ORIGINALE ARCHIVIO

CARLO GAVAZZI

CARLO GAVAZZI SPACE SpA

AMS02-PDS

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Titolo : *Title :*	AMS02-PDS PFM REDUCED FUNCTIONAL TEST REPORT AFTER VIBRATION TEST				

	Nome & Funzione *Name & Function*	Firma *Signature*	Data *Date*
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1 SCOPE

This document describes the reduced test report, to demonstrate the AMS-02 Power Distribution System Proto Flight Model (PDS-PFM) functionality after vibration test.

The unit under test is:
AMS02-PDS
Model: PFM
Part number: 10-AMS02PDS-000.00
Serial number: FM01

The document corresponds to contract deliverable DEL 103.

2 DOCUMENTS

2.1 APPLICABLE DOCUMENTS

AD	Doc. Number	Issue / Date	Rev	Title / Applicability	Remarks
1	AMS-RQ-CGS-002	1 / April 2007	N.A.	PDS Specification	
2	PDS-PL-CGS-003	1 / 11-05-2009	N.A.	AMS02 PDS DESIGN DEVELOPMENT AND QUALIFICATION PLAN	
3	PDS-PR-CGS-020	1 / 10/07/2009	N.A.	AMS02-PDS PFM Reduced Functional Test Procedure	

2.2 REFERENCE DOCUMENTS

RD	Doc. Number	Issue / Date	Rev	Title / Applicability	Remarks
1	10-AMS02PDS-000.00	28/07/2008	/	AMS02 Power Distribution System Assembly	
2	10-AMS02PDS-000.01	28/07/2008	/	AMS02 Power Distribution System Assembly Parts List	
3	10-AMS02PDS-000.02	08/06/2009	A	AMS02 Power Distribution System ICD	
4	PDS-IC-CGS-001	2 / 08-06-2009	N.A.	PDS FM electrical/functional, mechanical ICD	

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3 ACRONYMS

C.I.	Configuration Item. Also called Part Number (P/N)
CGS	Carlo Gavazzi Space
FM	Flight Model
NA	Not Applicable
P/N	Part Number. Also called Configuration Item C.I.
PA	Product Assurance
PDS	Power Distribution System
PVS	Procedure Variation Sheet
QA	Quality Assurance
S/N	Serial Number
TE	Test Equipment
UUT	Unit Under Test

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4 PARTICIPANTS REQUIRED

4.1 GENERAL

All test will be performed under QA surveillance in accordance with, and following detailed procedure of applicable PA Plan.

4.2 RESPONSIBILITY

The technical responsibility for testing and test results is up to the Engineering department.

QA is responsible for ensuring that all the agreed procedures are carefully observed, that test equipment and instrumentation used during testing is calibrated and within validity date: that the test data sheets are recorded in the Test Report and signed by the operators and QA witnesses, that all non conforming condition and test results are properly documented and notified to the Prime Contractor, and that all requirements of applicable PA Plan, specification and Statement of Work pertaining to the acceptance tests, are fully satisfied.

4.3 QA WITNESS OF TEST AND SIGN-OFF

QA inspector, or its delegate, shall witness the tests described in this procedure in accordance to the requirement specified in the applicable PA Plans.

4.4 NON CONFORMANCE AND FAILURES

Any malfunction/defect which occurs during the test will be processed along the Non Conformance Procedure described in the applicable PA Plans.

4.5 CALIBRATION REQUIREMENTS

All instruments used for testing shall be calibrated.

Evidence of certification shall be provided by a label attached to the instruments itself, showing the calibration date, the expiring date and the signature of the operator.

5 TEST ARTICLE

The test article consists of: (see Par. 1).

Before starting the test, the model, P/N and SN of the test article to be tested shall be recorded on the step-by-step procedure sheets under the table cell "UNIT UNDER TEST".

6 TEST CONFIGURATION

Before the beginning of the test, be sure that all the cables between AMS02-PDS box and test setup are connected.

Follows a list of the needed instruments:

- 1 oscilloscope: it is recommended to connect the oscilloscope to PC in order to acquire the measurements (acquisition software required)

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- 2 multimeters
- 1 short circuit generator
- 1 current probe to connect to oscilloscope
- EPP can box (interface between PC and PDS)
- 1 milliohmeter
- 1 personal computer with LINUX operative system
- Test racks

The needed interface software is the following:

- PDS-4
- USCM

During test, it's suggested the use of a fan applied to PDS dissipator.

The accuracy of the telemetry are resumed in the following table

	Signals	Monitored Range	Accuracy
Input Stage	Main Power Voltage	0V ÷ 190V	5%
	Main Power Current	-5A ÷ 33A	20% F.S. see RFW PDS-WV-CGS-002
	Analog Reference Voltage	~4V	±250mV
ESEM1-A	Main Power Voltage	0V ÷ 150V	3%
	Temperature	-40°C ÷ +90°C	±2°C
PB2	+28V Output Voltage	0V ÷ 36.76V	3%
	Analog Reference Voltage	~2V	±250mV
	Temperature	-40°C ÷ +90°C	±2°C
Esem3-A	Outlet #1 to #7 Current (rated 5A)	0A ÷ 7.5A	3%
	Outlet #8 Current (rated 10A)	0A ÷ 15A	3%
	Analog Reference Voltage	~3V	±250mV
	Temperature	-40°C ÷ +90°C	±2°C
ESEM3-B	Outlet #12 Current (rated 10A)	0A ÷ 15A	3%
	Analog Reference Voltage	~2.5V	±250mV
	Temperature	-40°C ÷ +90°C	±2°C

Tab. 1: Accuracy value

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7 INSTRUMENTATION AND TEST EQUIPMENT

The complete list of the instrumentation used during the test shall be recorded in next table.

The list shall be filled up during tests and reported in Test Report.

N.	EQUIPMENT	MANUFACTURER	P/N	S/N	ACCURACY (*)	NEXT CAL. DATE	REMARKS
1	Multimeter	Fluke	45	ENG-LAB-103		23-may-2010	
2	Current probe amplifier	Tektronix	TCPA300	ENG-LAB-300		25-may-2010	
3	Current probe	Tektronix	TCP305	ENG-LAB-300-1		25-may-2010	
4	Multimeter	HP	34401	ENG-LAB-301		Nov-2009	
5	Multimeter	Fluke	45	ENG-LAB-104		23-may-2010	

Tab. 2: INSTRUMENT LIST

(*) Where not specified the accuracy is as stated on the instrument manufacturer data sheet

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8 TEST CONDITION

- The CI shall be tested in its defined configuration: it shall properly closed, all electrical loads shall be present and the CI interface function(s) shall be simulated.

- Unless otherwise specified, all measurements are to be performed at the following ambient condition:

Temperature	25 °C +/- 3°C
Relative humidity	between 30 % and 60 % RH
Pressure	Ambient
Cleanliness	100000 class

- All tests, unless otherwise specified, shall be performed internally to CGS laboratories in a proper area. General disposition shall be applied to maximize personnel safety from potential hazards

- Connectors savers shall be used on PFM model as applicable to protect the UUT interface connectors.

- Skilled personnel shall be employed

- All used instruments shall meet the necessary accuracy and shall not degrade the UUT performances.

9 TEST PROCEDURE VARIATION SHEET

In case that for any reason the test procedure has to be changed, the change shall be described in a Procedure Variation Sheet (PVS) as shown in the next page.

