

EADS Astrium HERSCHEL H-EPLM	ACTIVITY	CONTROL	SHEET	HP-2-ASED-SD-0126 Iss: 2	Page 1 of 22
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Location : ESTEC & FN	Title: SPIRE WU, WIH and SIH Integration on EQM Panel for PFM Stray-light-Test at ESTEC <i>AS-RUN</i>			
Facility : Class 100.000	Model: PFM	Subsystem: SVM CCH	Date: 06.10.06	
CI No 151432-03	Test Conductor: U. Wössner, A. Grasl, J. Lang	NCR Ref:		
	Prepared By: RAL / Doug Griffin / <i>J. Lang</i>	CIL No:		

Scope: This Procedure covers the Integration of the SPIRE STM2 SVM WU , the EQM WIH and SIH on EQM Dummy Panel for STM 2 Stay-light-Tests at ESTEC ; <i>Remark: Iss.2 = edit + performed steps 162-197,</i>		Procedures and reference documents:- HP-2-ASED-TP-0110 H-PLM STM2 Stray-light Test Procedure	
Facilities required:	- Clean-room 100.000 at ESTEC	Documents, Drawings& Routing Design Ref.1: HP-NXH-DW-1022 SVM SPIRE Instrument Panel Ref.2: HP-2-ASED-ID-0083-04-0B SVM internal SIH & CCH Ref.3: HP-2-ASED-ID-0094-01-0C, SPIRE EQM Interconnection Diagram Ref45: SPIRE-RAL-NOT-002028 Draft 0.2, Making SPIRE ESD Safe Ref.5: HP-2-ASED-IC-0016 Issue: 2.1 PFM SPIRE SIH EICD Ref.6: SPIRE-RAL-PRC-002642 Issue:1 SPIRE FPU Handling & Integration Procedure Ref.7: SPIRE-RAL-PRC-002181 Issue: 3, SPIRE Warm Electronics Integration Procedure Ref.8:HP-2-ASED-SD-0128 Issue: 1 ; Integration of SVM Dummy Panels inclusive Warm Units Ref.9: HP-2-ASED-MN-1263 section 2.1 ASED to provide WU Bond-straps Ref.10: HP-2-ASED-SD-0129 Issue: 1 , Implementation of Filter-plates in SPIRE SIH-SS-01 & -06 DCU I/F-Connectors	
Personnel required:	3 Harness -; 2 AIT- and 1 PA - engineer	MASS:	
Safety and Hazards:	SPIRE ESD requirements to be followed		
Constraints:	Class 100.000 clean room		

No:	Activity	Proc/Drwg	Remarks/Results	sign off
1.	Perform ESD Preparation table and SVM Dummy-panel on another ESD Integration table for ESD sensitive WU		according annex 1	

Release AIT: <i>[Signature]</i>	Release SE: <i>[Signature]</i>	Release PA/Safety: <i>[Signature]</i>	Sign off (PA/QC/Team Leader)
ESA: <i>[Signature]</i>	RAL / SPIRE: <i>[Signature]</i>	24.10.06	27.10.06 <i>J. Lang</i>

No:	Activity	Proc/Drwg	Remarks/Results	sign off
1.	Perform ESD Preparation table and SVM Dummy-panel on another ESD Integration table for ESD sensitive WU integration on SVM EQM Dummy-panel used for STM 2		according annex 1	
2.	Connect S/C star-point (copper) GND-plate bond-strap to facility Clean GND & SPIRE WU Preparation table		<i>Remark: performed steps 1-161</i>	
3.	Connect Warm Unit Handling bond-strap to Star-point GND-plate and measure bond-strap resistance		<i>see SD-0126 Iss. 01</i>	
4.	Connect SPIRE ESD Integration table with Star-point GND-plate and measure bond-strap resistance		<i>AS-MUN</i>	<i>26.10.06 Fey</i>
5.	Place EQM SPIRE SVM Dummy-panel on ESD Integration table			
6.	Mount bond-strap between SPIRE SVM Dummy-panel & ESD Integration table		Torque all Bond-strap fixation bolts	
7.	Measure Bond-strap resistance between EQM Dummy-Panel and ESD Integration table			
8.	Operator to connect his wristband to star-point GND-plate & measure bonding resistance			
9.	PA Controller to connect his wristband to star-point GND-plate & measure bonding resistance			
10.	SPIRE WU & WIH Incoming inspection Preparation			
11.	Lift FCU transport container on ESD Preparation table			
12.	Open FCU transport container and discharge FCU enclosing ESD bag with temporary bond-strap			
13.	Remove FCU enclosing ESD bag			
14.	Fix temporary bond-strap to FCU housing			
15.	Lift FCU out of transport container and place it on ESD preparation table			

