09	027	
104	SPIRE SLW JFETV A2 . SHD06		SSF.-	-	S012	022BS-38	12			Cable S012 inner Shd daisy ch to Pin 104 at CVV side (B3)	HSJFS	76	121220 P09	026	
-	Cable S012 outer Shield									Cable S012 outer Shd con to Busbar (Faraday)					
090	SPIRE SSW Bias A1 . +ve		SSC.-	-	S029	022BS-38	29				HSJFS	76	121220 P09	028	
079	SPIRE SSW Bias A1 . -ve		SSC.-	-	S029	022BS-38	29				HSJFS	76	121220 P09	010	
093	SPIRE SSW Bias A1 . SHD07		SSC.-	-	S029	022BS-38	29			Cable S029 inner Shd daisy ch to Pin 093 at CVV side (C3)	HSJFS	76	121220 P09	009	
-	Cable S029 outer Shield									Cable S029 outer Shd con to Busbar (Faraday)					
068	SPIRE SSW JFETV A1 . +ve		SSE.-	-	S016	022BS-38	16				HSJFS	76	121220 P09	011	
057	SPIRE SSW JFETV A1 . -ve		SSE.-	-	S016	022BS-38	16				HSJFS	76	121220 P09	030	

This is compliant with SPIRE HDD 1.2