The PVS shall contain:

- Reference to the test procedure to be changed
- Reference to the relevant test, procedure page and paragraph
- Description of the change, possibly in the form was....is.....
- Reason for change
- Test Engineer, QA, Test conductor signatures and dates
- Customer signature and date (when required).

Each PVS shall be identified by a reference number provided in sequential order.

All the generated PVS shall be collected in a dedicated section of the Test Report.

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PROCEDURE VARIATION SHEET ref. N°:

Test Procedure Ref.:	Page Revised:	Paragraph Revised:

Description of Change:

Reason for Change:

CONCURRENCE

Test Cond.	QA	System Eng.		Customer
Date	Date	Date		Date

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10 TEST DATA SHEETS

The step-by-step procedure sheets are provided in the following pages.

10.1 DATA SHEETS FILLING UP

The following fields of the data sheets:

- UUT DATA (including Model, Item, C.I., S/N)
- Measured value

shall be filled up during the test performances and shall be part of the Test Report together with photographs, sketches, etc. eventually useful to document the test execution/result.
Remarks field shall be used as a minimum to provide, where appropriate, reference to NCRs and PVS.
Test Report reference data shall be added in the relevant field.
Each data sheet (including the attachments) shall be certified by QA stamp and signature together with the Test Conductor signature and date.

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10.2 ELECTRICAL CONNECTIONS

10.2.1 ISOLATION

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
2.1	The PDS shall be in OFF condition, disconnected from any cable or test equipment and placed on an insulated table.			
2.2	To verify the power isolation, measure the DC resistance:			OBJECTIVE: Verify the power isolation using the DC resistance measurements
2.3	To verify the power isolation between bus A positive line and BONDING			
2.4	J100 pin E Vs BONDING	>1MΩ	>1MΩ	
2.5	J100 pin A Vs BONDING	>1MΩ	>1MΩ	
2.6	J101 pin A Vs BONDING	>1MΩ	>1MΩ	
2.7	To verify the power isolation between bus A return line and BONDING			
2.8	J100 pin D Vs BONDING	>1MΩ	>1MΩ	
2.9	J100 pin B Vs BONDING	>1MΩ	>1MΩ	
2.10	J101 pin G Vs BONDING	>1MΩ	>1MΩ	
2.11	To verify the power isolation between bus B positive line and BONDING			
2.12	J200 pin E Vs BONDING	>1MΩ	>1MΩ	
2.13	J200 pin A Vs BONDING	>1MΩ	>1MΩ	
2.14	J201 pin D Vs BONDING	>1MΩ	>1MΩ	
2.15	To verify the power isolation between bus B return line and BONDING			
2.16	J200 pin D Vs BONDING	>1MΩ	>1MΩ	
2.17	J200 pin B Vs BONDING	>1MΩ	>1MΩ	
2.18	J201 pin E Vs BONDING	>1MΩ	>1MΩ	

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS

10.3 FUNCTIONAL VERIFICATION

10.3.1 A SECTION

10.3.1.1 SETUP

3.1.1.1	Verify that the **"power switch box"** is connected between power supply alim and PDS cables	Connected	Connected		
3.1.1.2	Verify that the **"power switch"** of the **"power switch box"** is set in OFF position	OFF	OFF		
3.1.1.3	Verify that all load are connected except for external heaters	Connected	Connected		
3.1.1.4	Set all the loads to 0A current absorption (external heaters included)	0A absorbtion set	0A absorbtion set		
3.1.1.5	Launch the PDS controller software and select FM in the Model window	Program open	Program open		
3.1.1.6	Launch the USCM controller software: Open the file **"USCM"**	File open	File open		

10.3.1.2 POWER ON WITH ISS MAIN BUS

3.1.2.1	Connect main power supply between AI_120V (positive) and AI_120V_RTN (negative)	J100 connected	J100 connected	
3.1.2.2	Set Power supply alim to 120V	120,00V±1,00V	120,00V	
3.1.2.3	Set output current limitation to 3A	3A±0,5A	3A	
3.1.2.4	Enable power supply output	enabled	enabled	
3.1.2.5	Verify that green led of **"power switch box"** is lighted	Green led ligthed	Green led ligthed	
3.1.2.6	Switch ON the **"power switch "**of **"power switch box"**	Switch ON	Switch ON	
3.1.2.7	Verify that red led of **"power switch box"** is lighted	Red led ligthed	Red led ligthed	
3.1.2.8	Verify the current absorption from Main Bus	1,10A±0,20A	1.2A	Note: this current can be read from power supply display or amperometer. In case of power supply reading, verify the correctness of measurements.
3.1.2.9	**Unmated connectoros verification**			
3.1.2.10	Measure with multimeter the voltage between 1P_120V (positive) and 1P_120V_RTN (negative)	<5V	0V	
3.1.2.11	Measure with multimeter the voltage between T0_120V (positive) and T0_120V_RTN (negative)	<5V	0V	

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10.3.1.2.1 CAN BUS COMMUNICATION LINE CHECK BOARD 30

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3.1.2.12	Objective: to verify the external CAN BUS lines communication			
3.1.2.13	Select USCM controller software	USCM selected	USCM selected	
3.1.2.14	set the CAN BUS board address to 30 in the command widow	30	30	
3.1.2.15	Select JMDC = 0	0	0	
3.1.2.16	Select TX = A	A	A	
3.1.2.17	Select RX = A	A	A	
3.1.2.18	press button READ and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.19	Verify MODE window	PDS_PROM	PDS_PROM	
3.1.2.20	Verify Version window	26-Jan-09 17:06	26-Jan-09 17:06	
3.1.2.21	Verify History window	POWER ON 0	POWER ON 0	
3.1.2.22	select Select TX = B	B	B	
3.1.2.23	Select RX = B	B	B	
3.1.2.24	press button READ and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.25	Verify MODE window	PDS_PROM	PDS_PROM	
3.1.2.26	Verify Version window	26-Jan-09 17:06	26-Jan-09 17:06	
3.1.2.27	Verify History	POWER ON 0	POWER ON 0	

10.3.1.2.2 CAN BUS COMMUNICATION LINE CHECK BOARD 31

3.1.2.28	Objective: To verify the external CAN BUS lines communication			
3.1.2.29	Set the CAN BUS board address to 31 in the command widow	31	31	
3.1.2.30	Select JMDC = 0	0	0	
3.1.2.31	Select TX = A	A	A	
3.1.2.32	Select RX = A	A	A	
3.1.2.33	press button READ and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.34	Verify MODE window	PDS_PROM	PDS_PROM	
3.1.2.35	Verify Version window	26-Jan-09 17:06	26-Jan-09 17:06	
3.1.2.36	Verify History window	POWER ON 0	POWER ON 0	
3.1.2.37	select Select TX = B	B	B	

DATE:	TEST CONDUCTOR	QA	CUSTOMER
6/08/2009	Albertin A.	Francini E.	