No:	Activity	Proc/Drwg	Remarks/Results	sign off
16.	Perform Incoming inspection of FCU			
17.	For inspection opened ESD connector covers to be placed back when inspection is finished			
18.	Connect WU Handling bond-strap to FCU and control Bonding		Note: Temporary bond-strap shall be fixed to DCU during all handling activities	
19.	Lift FCU from ESD Preparation table to EQM SVM Dummy-panel			
20.	Install FCU properly on EQM Dummy-panel according ref. 6			
21.	Manufacture test bond-strap between FCU & EQM Dummy-panel according ref.9			
22.	Measure FCU test-bond-strap resistance			
23.	Mount FCU Bond-strap between FCU bonding-stud & EQM Dummy-panel according ref.1, 6 & 7			
24.	Apply requested torque on FCU Bonding stud nut & panel M4x12 fixation bolts according ref. 6 & 7			
25.	Measure temporary bond-strap resistance between FCU and EQM Dummy-panel			
26.	Left blank			
27.	Lift DCU transport container on ESD Preparation table			
28.	Open DCU transport container and discharge FCU enclosing ESD bag with temporary bond-strap			
29.	Remove DCU enclosing ESD bag			
30.	Fix temporary bond-strap to DCU housing			
31.	Lift DCU out of transport container and place it on ESD preparation table			
32.	Perform Incoming inspection of DCU			

No:	Activity	Proc/Drwg	Remarks/Results	sign off
33.	For inspection opened ESD connector covers to be placed back when inspection is finished		Note: temporary bond-strap shall be fixed to FCU all time. DO NOT REMOVE ANY copper tape covered WU connector	
34.	Connect WU Handling bond-strap to DCU and control Bonding		Note: Temporary bond-strap shall be fixed to DCU during all handling activities	
35.	Lift DCU from ESD Preparation table to EQM SVM Dummy-panel			
36.	Install DCU properly on EQM Dummy-panel according ref. 6			
37.	Manufacture test bond-strap between DCU & EQM Dummy-panel according ref. 9			
38.	Measure DCU test-bond-strap resistance			
39.	Mount DCU Bond-strap between DCU bonding-stud & EQM Dummy-panel according ref.1, 6 & 7			
40.	Apply requested torque on DCU Bonding stud nut & panel M4 fixation bolt			
41.	Measure temporary bond-strap resistance between DCU and EQM Dummy-panel			
42.	Left blank			
43.	Lift DPU transport container on ESD Preparation table			
44.	Open DPU transport container and discharge FCU enclosing ESD bag with temporary bond-strap			
45.	Remove DPU enclosing ESD bag			
46.	Fix temporary bond-strap to DPU housing			
47.	Lift DPU out of transport container and place it on ESD preparation table			
48.	Perform Incoming inspection of DPU			
49.	For inspection opened ESD connector covers to be placed back when inspection is finished		Note: temporary bond-strap shall be fixed to FCU all time. DO NOT REMOVE ANY copper tape covered WU connector	

No:	Activity	Proc/Drwg	Remarks/Results	sign off
50.	Connect WU Handling bond-strap to DPU and control Bonding		Note: Temporary bond-strap shall be fixed to DPU during all handling activities	
51.	Lift DPU from ESD Preparation table to EQM SVM Dummy-panel			
52.	Install DPU properly on EQM Dummy-panel according ref. 6			
53.	Manufacture test bond-strap between DPU & EQM Dummy-panel according ref. 9			
54.	Measure DPU test-bond-strap resistance			
55.	Mount DPU Bond-strap between DPU bonding-stud & EQM Dummy-panel according ref.1, 6 & 7			
56.	Apply requested torque on DPU Bonding stud nut & panel M4 fixation bolt			
57.	Measure temporary bond-strap resistance between DPU and EQM Dummy-panel			
58.	SPIRE SVM STM2 WIH Integration Preparation			
59.	Unpack SPIRE WIH on ESD preparation table			
60.	Discharge WIH bundle ESD bags if packed in those			
61.	Extract WIH from bags and lay it on the preparation table			
62.	Remove connector plastic covers , mate on one WIH bundle side a shorting plug and discharge WIH bundle W1 to Preparation table GND			
63.	Remove connector plastic covers , mate on one WIH bundle side a shorting plug and discharge WIH bundle W3 to Preparation table GND			
64.	Remove connector plastic covers , mate on one WIH bundle side a shorting plug and discharge WIH bundle W5 to Preparation table GND			

No:	Activity	Proc/Drwg	Remarks/Results	sign off
65.	Left blank			
66.	Perform SPIRE WIH integration according ref. 6 & 7		Start first WU interconnection with mated shorting plug on opposite bundle side. DCU is more ESD sensitive as FCU and DPU	
67.	Annex copied SPIRE as-run procedure parts performed to this SD			
68.	Preparation of FCU / DPU Power Harness integration & fixation on SPIRE Dummy-panel			
69.	Mate the 2 bundles of SPIRE DPU & FCU Power test harness DB04 J01 with P01 and connect PFE P901 & PFE P902 to Power SCOE		according annex 2	
70.	Check proper electrical pin-function & FCU / DPU power switching with switched on Power SCOE		Remark: Test without mated SPIRE DPU or FCU	
71.	Switch-off Power SCOE and discharge FCU P05 & DPU P01 Power SCOE test cable			
72.	Mate DB04 J01 Power Test cable P05 to FCU J05		Remark: Srew-lock assembly to be hand torqued	
73.	Mate DB04 J01 Power Test cable P01 to DPU J01		Remark: Srew-lock assembly to be hand torqued	
74.	Perform temporary PFE Test harness integration and fixation on SVM Dummy-panel according annex 2			
75.	Mate PFE Power Test cable DB04 P01 on J01& fix junction temporary on SPIRE Dummy-panel structure			
76.	MIL-Bus 1553 Harness Preparation & Integration			
77.	Perform MIL-bus 1553 S/C Harness & Stub unpacking on ESD preparation table			
78.	Connect all need MIL-bus cables to the Stubs			
79.	Mated stub terminations on all stub connectors not used			
80.	Discharge to be integrated MIL-bus cables & Stubs			

No:	Activity	Proc/Drwg	Remarks/Results	sign off
81.	Perform temporary WIH & MIL-bus harness attachments on SPIRE SVM Dummy-panel		Remark: Tape stubs & cables by use of conductive Alu-tape to SPIRE Dummy-panel	
82.	SPIRE EQM SVM SIH Integration Preparation			
83.	Perform on behalf of RAL & ESA, on all 5 EQM SIH bundles the isolation layer against SVM Dummy-panel structure as proposed by ASED, to get similar conditions as valid on PFM SVM w.r.t. SIH grounding		Remark: On PFM SVM panels consist of CFRP & of Aluminium for STM2 SVM, therefore SIH bundles to be isolated from STM2 SVM structure	
84.	Wrap EQM SIH-SS-01 by use of Goretex acc. ASED wrapping standard (standard => 2-layers with >50% overlap)		Remark: Perform complete wrapping under ionized airflow	
85.	Wrap EQM SIH-SS-03 by use of Goretex acc. ASED wrapping standard			
86.	Wrap EQM SIH-SS-06 by use of Goretex acc. ASED wrapping standard			
87.	Wrap EQM SIH-SS-10 by use of Goretex acc. ASED wrapping standard			
88.	Wrap EQM SIH-SS-11 by use of Goretex acc. ASED wrapping standard			
89.	Discharge SIH-SS-01 on ESD preparation table and control that charge is less than 1KV in 2 cm distance			
90.	Discharge SIH-SS-03 on ESD preparation table and control that charge is less than 1KV in 2 cm distance			
91.	Discharge SIH-SS-06 on ESD preparation table and control that charge is less than 1KV in 2 cm distance			
92.	Discharge SIH-SS-10 on ESD preparation table and control that charge is less than 1KV in 2 cm distance			
93.	Discharge SIH-SS-11 on ESD preparation table and control that charge is less than 1KV in 2 cm distance			
94.	Install the 4 Stand-off towers in front of FCU & DPU			
95.	Torque the 2x2 fixation bolts M4			

No:	Activity	Proc/Drwg	Remarks/Results	sign off
96.	Left Blank			
97.	Mate shorting plug on SIH-SS-10 SVM Plug-connector and connect it to the Dummy panel GND		Let shorting-plug mated & bonded to the Dummy-panel GND just before SVM 312300 P06 has to be mated.	
98.	Fix temporary the SVM SIH Plug 312300 P06 on SVM Dummy panel			
99.	Remove FCU J11 - J23 - J25 protection covers			
100.	Mated SIH-SS-10 to FCU P11 and perform hand-torqued srew-lock assemblies		Remark: Take care for back-shell bonding jumper & lug	
101.	Mated SIH-SS-10 to FCU P23 and perform hand-torqued srew-lock assemblies			
102.	Mated SIH-SS-10 to FCU P25 and perform hand-torqued srew-lock assemblies			
103.	Route and fix SIH-IS-10 on Dummy-panel acc. ref. 2.			
104.	Mate shorting plug on SIH-SS-11 SVM Plug-connector and connect it to the Dummy panel GND		Let shorting-plug mated & bonded to the Dummy-panel GND just before SVM 312300 P04 has to be mated.	
105.	Fix temporary the SVM SIH Plug 312300 P04 on SVM Dummy panel			
106.	Remove FCU J13 - J17 - J19 - J21 - J29 protection covers			
107.	Mated SIH-SS-10 to FCU P13 and perform hand-torqued srew-lock assemblies			
108.	Mated SIH-SS-10 to FCU P17 and perform hand-torqued srew-lock assemblies			
109.	Mated SIH-SS-10 to FCU P19 and perform hand-torqued srew-lock assemblies			
110.	Mated SIH-SS-10 to FCU P21 and perform hand-torqued srew-lock assemblies			
111.	Mated SIH-SS-10 to FCU P29 and perform hand-torqued srew-lock assemblies			

No:	Activity	Proc/Drwg	Remarks/Results	sign off
112.	Route and fix SIH-IS-11 on Dummy-panel acc. ref. 2.			
113.	Mate shorting plug on SIH-SS-01 SVM Plug-connector and connect it to the Dummy panel GND		Let shorting-plug mated & bonded to the Dummy-panel GND just before SVM 312200 P06 has to be mated.	
114.	Integrate SIH-IS-01 according SPIRE Integration procedure ref. 6			
115.	Fix temporary the SVM Plug 312200 P06 on SVM Dummy panel			
116.	Remove DCU J27 - J28 - J31 - J32 protection covers			
117.	Mated SIH-SS-01 to DCU P27 and perform hand-torqued srew-lock assemblies			
118.	Mated SIH-SS-01 to DCU P28 and perform hand-torqued srew-lock assemblies			
119.	Mated SIH-SS-01 to DCU P31 and perform hand-torqued srew-lock assemblies			
120.	Mated SIH-SS-01 to DCU P32 and perform hand-torqued srew-lock assemblies			
121.	Route and fix SIH-IS-01 on Dummy-panel acc. ref. 2.			
122.	Mate shorting plug on SIH-SS-06 SVM Plug-connector and connect it to the Dummy panel GND		Let shorting-plug mated & bonded to the Dummy-panel GND just before SVM 312200 P03 has to be mated.	
123.	Fix temporary the SVM Plug 312200 P03 on SVM Dummy panel frame			
124.	Remove DCU J29 - J30 protection covers			
125.	Mated SIH-SS-06 to DCU P29 and perform hand-torqued srew-lock assemblies			
126.	Mated SIH-SS-06 to DCU P30 and perform hand-torqued srew-lock assemblies			
127.	Route and fix SIH-IS-06 on Dummy-panel acc. ref. 2.			
128.	Mate shorting plug on SIH-SS-03 SVM Plug-connector and		Let shorting-plug mated & bonded to the Dummy-panel GND just before SVM 312100 P04 has to be mated.	