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3.1.2.38	Select RX = B	B	B	
3.1.2.39	press button READ and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.40	Verify MODE window	PDS_PROM	PDS_PROM	
3.1.2.41	Verify Version window	26-Jan-09 17:06	26-Jan-09 17:06	
3.1.2.42	Verify History	POWER ON 0	POWER ON 0	

10.3.1.2.3 PDS INTERNAL SERIAL COMMUNICATION CHECK BOARD 30

3.1.2.43	**Objective: To verify the internal communication of the CAN BUS boards 30 with the PDS A side boards**			
3.1.2.44	set the CAN BUS board address to 30	30	30	
3.1.2.45	select JMDC = 0	0	0	
3.1.2.46	select TX = A	A	A	
3.1.2.47	select RX = A	A	A	
3.1.2.48	Press button "RUN Flash" and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.49	press button READ and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.50	Verify MODE window	PDS_FLASH	PDS_FLASH	
3.1.2.51	Verify Version window	26-Jan-09 17:07	26-Jan-09 17:07	
3.1.2.52	Verify History	PROM 3	PROM 3	
3.1.2.53	Select PDS controller software	program open	program open	
3.1.2.54	set the CAN BUS board address to 30	30	30	
3.1.2.55	select JMDC = 0	0	0	
3.1.2.56	select TX = A	A	A	
3.1.2.57	select RX = A	A	A	
3.1.2.58	Select "CAN BUS I/F Side" to A	A	A	
3.1.2.59	Select "PDS Side" to A	A	A	
3.1.2.60	Press button "READ INPUT" button and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.61	Verify Input Stage A Voltage (V)monitor	120V ± 9.5V	119,2V	
3.1.2.62	Verify Input stage A Current (A) monitor	1,1A ± 20%	0,697A	20% Full Scale value
3.1.2.63	Press button "READ" to verify all board status	Command execute OK	OK	
3.1.2.64	Verify "Sta" column values	All boards OK	OK	

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3.1.2.65	Verify "OVT" column values	All boards OK	OK	With the exception of ESEM1-A board: OVT flag not present
3.1.2.66	Verify "Temp" column values	-20°C to +80°C	OK	No full scale values must be present All temperatures must be inside unit temp limits
3.1.2.67	Verify "Ref" colum values	2,5V ± 0,25V 2,0V ± 0,25V 3,0V ± 0,25V 2,0V ± 0,25V 3,0V ± 0,25V 2,0V ± 0,25V 3,0V ± 0,25V 2,0V ± 0,25V 3,0V ± 0,25V 4,0V ± 0,25V	2,5V 2,19V 2,98V 2,04V 3,02V 2,15V 3,01V 2,15V 3,02V 4,21V	All

10.3.1.2.4 PDS INTERNAL SERIAL COMMUNICATION CHECK BOARD 31

3.1.2.68	Select USCM controller software	USCM selected	USCM selected	
3.1.2.69	Set the CAN BUS board address to 31	31	31	
3.1.2.70	select JMDC = 0	0	0	
3.1.2.71	select TX = A	A	A	
3.1.2.72	select RX = A	A	A	
3.1.2.73	Press button "RUN Flash" and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.74	press button READ and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.75	Verify MODE window	PDS_FLASH	PDS_FLASH	
3.1.2.76	Verify Version window	26-Jan-09 17:07	26-Jan-09 17:07	
3.1.2.77	Verify History	PROM 3	PROM 3	
3.1.2.78	Select PDS controller software	program open	program open	
3.1.2.79	Set the CAN BUS board address to 31	31	31	
3.1.2.80	select JMDC = 0	0	0	
3.1.2.81	select TX = A	A	A	
3.1.2.82	select RX = A	A	A	
3.1.2.83	Select "CAN BUS I/F Side" to B	B	B	
3.1.2.84	Select "PDS Side" to A	A	A	
3.1.2.85	Click on Run flash button	OK	OK	

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3.1.2.86	Press button "READ INPUT" button and verify on the command status window	Command execute OK	OK	
3.1.2.87	Verify "Input Stage A" Voltage (V)monitor	120V ± 9.5V	120,3V	
3.1.2.88	Verify "Input stage A" Current (A) monitor	1,1A ± 20%	0,932V	20% Full Scale value
3.1.2.89	Press button "READ" to verify all board status	Command execute OK	OK	
3.1.2.90	Verify "Sta" column values	All boards OK	OK	
3.1.2.91	Verify "OVT" column values	All boards OK	OK	With the exception of ESEM1-A board: OVT flag not present
3.1.2.92	Verify "Temp" column values	-20°C to +80°C	OK	No full scale values must be present All temperatures must be inside unit temp limits Some difference can be present due to different board power dissipation
3.1.2.93	Verify "Ref" colum values	2,5V ± 0,25V 2,0V ± 0,25V 3,0V ± 0,25V 2,0V ± 0,25V 3,0V ± 0,25V 2,0V ± 0,25V 3,0V ± 0,25V 2,0V ± 0,25V 3,0V ± 0,25V 4,0V ± 0,25V	2,5V 2,22V 2,98V 2,16V 2,98V 2,18V 2,98V 2,19V 2,95V 3,98V	
3.1.2.94	Switch OFF 120V main bus	OK	OK	

10.3.1.2.5 CAN BUS BOARDS CROSS CMD OFF/ON AND SUICIDE TEST

3.1.2.95	Objective: to verify the possibility to command OFF and ON one board from the other			
3.1.2.96	Verify that the **"power switch box"** is connected between power supply alim and PDS cables	Connected	Connected	
3.1.2.97	Verify that the **"power switch"** of the **"power switch box"** is set in OFF position	OFF	OFF	
3.1.2.98	Lunch the PDS controller software	Program open	Program open	
3.1.2.99	Launch the USCM controller software	File open	File open	
3.1.2.100	Set to "FM" the window Model	FM	FM	
3.1.2.101	Connect "J300 test box" to the unit J300 connector	OK	OK	
3.1.2.102	Connect main power supply between AI_120V (positive) and AI_120V_RTN (negative)	J100 connected	J100 connected	
3.1.2.103	Set Power supply alim to 120V	120,00V±1,00V	120,00V	V1
3.1.2.104	Set output current limitation to 3A	3A±0,5A	3A	

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3.1.2.105	Enable power supply output	enabled	enabled	
3.1.2.106	Verify that green led of **"power switch box"** is lighted	Green led ligthed	Green led ligthed	
3.1.2.107	Switch ON the **"power switch "**of **"power switch box"**	Switch ON	Switch ON	
3.1.2.108	Verify that red led of **"power switch box"** is lighted	Red led ligthed	Red led ligthed	
3.1.2.109	Verify the current absorption from Main Bus	1,10A±0,20A	1,1A	Note: this current can be read from power supply display or amperometer. In case of power supply reading, verify the correctness of measurements.
3.1.2.110	Select USCM controller software	USCM selcted	USCM selcted	
3.1.2.111	set the CAN BUS board address to 30 in the command window	30	30	
3.1.2.112	Select JMDC = 0	0	0	
3.1.2.113	Select TX = A	A	A	
3.1.2.114	Select RX = A	A	A	
3.1.2.115	press button READ and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.116	Verify MODE window	PDS_PROM	PDS_PROM	
3.1.2.117	Verify Version window	26-Jan-09 17:06	26-Jan-09 17:06	
3.1.2.118	Verify History window	POWER ON 0	POWER ON 0	
3.1.2.119	Measure the CAN BUS internal power supply: connect a multimeter between PIN Vcc (positive) and SEC_GND (negative) on side A of the J300 test box	5.3V ± 0.1V	5,3V	
3.1.2.120	Set the CAN BUS board address to 31 in the command window	31	31	
3.1.2.121	Select JMDC = 0	0	0	
3.1.2.122	Select TX = A	A	A	
3.1.2.123	Select RX = A	A	A	
3.1.2.124	press button READ and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.125	Verify MODE window	PDS_PROM	PDS_PROM	
3.1.2.126	Verify Version window	26-Jan-09 17:06	26-Jan-09 17:06	
3.1.2.127	Verify History window	POWER ON 0	POWER ON 0	
3.1.2.128	Measure the CAN BUS internal power supply: connect a multimeter between PIN Vcc (positive) and SEC_GND (negative) on side B of the J300 test box	5.30 ± 0.1V	5,286V	
3.1.2.129	set the CAN BUS board address to 30 in the command window	30	30	
3.1.2.130	press button SOFF and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.131	Set the CAN BUS board address to 31 in the command window	31	31	
3.1.2.132	press button READ and verify on the command status window	Command execute failed	Command execute failed	