No:	Activity	Proc/Drwg	Remarks/Results	sign off
	connect it to the Dummy panel GND			
129.	Fix temporary the SVM Plug 312100 P04 on SVM Dummy panel			
130.	Remove DCU J14 - J15 - J16 protection covers			
131.	Mated SIH-SS-03 to DCU P14 and perform hand-torqued srew-lock assemblies			
132.	Mated SIH-SS-03 to DCU P15 and perform hand-torqued srew-lock assemblies			
133.	Mated SIH-SS-03 to DCU P16 and perform hand-torqued srew-lock assemblies			
134.	Route and fix SIH-IS-03 on Dummy-panel acc. ref. 2.			
135.	Left Blank			
136.	Control SPIRE SVM STM2 WU Interconnection is finished			
137.	Mechanical PLM with Dummy-panel Integration Preparation			
138.	Fix additional Bond-strap between SVM Dummy-panel & PLM S/C star-point (copper) GND-plate		Remark: Bond-strap shall be long enough for Panel lifting by crane.	
139.	Measure Bond-strap resistance to star-point GND plate			
140.	Control , that all Dummy-panel handling operators are bonded to Dummy-panel GND			
141.	Perform Panel lifting and mounting on TTAP according ref. 8			
142.	Perform SVM I/F-CB connector fit-check during Dummy-panel lifting & before final positioning			
143.	Install SPIRE Dummy-panel in horizontal & final position on TTAP			
144.	SPIRE EQM SIH Mating on SVM I/F-CB acc. ref.2, 3			

No:	Activity	Proc/Drwg	Remarks/Results	sign off
145.	Disconnect shorting-plug from SIH-SS-10 SVM connector 312300 P06			
146.	Disconnect SIH Termination connector cap from 312300 J06			
147.	Record disconnected Termination connector type & store it under PLM RED-TAG Item			
148.	Disconnect shorting-plug from SIH-SS-11 SVM connector 312300 P04			
149.	Disconnect SIH Termination connector cap from 312300 J04			
150.	Record disconnected Termination connector type & store it under PLM RED-TAG Item			
151.	Disconnect shorting-plug from SIH-SS-01 SVM connector 312200 P03			
152.	Disconnect SIH Termination connector cap from 312200 J03			
153.	Record disconnected Termination connector type & store it under PLM RED-TAG Item			
154.	Disconnect shorting-plug from SIH-SS-06 SVM connector 312200 P03			
155.	Disconnect SIH Termination connector cap from 312200 J06			
156.	Record disconnected Termination connector type & store it under PLM RED-TAG Item			
157.	Disconnect shorting-plug from SIH-SS-03 SVM connector 312100 P04			
158.	Disconnect SIH Termination connector cap from 312100 J04			
159.	Record disconnected Termination connector type & store it under PLM RED-TAG Item			
160.	Fix all 5 SIH bundles temporary on SCOE Test harness bundles as routed on the TTAP.			

No:	Activity	Proc/Drwg	Remarks/Results	sign off
161.	Control all steps performed and anomalies noted / NCR raised		Mechanical & semi electrical SPIRE WU - WIH and SIH Integration finished	
162.	left blank			
163.	SPIRE EQM SVM SIH De-mating & Panel De-Integration		Steps 162 to 197 added to HP-2-ASED-SD-0126 issue: 1 and released by ASED, AAS, ESA & SPIRE, as issue: 2	24.10.06
164.	Disconnect SIH-SS-10 SVM connector (312300 P06)		All ASED activities performed have been controlled by SPIRE RAL / Doug Griffin	Lang 24.10.06
165.	Mate shorting plug Type-VII to 312300 J06			Lang 24.10.06
166.	Disconnect SIH-SS-11 SVM connector (312300 P04)			Lang 24.10.06
167.	Mate shorting plug Type-VIII to 312300 J04			Lang 24.10.06
168.	Disconnect SIH-SS-01 SVM connector (312200 P06)			Lang 24.10.06
169.	Mate shorting plug Type-VI to 312200 J06			Lang 24.10.06
170.	Disconnect SIH-SS-06 SVM connector (312200 P03)			Lang 24.10.06
171.	Mate shorting plug Type-VII to 312200 J03			Lang 24.10.06
172.	Set up de-ionizer fan to neutralise items near 312100 P04			Lang 24.10.06
173.	Disconnect SIH-SS-03 SVM connector (312100 P04)			Lang 24.10.06
174.	Mate shorting plug Type-V to 312100 J04			Lang 24.10.06
175.	Mount 128-way BOB near 312100 J04			Grasl & Lang 24.10.06
176.	Short contacts of BOB to cryostat chassis with a shorting plug			Grasl & Lang 24.10.06