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3.1.2.133	Measure the CAN BUS 31 internal power supply: connect a multimeter between PIN Vcc (positive) and SEC_GND (negative) on side B of the J300 test box	0.5V ± 0.1V	0.521V	
3.1.2.134	Measure the CAN BUS 30 internal power supply: connect a multimeter between PIN Vcc (positive) and SEC_GND (negative) on side A of the J300 test box	5.3V ± 0.1V	5,305V	
3.1.2.135	set the CAN BUS board address to 30 in the command window	30	30	
3.1.2.136	press button SON and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.137	Set the CAN BUS board address to 31 in the command window	31	31	
3.1.2.138	press button READ and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.139	Measure the CAN BUS internal power supply: connect a multimeter between PIN Vcc (positive) and SEC_GND (negative) on side B of the J300 test box	5.3V ± 0.1V	5,28V	
3.1.2.140	Verify MODE window	PDS_PROM	PDS_PROM	
3.1.2.141	Verify Version window	26-Jan-09 17:06	26-Jan-09 17:06	
3.1.2.142	Verify History window	POWER ON 0	POWER ON 0	
3.1.2.143	Set the CAN BUS board address to 31 in the command window	31	31	
3.1.2.144	press button SOFF and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.145	set the CAN BUS board address to 30 in the command window	30	30	
3.1.2.146	press button READ and verify on the command status window	Command execute failed	Command execute failed	
3.1.2.147	Measure the CAN BUS internal power supply: connect a multimeter between PIN Vcc (positive) and SEC_GND (negative) on side A of the J300 test box	0,5V ± 0.1V	0,51V	
3.1.2.148	Measure the CAN BUS internal power supply: connect a multimeter between PIN Vcc (positive) and SEC_GND (negative) on side B of the J300 test box	5.3V ± 0.1V	5,286V	
3.1.2.149	Set the CAN BUS board address to 31 in the command window	31	31	
3.1.2.150	press button SON and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.151	set the CAN BUS board address to 30 in the command window	30	30	
3.1.2.152	press button READ and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.153	Measure the CAN BUS internal power supply: connect a multimeter between PIN Vcc (positive) and SEC_GND (negative) on side A of the J300 test box	5.3V ± 0.1V	5,306V	
3.1.2.154	Verify MODE window	PDS_PROM	PDS_PROM	
3.1.2.155	Verify Version window	26-Jan-09 17:06	26-Jan-09 17:06	
3.1.2.156	Verify History window	POWER ON 0	POWER ON 0	
3.1.2.157	**SUICIDE BOARD 30 COMMAND TEST**			

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3.1.2.158	set the CAN BUS board address to 30 in the command window	30	30	
3.1.2.159	press button SUIC and verify on the command status window	Command execute failed	Command execute failed	
3.1.2.160	Measure the CAN BUS internal power supply: connect a multimeter between PIN Vcc (positive) and SEC_GND (negative) on side A of the J300 test box	0.50V ±0.1V	0,51V	
3.1.2.161	press button READ and verify on the command status window	Command execute failed	Command execute failed	
3.1.2.162	Set the CAN BUS board address to 31 in the command window	31	31	
3.1.2.163	press button SON and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.164	set the CAN BUS board address to 30 in the command window	30	30	
3.1.2.165	press button READ and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.166	Measure the CAN BUS internal power supply: connect a multimeter between PIN Vcc (positive) and SEC_GND (negative) on side 30 of the J300 test box	5.30 ± 0.1V	5,306V	
3.1.2.167	Verify MODE window	PDS_PROM	PDS_PROM	
3.1.2.168	Verify Version window	26-Jan-09 17:06	26-Jan-09 17:06	
3.1.2.169	Verify History window	POWER ON 0	POWER ON 0	
3.1.2.170	**SUICIDE BOARD 31 COMMAND TEST**			
3.1.2.171	Set the CAN BUS board address to 31 in the command window	31	31	
3.1.2.172	press button SUIC and verify on the command status window	Command execute failed	Command execute failed	
3.1.2.173	Measure the CAN BUS internal power supply: connect a multimeter between PIN Vcc (positive) and SEC_GND (negative) on side B of the J300 test box	0.50V ± 0.1V	0,51V	
3.1.2.174	press button READ and verify on the command status window	Command execute failed	Command execute failed	
3.1.2.175	set the CAN BUS board address to 30 in the command window	30	30	
3.1.2.176	press button SON and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.177	Set the CAN BUS board address to 31 in the command window	31	31	
3.1.2.178	press button READ and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.179	Measure the CAN BUS internal power supply: connect a multimeter between PIN Vcc (positive) and SEC_GND (negative) on side B of the J300 test box	5.30V ± 0.1V	5,286V	
3.1.2.180	Verify MODE window	PDS_PROM	PDS_PROM	
3.1.2.181	Verify Version window	26-Jan-09 17:06	26-Jan-09 17:06	
3.1.2.182	Verify History window	POWER ON 0	POWER ON 0	

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3.1.2.183	Switch OFF the "power switch "of "power switch box"	OFF	OFF	
3.1.2.184	Disable power supply output	DISABLED	DISABLED	

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10.3.1.3 POWER VIDEO GRAPPLE FIXTURE 1 POWER SUPPLY VERIFICATION (1P)

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3.1.2.185	Connect main power supply between 1P_120V (positive) and 1P_120V_RTN (negative)	CONNECTED	CONNECTED	
3.1.2.186	Connect ESEM 3-B outlet 1 to load	CONNECTED	CONNECTED	Default on: current absorptioN = 1,200A±100mA
3.1.2.187	Set Power supply alim to 120V	120,00V±1,00V	120,00V	
3.1.2.188	Set output current limitation to 5A	5A±0,5A	5A	
3.1.2.189	Enable power supply output	Enabled	Enabled	
3.1.2.190	Verify that green led of **"power switch box"** is lighted	Green led ligthed	Green led ligthed	
3.1.2.191	Switch ON the **"power switch** "of **"power switch box"**	Switch ON	Switch ON	
3.1.2.192	Verify that red led of **"power switch box"** is lighted	Red led ligthed	Red led ligthed	
3.1.2.193	Measure the PDS input voltage: connect a multimeter between PIN "bypass thermal interlock" (positive) and "PRI_GND"(negative) on side A of the J300 test box	118,50V±1,00V	119,5V	
3.1.2.194	Verify the current absorption from Main Bus	2,30A±0,20A	2,3A	Note: this current can be read from power supply display or amperometer. In case of power supply reading, verify the correctness of measurements.
3.1.2.195	Select PDS controller software	OPEN	OPEN	
3.1.2.196	Set to "FM" the window Model	FM	FM	
3.1.2.197	Set the CAN BUS board address to 30	30	30	
3.1.2.198	Select "CAN BUS I/F Side" to A	A	A	
3.1.2.199	Select "PDS Side" to A	A	A	
3.1.2.200	select JMDC = 0	0	0	
3.1.2.201	select TX = A	A	A	
3.1.2.202	select RX = A	A	A	
3.1.2.203	Press button "RUN Flash" and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.204	Press button "READ" to verify all board status	Command execute OK	Command execute OK	
3.1.2.205	Verify the status of the flags indicated on "Sta" column. All flags must be "OK"	OK	OK	Click on READ command under Sta column This column resumes the status of al the boards
3.1.2.206	Set the CAN BUS board address to 31	31	31	
3.1.2.207	Select "CAN BUS I/F Side" to B	B	B	
3.1.2.208	Select "PDS Side" to A	A	A	
3.1.2.209	Click on Run flash button	Command execute OK	Command execute OK	Command located on up-left
3.1.2.210	Press button "READ" to verify all board status	Command execute OK	Command execute OK	