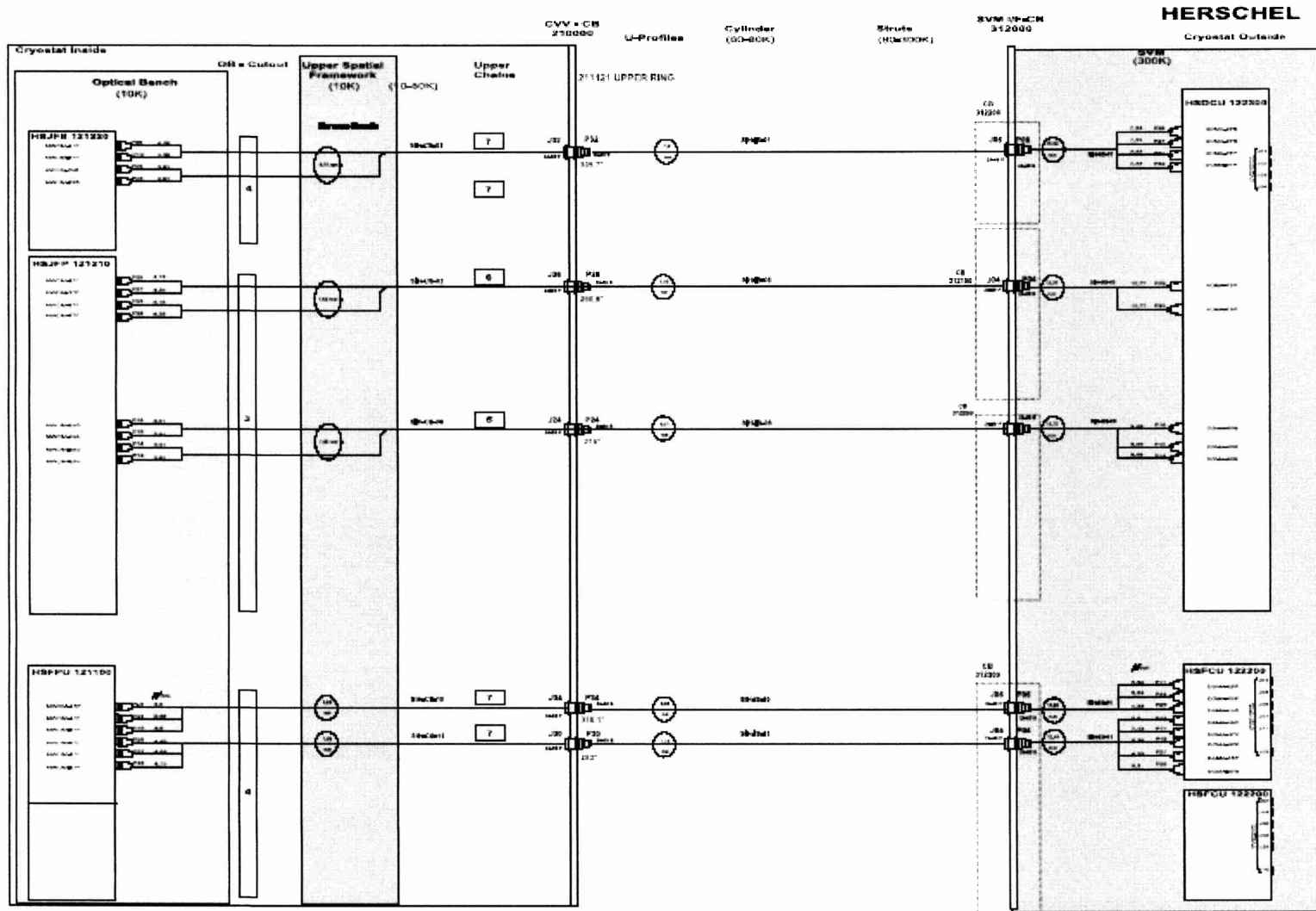
No:	Activity	Proc/Drwg	Remarks/Results	sign off
177.	Remove shorting plug Type-V from 312100 J04			Grasl & Lang 24.10.06
178.	Mate 128-way BOB to 312100 J04			Grasl & Lang 24.10.06
179.	Measure resistance between contact 128 of 312100 J04 and cryostat chassis		R > 1 MΩ expected and measured R = 13 Ω => SPIRE to raise NCR & issue to ASED &ESA, see MN ref. SCI-PT-44536 date: 25.10.06	Grasl & Lang 24.10.06
180.	Measure resistance between contact 2 of 312100 J04 and cryostat chassis		R > 1 MΩ expected and measured R = 22,68 Ω => SPIRE to raise NCR & issue to ASED &ESA, see MN ref. SCI-PT-44536 date: 25.10.06	Grasl & Lang 24.10.06
181.	De-mate 128-way BOB from 312100 J04			Lang 24.10.06
182.	Mate shorting plug Type-V to 312100 J04			Lang 24.10.06
183.	Mate shorting plugs to SVM Plugs of SIH-SS-01, 03, 06, 10, and 11			Grasl, Hund & Lang 24.10.06
184.	Secure SIH-SS harnesses to dummy panel in preparation for mechanical de-integration			Grasl, Hund & Lang 24.10.06
185.	Grounding lead connected to dummy panel for de-integration		Length approx. 8 m & measured R = 25 mΩ	Grasl 24.10.06
186.	Mechanically de-integrate the dummy panel from TTAP		Mechanical Panel de-integration controlled by ASED PA, R. Langenstein & observed by SPIRE / RAL	25.10.06 Bayer, Hengstler, Geiger, Süss, Grasl
187.	Move to ESD integration table			25.10.06 Bayer, Hengstler, Geiger, Süss, Grasl