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3.1.2.211	Verify the status of the flags indicated on "Sta" column. All flags must be "OK"	OK	OK	Click on READ command under Sta column This column resumes the status of al the boards
3.1.2.212	Measure with multimeter the voltage on ESEM 3-B outlet 1	117,00V<V<120,00V	118,2V	This test is used to verify that input diode located in input stage board is not damaged
3.1.2.213	Switch OFF main power bus	OK	OK	
3.1.2.214	disconnect ESEM 3-B outlet 1 to default load	OK	OK	

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10.3.1.4 T0 POWER SUPPLY TEST

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3.1.2.215	Connect main power supply between T0_120V (positive) and T0_120V_RTN (negative)	Connected	Connected	
3.1.2.216	Connect ESEM 3-B outlet 1 to load	CONNECTED	CONNECTED	Default on: current absorptioN = 1,200A±100mA
3.1.2.217	Set Power supply alim to 120V	120,00V±1,00V	119,8V	
3.1.2.218	Set output current limitation to 5A	5A±0,5A	5A	
3.1.2.219	Enable power supply output	Enabled	Enabled	
3.1.2.220	Verify that green led of "power switch box" is lighted	Green led ligthed	Green led ligthed	
3.1.2.221	Switch ON the "power switch "of "power switch box"	Switch ON	Switch ON	
3.1.2.222	Verify that red led of "power switch box" is lighted	Red led ligthed	Red led ligthed	
3.1.2.223	Measure the PDS input voltage: connect a multimeter between PIN "bypass thermal interlock" (positive) and "PRI_GND"(negative) on side A of the J300 test box	118,50V±1,00V	119,43V	
3.1.2.224	Verify the current absorption from Main Bus	2,30A±0,20A	2,3A	Note: this current can be read from power supply display or amperometer. In case of power supply reading, verify the correctness of measurements.
3.1.2.225	Select PDS controller software	OPEN	OPEN	
3.1.2.226	Set to "FM" the window Model	FM	FM	
3.1.2.227	Set the CAN BUS board address to 30	30	30	
3.1.2.228	Select "CAN BUS I/F Side" to A	A	A	
3.1.2.229	Select "PDS Side" to A	A	A	
3.1.2.230	select JMDC = 0	0	0	
3.1.2.231	select TX = A	A	A	
3.1.2.232	select RX = A	A	A	
3.1.2.233	Press button "RUN Flash" and verify on the command status window	Command execute OK	Command execute OK	
3.1.2.234	Press button "READ" to verify all board status	Command execute OK	Command execute OK	
3.1.2.235	Verify the status of the flags indicated on "Sta" column. All flags must be "OK"	OK	OK	Click on READ command under Sta column This column resumes the status of al the boards
3.1.2.236	Set the CAN BUS board address to 31	31	31	
3.1.2.237	Select "CAN BUS I/F Side" to B	B	B	
3.1.2.238	Select "PDS Side" to A	A	A	
3.1.2.239	Click on Run flash button	Command execute OK	Command execute OK	Command located on up-left

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3.1.2.240	Press button "READ" to verify all board status	Command execute OK	Command execute OK	
3.1.2.241	Verify the status of the flags indicated on "Sta" column. All flags must be "OK"	OK	OK	Click on READ command under Sta column This column resumes the status of al the boards
3.1.2.242	Measure with multimeter the voltage on ESEM 3-B outlet 1	117,00V<V<120,00V	118,3V	This test is used to verify that input diode located in input stage board is not damaged
3.1.2.243	Switch OFF main power bus	OK	OK	
3.1.2.244	disconnect ESEM 3-B outlet 1 to default load	OK	OK	

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10.3.1.5 UNIT CHECK

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3.1.5.1	Connect AI_120V and AI_120V_RTN power supply signals	Connected	Connected	
3.1.5.2	Verify that all the cables of the section are connected and all loads are set to 0A	OK	OK	See PVS-01
3.1.5.3	Launch the PDS controller software	Program open	Program open	
3.1.5.4	Set to "FM" the window Model	OK	OK	
3.1.5.5	Select "PDS Side" to A	A	A	
3.1.5.6	Set the CAN BUS board address to 30	30	30	
3.1.5.7	Select JMDC = 0	0	0	
3.1.5.8	Select TX = A	A	A	
3.1.5.9	Select RX = A	A	A	
3.1.5.10	Select "CAN BUS I/F Side" to A	A	A	
3.1.5.11	Set input bus voltage to 120V	120V±1V	119,8V	V1
3.1.5.12	Set input bus current limitation to 27,5 A	27,5 A±1A	27,5A	
3.1.5.13	Enable power supply output	Enabled	Enabled	
3.1.5.14	Verify that green led of **"power switch box"** is lighted	Green led ligthed	Green led ligthed	
3.1.5.15	Switch ON the **"power switch** "of **"power switch box"**	Switch ON	Switch ON	
3.1.5.16	Verify that red led of **"power switch box"** is lighted	Red led ligthed	Red led ligthed	
3.1.5.17	Take note of power supply output current	1,1A±0,5A	1,1A	I1
3.1.5.18	Press button "RUN Flash" and verify on the command status window	Command execute OK	Command execute OK	

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10.3.1.5.1 INPUT STAGE A VERIFICATION

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3.1.5.19	Push the command "Read input" located in the bottom left of the software window	OK	OK	
3.1.5.20	Take note of the value "V" indicated in Input Stage A window	V1±9,50V	119,6A	
3.1.5.21	Take note of the value "I" indicated in Input Stage A window	I1± 20%	0,555A	20% Full Scale value
3.1.5.22	Set the CAN BUS board address to 31	31	31	
3.1.5.23	Select "CAN BUS I/F Side" to B	B	B	
3.1.5.24	Press button "RUN Flash" and verify on the command status window	Command execute OK	Command execute OK	
3.1.5.25	Push the command "Read input" located in the bottom left of the software window	OK	OK	
3.1.5.26	Take note of the value "V" indicated in Input Stage B window	V1±9,50V	122,2V	
3.1.5.27	Take note of the value "I" indicated in Input Stage B window	I1± 20%	0,869A	20% Full Scale value
3.1.5.28	Switch OFF main power bus	OFF	OFF	
3.1.5.29	Connect external heaters	Connected	Connected	
3.1.5.30	Switch ON main bus	ON	ON	
3.1.5.31	Verify the current absorption from Main Bus	7,80A±0,50A	7,8A	verify that heater lines are working
3.1.5.32	Switch OFF main power bus	OFF	OFF	
3.1.5.33	Disconnect external heaters	Disconnected	Disconnected	