No:	Activity	Proc/Drwg	Remarks/Results	sign off
188.	De-mate SVM SIH from DCU and FCU and store it in the ASED transport container			Grasl & Hund 25.10.06
189.	Install ESD protective caps to exposed DCU, FPU & DPU connectors		On request of SPIRE / RAL , E.Sawyer, all unit connector with exposed contacts have been covered by conductive alu-tape instead of red-plastic caps detected during incoming inspection at ESTEC	Grasl & Hund 25.10.06
190.	De-mate WIH and return to transport containers			Grasl & Hund 25.10.06
191.	De-mate 1553 from DPU			Grasl & Hund 25.10.06
192.	De-mate 28V power bus from DPU and FCU			Grasl & Hund 25.10.06
193.	SPIRE EQM Warm-Unit Packing & Storage preparation		All ASED activities performed have been by SPIRE RAL / Eric Sawyer & ASED Andreas Grasl	Grasl 25.10.06
194.	Connect bonding ESD lanyard to DPU, FCU and DCU			Grasl & Sawyer 25.10.06
195.	Mechanically de-integrate the units from bonded dummy panel and mounting in Transport containers			Grasl & Sawyer 25.10.06
196.	Cover Warm-units with ESD foil and close transport containers			Grasl & Sawyer 25.10.06
197.	End			26.10.06

Figure 1: SVM lateral SPIRE EQM & STM 2 Dummy-Panel (WU mounting plane)

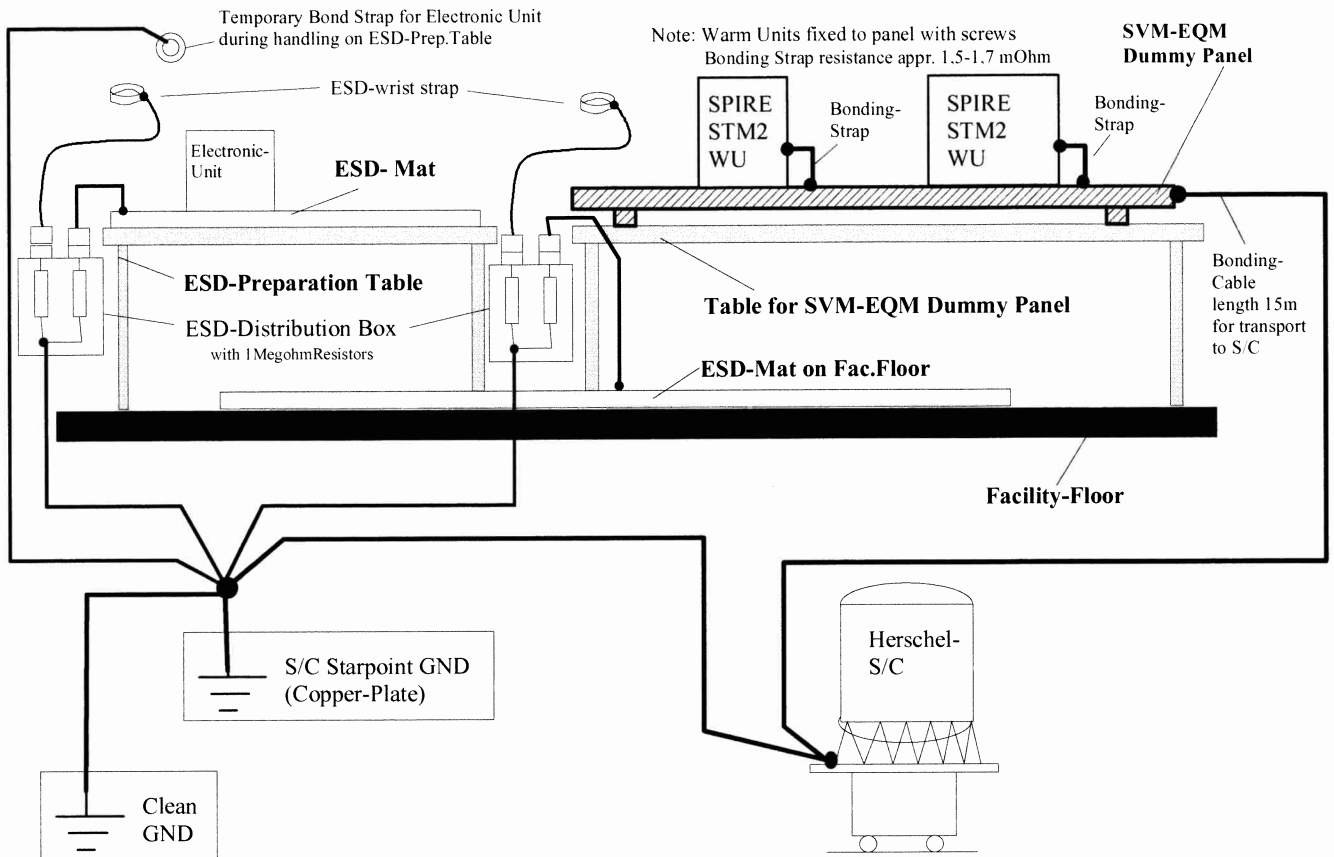


Figure 2: HP-2-ASED-ID-009-01-0C SPIRE EQM SIH Interconnection Diagram





Annex 1-1:

Grounding- and ESD set-up



Annex 2-1: DPU Power test cable I/F

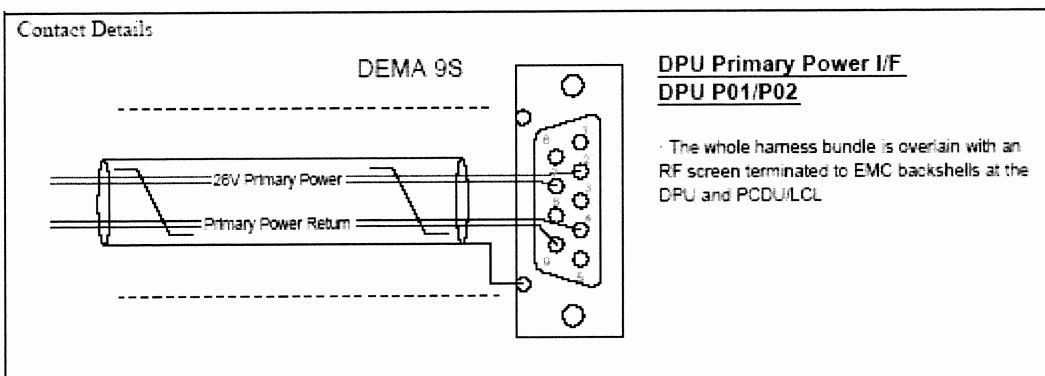
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4.7.3 T3 DPU-P Power


Overall Mechanical Drawing

Connector/Backshell Details
To HSDPU J1

Harness Layup



Annex 2-2: FCU Power test cable I/F

		SPIRE HARNESS DEFINITION DOCUMENT	Doc: SPIRE-RAL-PRJ-000608 Issue: 1.2 Date: 17/02/05 Page 226 of 245
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4.7.5 T5 FCU-P Power

Overall Mechanical Drawing

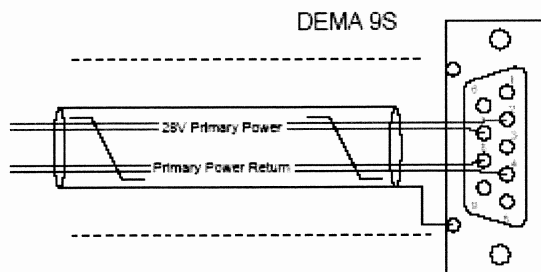
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Connector/Backshell Details