10.3.1.5.2 ESEM 1-A SIDE A

1A-A.1	Set input bus voltage to 120V	120V±1V	120V	V1
1A-A.2	Set input bus current limitation to 27,5 A	27,5A	27,5A	
1A-A.3	Switch ON main bus	ON	ON	
1A-A.4	Take note of power supply output current	1,1A±0,5A	1,1A	I1
1A-A.5	Set the CAN BUS board address to 30	30	30	
1A-A.6	Select "CAN BUS I/F Side" to A	A	A	
1A-A.7	Press button "RUN Flash" and verify on the command status window	Command execute OK	Command execute OK	
1A-A.8	Click on ESEM 1-A button	OK	OK	
1A-A.9	Set Digital I/F Test logic value = 1 in "Commanding" column	1	1	
1A-A.10	Click on letter "W" on the right of the "1" value	OK	OK	
1A-A.11	Click on the command READ ALL under the column Digital Readout	OK	OK	

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
1A-A.12	Verify that in the column Digital Readout under the voice Digital I/F Test appears "1"	1	1	
1A-A.13	Set Digital I/F Test logic value = 0 in "Commanding" column	0	0	
1A-A.14	Click on letter "W" on the right of the "0" value	OK	OK	
1A-A.15	Click on the command READ ALL under the column Digital Readout	OK	OK	
1A-A.16	Verify that in the column Digital Readout under the voice Digital I/F Test appears "0"	0	0	
1A-A.17	Verify the status of the following flags: BOARD STATUS DCDC 1 OVC DCDC 2 OVC DCDC 1 STATUS DCDC 2 STATUS MAIN POWER STATUS	 OK OK OK ON ON ON	 OK OK OK ON ON ON	Flags located in Digital readout column
1A-A.18	Click on PB2-1 button	OK	OK	
1A-A.19	Set to "ON" the line "DCDC OFF/ON CMD" in the "commanding" column"	ON	ON	
1A-A.20	Press "W" button in the line "DCDC OFF/ON CMD" in the "commanding" column	Command execute OK	Command execute OK	
1A-A.21	Verify that in the column Digital Readout under the voice DCDC ON/OFF appears "ON"	ON	ON	
1A-A.22	Click on PB2-2 button	OK	OK	
1A-A.23	Set to "ON" the line "DCDC OFF/ON CMD" in the "commanding" column"	ON	ON	
1A-A.24	Press "W" button in the line "DCDC OFF/ON CMD" in the "commanding" column	Command execute OK	Command execute OK	
1A-A.25	Verify that in the column Digital Readout under the voice DCDC ON/OFF appears "ON"	ON	ON	
1A-A.26	Click on PB2-3 button	OK	OK	
1A-A.27	Set to "ON" the line "DCDC OFF/ON CMD" in the "commanding" column"	ON	ON	
1A-A.28	Press "W" button in the line "DCDC OFF/ON CMD" in the "commanding" column	Command execute OK	Command execute OK	
1A-A.29	Verify that in the column Digital Readout under the voice DCDC ON/OFF appears "ON"	ON	ON	
1A-A.30	Click on PB2-4 button	OK	OK	
1A-A.31	Set to "ON" the line "DCDC OFF/ON CMD" in the "commanding" column"	ON	ON	
1A-A.32	Press "W" button in the line "DCDC OFF/ON CMD" in the "commanding" column	Command execute OK	Command execute OK	
1A-A.33	Verify that in the column Digital Readout under the voice DCDC ON/OFF appears "ON"	ON	ON	
1A-A.34	Take note of power supply output current	1,6A±0,5A	1,6A	All the PB2 DC/DC are ON

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS

10.3.1.5.2.1 ESEM 1-A SIDE A UNDER VOLTAGE TEST

1A-A.35	Click on ESEM 1-A button	OK	OK	
1A-A.36	Press "READ ALL" button in the column "ANALOG READOUT"	Command execute OK	Command execute OK	
1A-A.37	Verify the "Analog ref. 4.0V" telemetry	4,0V ± 0,15V	4,06V	
1A-A.38	Measure the input voltage with a multimeter	120V ± 0.2V	120,16V	
1A-A.39	In the column "ANALOG READOUT" press R Button near Main Power Volt.	120V ± 4.5V	121,6V	
1A-A.40	Decrease the input voltage to 113V	113V ± 0.2V	112,87V	
1A-A.41	In the column "ANALOG READOUT" press R Button near Main Power Volt.	113V ± 4.5V	113,7V	
1A-A.42	Decrease the input voltage to 85V (below threshold and accuracy)	85V ± 0,2V	85V	Threshold = 88V ± 2V
1A-A.43	Verify current absorption from Main Bus	0,000A±200mA	0,1A	
1A-A.44	In the column "ANALOG READOUT" press R Button near Main Power Volt.	Command execute Failed	Command execute Failed	
1A-A.45	Set the CAN BUS board address to 31	31	31	
1A-A.46	Select "CAN BUS I/F Side" to B	B	B	
1A-A.47	In the column "ANALOG READOUT" press R Button near Main Power Volt.	Command execute Failed	Command execute Failed	
1A-A.48	Increase the input voltage to 113V	113V ± 0.2V	113,1V	
1A-A.49	Take note of power supply output current	1,3A±0,5A	1,3A	
1A-A.50	Set power supply to 120V	120V ± 0.2V	120,2V	
1A-A.51	Take note of power supply output current	1,1A±0,5A	1,1A	
1A-A.52	Press button "RUN Flash" and verify on the command status window	Command execute OK	Command execute OK	
1A-A.53	Set the CAN BUS board address to 30	30	30	
1A-A.54	Select "CAN BUS I/F Side" to A	A	A	
1A-A.55	Press button "RUN Flash" and verify on the command status window	Command execute OK	Command execute OK	
1A-A.56	Click on ESEM1-A button	OK	OK	
1A-A.57	Press "READ ALL" button in the column "DIGITAL READOUT"	Command execute OK	Command execute OK	
1A-A.58	Verify the following parameter: Board status DCDC 1 OVC DCDC 2 OVC DCDC 1 STATUS	 0 (OK) 0 (OK) 0 (OK) 1 (ON)	 0 (OK) 0 (OK) 0 (OK) 1 (ON)	

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	DCDC 2 STATUS MAIN POWER STATUS	1 (ON) 1 (ON)	1 (ON) 1 (ON)	
1A-A.59	Click on Read All command in the column Analog Readout	OK	OK	
1A-A.60	Verify the value of the following telemetries: Temperature Main Power Volt. Analog Ref. 4.0V	-40°C<T<80C° 120,00V±7,50V 4,000V±150mV	31,3°C 120,5V 4,02V	