To HSFCU J5

Harness Layup

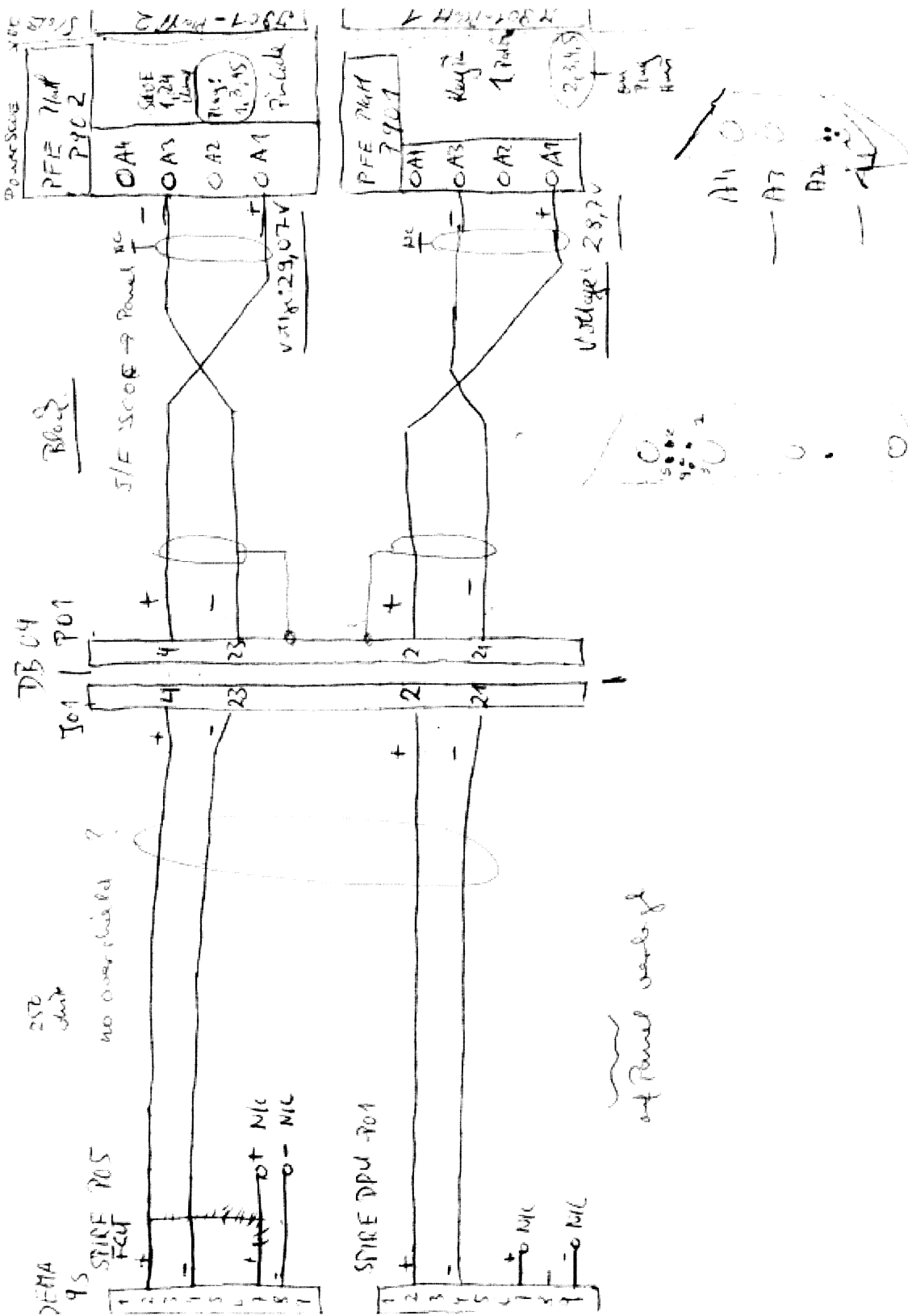
Contact Details



FCU Primary Power I/F
FCU P05/P06

The whole harness bundle is overlain with an RF screen terminated to EMC backshells at the FCU and PCDU/LCL

Annex 2-3: Power SCOE Interface cable and Pin-Allocations



	Name	Dep./Comp.		Name	Dep./Comp.
	Alberti von Mathias Dr.	ASG22		Schweickert Gunn	ASG22
	Barlage Bernhard	AED13		Steiningger Eric	AED32
	Bayer Thomas	ASA42	X	Stritter Rene	AED11
	Brune Holger	ASA45		Suess Rudi	OTN/ASA44
	Edelhoff Dirk	AED2		Thörmer Klaus-Horst Dr.	OTN/AED65
	Fehringer Alexander	ASG13		Wagner Klaus	ASG22
X	Fricke Wolfgang Dr.	AED 65	X	Wietbrock Walter	AET12
	Geiger Hermann	ASA42		Wöhler Hans	ASG22
X	Grasl Andreas	OTN/ASA44			
X	Grasshoff Brigitte	AET12			
	Hartmann Hans	AED32	X	Alcatel Alenia Space Cannes	ASP
	Hauser Armin	ASG22	X	ESA/ESTEC	ESA
X	Hendry David	Terma			
	Hengstler Reinhold	ASA42		Instruments:	
	Hinger Jürgen	ASG22		MPE (PACS)	MPE
X	Hohn Rüdiger	AED65	X	RAL (SPIRE)	RAL
	Hölzle Edgar Dr.	AED32		SRON (HIFI)	SRON
	Huber Johann	ASA42		Subcontractors:	
X	Hund Walter	ASE252		Air Liquide, Space Department	AIR
X	Idler Siegmund	AED312		Air Liquide, Space Department	AIRS
	Ilsen Stijn	Terma		Air Liquide, Orbital System	AIRT
	Ivány von András	FAE12		Alcatel Alenia Space Antwerp	ABSP
	Jahn Gerd Dr.	ASG22		Austrian Aerospace	AAE
X	Kalde Clemens	ASM2		Austrian Aerospace	AAEM
	Kameter Rudolf	OTN/ASA42		APCO Technologies S. A.	APCO
	Kettner Bernhard	AET42		Bieri Engineering B. V.	BIER
X	Knoblauch August	AET32		BOC Edwards	BOCE
X	Koelle Markus	ASA43		Dutch Space Solar Arrays	DSSA
	Koppe Axel	AED312		EADS Astrium Sub-Subsyst. & Equipment	ASSE
	Kroeker Jürgen	AED65		EADS CASA Espacio	CASA
	La Gioia Valentina	Terma		EADS CASA Espacio	ECAS
	Lamprecht Ernst	OTN/ASQ22		EADS Space Transportation	ASIP
X	Lang Jürgen	ASE252		Eurocopter	ECD
X	Langenstein Rolf	AED15		European Test Services	ETS
X	Langfermann Michael	ASA41		HTS AG Zürich	HTSZ
	Much Christoph	ASA43		Linde	LIND
	Müller Jörg	ASA42		Patria New Technologies Oy	PANT
X	Müller Martin	ASA43		Phoenix, Volkmarsen	PHOE
	Peltz Heinz-Willi	ASG13		Prototech AS	PROT
	Pietroboni Karin	AED65		QMC Instruments Ltd.	QMC
	Platzer Wilhelm	AED2		Rembe, Brilon	REMB
	Reichle Konrad	ASA42		Rosemount Aerospace GmbH	ROSE
	Runge Axel	OTN/ASA44		RYMSA, Radiación y Microondas S.A.	RYM
	Schink Dietmar	AED32		SENER Ingenieria SA	SEN
X	Schlosser Christian	OTN/ASA44		Stöhr, Königsbrunn	STOE
	Schmidt Rudolf	FAE12		Terma A/S, Herlev	TER