10.3.1.5.2.2 ESEM 1-A SIDE A OVER VOLTAGE TEST

1A-A.61	Click on PB2-1 button	OK	OK	
1A-A.62	Set to "ON" the line "DCDC OFF/ON CMD" in the "commanding" column"	ON	ON	
1A-A.63	Press "W" button" in the line "DCDC OFF/ON CMD" in the "commanding" column	W	W	
1A-A.64	Verify that in the column Digital Readout under the voice DCDC ON/OFF appears "ON"	ON	ON	
1A-A.65	Click on PB2-2 button	OK	OK	
1A-A.66	Set to "ON" the line "DCDC OFF/ON CMD" in the "commanding" column"	ON	ON	
1A-A.67	Press "W" button" in the line "DCDC OFF/ON CMD" in the "commanding" column	W	W	
1A-A.68	Verify that in the column Digital Readout under the voice DCDC ON/OFF appears "ON"	ON	ON	
1A-A.69	Click on PB2-3 button	OK	OK	
1A-A.70	Set to "ON" the line "DCDC OFF/ON CMD" in the "commanding" column"	ON	ON	
1A-A.71	Press "W" button" in the line "DCDC OFF/ON CMD" in the "commanding" column	W	W	
1A-A.72	Verify that in the column Digital Readout under the voice DCDC ON/OFF appears "ON"	ON	ON	
1A-A.73	Click on PB2-4 button	OK	OK	
1A-A.74	Set to "ON" the line "DCDC OFF/ON CMD" in the "commanding" column"	ON	ON	
1A-A.75	Press "W" button" in the line "DCDC OFF/ON CMD" in the "commanding" column	W	W	
1A-A.76	Verify that in the column Digital Readout under the voice DCDC ON/OFF appears "ON"	ON	ON	
1A-A.77	Take note of power supply output current	1,6A±0,5A	1,6A	All the PB2 DC/DC are ON
1A-A.78	Increase the input voltage to 126V	126V ± 0.2V	126,2V	
1A-A.79	Click on ESEM1-A button	OK	OK	
1A-A.80	In the column "ANALOG READOUT" press R Button near Main Power Volt	126V ± 4.5V	126,5V	
1A-A.81	Increase the input voltage to 130V	130V ± 0.2V	130,2V	
1A-A.82	In the column "ANALOG READOUT" press R Button near Main Power Volt.	130V ± 4.5V	130,9V	
1A-A.83	Set the input voltage to 153V (up the threshold and accuracy)	153V ± 0,2V	153V	Threshold = 150V ± 2V
1A-A.84	Verify current absorption from Main Bus	0,000A±200mA	0,1A	
1A-A.85	In the column "ANALOG READOUT" press R Button near Main Power Volt.	Command execute Failed	Command execute Failed	

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
1A-A.86	Set the CAN BUS board address to 31	31	31	
1A-A.87	Select "CAN BUS I/F Side" to B	B	B	
1A-A.88	In the column "ANALOG READOUT" press R Button near Main Power Volt.	Command execute Failed	Command execute Failed	
1A-A.89	Set the input voltage to 126V	126V ± 0.2V	126,2V	
1A-A.90	Take note of power supply output current	1,0A±0,5A	1,1A	
1A-A.91	Press button "RUN Flash" and verify on the command status window	Command execute OK	Command execute OK	
1A-A.92	Set power supply to 120V	120V ± 0.2V	120,2V	
1A-A.93	Take note of power supply output current	1,1A±0,5A	1,1A	
1A-A.94	Set the CAN BUS board address to 30	30	30	
1A-A.95	Select "CAN BUS I/F Side" to A	A	A	
1A-A.96	Press button "RUN Flash" and verify on the command status window	Command execute OK	Command execute OK	
1A-A.97	Click on ESEM1-A button	OK	OK	
1A-A.98	Press "READ ALL" button in the column "DIGITAL READOUT"	OK	OK	
1A-A.99	Verify the following parameter:			
1A-A.100	Board status			
1A-A.101	DCDC 1 OVC	0 (OK)	0 (OK)	
1A-A.102	DCDC 2 OVC	0 (OK)	0 (OK)	
1A-A.103	DCDC 1 STATUS	0 (OK)	0 (OK)	
1A-A.104	DCDC 2 STATUS	1 (ON)	1 (ON)	
1A-A.105	MAIN POWER STATUS	1 (ON)	1 (ON)	
1A-A.106	Verify the value of the following telemetries: Temperature Main Power Volt. Analog Ref. 4.0V	1 (ON) -40°C<T<80C° 120,00V±7,50V 4,000V±150mV	1 (ON) 31°C 120,4V 4,045V	

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10.3.1.5.2.3 ESEM 1-A SIDE A GLOBAL ON/OFF TEST

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
1A-A.107	Set OFF in the Global ON/OFF window and click on relative "W" command	OFF	OFF	
1A-A.108	Verify current absorption from Main Bus	0,000A±200mA	0,2A	
1A-A.109	Press "READ ALL" button in the column "DIGITAL READOUT"	OK	OK	
1A-A.110	Verify that appears the message "Command execution failed!"	Command execution failed!	Command execution failed!	
1A-A.111	Perform a power cycle OFF/ON on the main bus	OK	OK	
1A-A.112	Click on Run flash button	OK	OK	
1A-A.113	Click on Read all command under Digital Readout column and verify that appears the message "Command executed O.K."	Command executed OK	Command executed OK	
1A-A.114	Verify that the value of Board status in Digital Readout column in "OK"	OK	OK	
1A-A.115	Set the CAN BUS board address to 31	31	31	
1A-A.116	Select "CAN BUS I/F Side" to B	B	B	
1A-A.117	Click on Run flash button	OK	OK	
1A-A.118	Click on Read all command under Digital Readout column and verify that appears the message "Command executed O.K."	Command executed OK	Command executed OK	
1A-A.119	Verify that the value of Board status in Digital Readout column in "OK"	OK	OK	
1A-A.120	Set OFF in the Global ON/OFF window and click on relative "W" command	OK	OK	
1A-A.121	Verify current absorption from Main Bus	0,000A±200mA	0,2A	
1A-A.122	Press "READ ALL" button in the column "DIGITAL READOUT"	OK	OK	
1A-A.123	Verify that appears the message "Command execution failed!"	Command execution failed!	Command execution failed!	
1A-A.124	Perform a power cycle OFF/ON on the main bus	OK	OK	
1A-A.125	Set the CAN BUS board address to 30	30	30	
1A-A.126	Select "CAN BUS I/F Side" to A	A	A	
1A-A.127	Click on Run flash button	OK	OK	
1A-A.128	Click on Read all command under Digital Readout column and verify that appears the message "Command executed O.K."	Command executed OK	Command executed OK	
1A-A.129	Verify that the value of Board status in Digital Readout column in "OK"	OK	OK	
1A-A.130	Switch OFF main power bus	OFF	OFF	

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10.3.1.5.3 PB2-1 SIDE A

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
PB2-4-A.1	Connect AI_120V and AI_120V_RTN power supply signals	OK	OK	
PB2-4-A.2	Verify that all the cables of the section are connected	OK	OK	
PB2-4-A.3	Launch the PDS controller software	Program open	Program open	
PB2-4-A.4	Set to "FM" the window Model	FM	FM	
PB2-4-A.5	set the CAN BUS board address to 30	30	30	
PB2-4-A.6	select JMDC = 0	0	0	
PB2-4-A.7	select TX = A	A	A	
PB2-4-A.8	select RX = A	A	A	
PB2-4-A.9	Select "CAN BUS I/F Side" to A	A	A	
PB2-4-A.10	Select "PDS Side" to A	A	A	
PB2-4-A.11	Set input bus voltage to 120V	120V±1V	120V	
PB2-4-A.12	Set input bus current limitation to 27,5 A	27,5A	27,5A	
PB2-4-A.13	Enable power supply output	enabled	enabled	
PB2-4-A.14	Verify that green led of "power switch box" is lighted	Green led ligthed	Green led ligthed	
PB2-4-A.15	Switch ON the "power switch "of "power switch box"	Switch ON	Switch ON	
PB2-4-A.16	Verify that red led of "power switch box" is lighted	Red led ligthed	Red led ligthed	
PB2-4-A.17	Take note of power supply output current	1,1A±0,5A	1,1A	
PB2-4-A.18	Click on Run flash button	OK	OK	
PB2-4-A.19	Set the CAN BUS board address to 31	31	31	
PB2-4-A.20	Select "CAN BUS I/F Side" to B	B	B	
PB2-4-A.21	Click on Run flash button	OK	OK	
PB2-4-A.22	Set the CAN BUS board address to 30	30	30	
PB2-4-A.23	Select "CAN BUS I/F Side" to A	A	A	
PB2-4-A.24	Click on PB2-1 button	OK	OK	This board is default ON
PB2-4-A.25	Set Digital I/F Test logic value = 1 in "Commanding" column	1	1	Button located on left side of software window
PB2-4-A.26	Click on letter "W" on the right of the "1" value	OK	OK	
PB2-4-A.27	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-4-A.28	Verify that in the column Digital Readout under the voice Digital I/F Test appears "1"	1	1	
PB2-4-A.29	Set Digital I/F Test logic value = 0 in "Commanding" column	0	0	
PB2-4-A.30	Click on letter "W" on the right of the "0" value	OK	OK	
PB2-4-A.31	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-4-A.32	Verify that in the column Digital Readout under the voice Digital I/F Test appears "0"	0	0	
PB2-4-A.33	Verify the status of the following flags: BOARD STATUS	OK	OK	

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	OVT ALARM Input OVC Alarm DCDC ON/OFF 27V UV 29V Trip DCDC OFF/ON CMD	OK OK **ON** OK OK **ON**	OK OK **ON** OK OK **ON**	
PB2-4-A.34	Measure with multimeter the voltage on ESEM 3A-1 out 3 (Check that load is not connected)	28,00V±1,00V	28,12V	V1
PB2-4-A.35	Verify the value of the following telemetry: Output Voltage	V1±1.092V	28,09V	Click on relative Rbutton
PB2-4-A.36	Set OFF on DCDC ON /OFF command window and send the command	OK	OK	Power cell OFF
PB2-4-A.37	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-4-A.38	Verify the status of the following flags: BOARD STATUS OVT ALARM Input OVC Alarm DCDC ON/OFF 27V UNV 29V Trip DCDC OFF/ON CMD	OK OK OK **OFF** OK OK **OFF**	OK OK OK **OFF** OK OK **OFF**	
PB2-4-A.39	Click on the command READ ALL under the column Analog Readout	OK	OK	
PB2-4-A.40	Verify the value of the following telemetries: Temperature Analog Ref. 2.0V	-40°C<T<80C° 2,000V±150mV	36,17V 2,016V	
PB2-4-A.41	Verify the following analog monitor: Output Voltage	0,00V±1.092V	0V	Click on relative Rbutton
PB2-4-A.42	Measure with multimeter the voltage on ESEM 3-A 1 out 3 (Check that load is not connected)	0,00V±0,10V	0,06V	
PB2-4-A.43	Set the CAN BUS board address to 31	31	31	
PB2-4-A.44	Select "CAN BUS I/F Side" to B	B	B	
PB2-4-A.45	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-4-A.46	Verify the status of the following flags: BOARD STATUS OVT ALARM Input OVC Alarm DCDC ON/OFF 27V UNV 29V Trip DCDC OFF/ON CMD	OK OK OK **OFF** OK OK **OFF**	OK OK OK **OFF** OK OK **OFF**	
PB2-4-A.47	Set ON on DCDC OFF/ON command window and send the command	OK	OK	Power cell ON

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
PB2-4-A.48	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-4-A.49	Verify the status of the following flags:			
	BOARD STATUS	OK	OK	
	OVT ALARM	OK	OK	
	Input OVC Alarm	OK	OK	
	DCDC ON/OFF	**ON**	**ON**	
	27V UNV	OK	OK	
	29V Trip	OK	OK	
	DCDC OFF/ON CMD	**ON**	**ON**	
PB2-4-A.50	Set the CAN BUS board address to 30	30	30	
PB2-4-A.51	Select "CAN BUS I/F Side" to A	A	A	
PB2-4-A.52	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-4-A.53	Verify the status of the following flags:			
	BOARD STATUS	OK	OK	
	OVT ALARM	OK	OK	
	Input OVC Alarm	OK	OK	
	DCDC ON/OFF	**ON**	**ON**	
	27V UNV	OK	OK	
	29V Trip	OK	OK	
	DCDC OFF/ON CMD	**ON**	**ON**	

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10.3.1.5.4 ESEM 3A-1 SIDE A

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-1-A.1	Click on ESEM 3A-1 button	OK	OK	Button located on left side of software window
3A-1-A.2	Connect to active loads outlet 1, 2, 3, 4, 5, 6, 7 and 8.	OK	OK	
3A-1-A.3	Verify that loads are set to 0A current absorption	OK	OK	
3A-1-A.4	Set Digital I/F Test logic value = 1 in "Commanding" column	1	1	
3A-1-A.5	Click on letter "W" on the right of the "1" value	OK	OK	
3A-1-A.6	Click on the command READ ALL under the column Digital Readout	OK	OK	
3A-1-A.7	Verify that in the column Digital Readout under the voice Digital I/F Test appears "1"	1	1	
3A-1-A.8	Set Digital I/F Test logic value = 0 in "Commanding" column	0	0	
3A-1-A.9	Click on letter "W" on the right of the "0" value	OK	OK	
3A-1-A.10	Click on the command READ ALL under the column Digital Readout	OK	OK	
3A-1-A.11	Verify that in the column Digital Readout under the voice Digital I/F Test appears "0"	0	0	
3A-1-A.12	Set ON in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-1-A.13	Read on display the voltage on this ESEM 3-A loads: O_1: TPD3 O_2: TPD7 O_3: JPD_N O_4: SPD1_N O_5: UGPD_N O_6:SPD0_R O_7: TPD1 O_8:TTPD_R	 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V	 28V 28V 28V 28V 28V 28V 28V 28V	
3A-1-A.14	Click on Read All command in Digital Readout column	OK	OK	
3A-1-A.15	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: TPD3 to O_8 CMD: TTPD_R From O_1 Status: TPD3 to O_8 Status: TTPD_R	 OK OK ON ON	 OK OK ON ON	
3A-1-A.16	Set the CAN BUS board address to 31	31	31	
3A-1-A.17	Select "CAN BUS I/F Side" to B	B	B	
3A-1-A.18	Click on Read All command in Digital Readout column	OK	OK	
3A-1-A.19	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: TPD3 to O_8 CMD: TTPD_R From O_1 Status: TPD3 to O_8 Status: TTPD_R	 OK OK ON ON	 OK OK ON ON	

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UUT DATA : **Model** **PFM** **Item** **AMS02 POWER DISTRIBUTION SYSTEM** **C.I.** **PDS 18** **S/N** **FM01**

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-1-A.20	Generate a short circuit on the passive load keyboards: From O_1: TPD3 to O_8: TTPD_R	OK	OK	
3A-1-A.21	Read on display the voltage on this ESEM 3-A loads: O_1: TPD3 O_2: TPD7 O_3: JPD_N O_4: SPD1_N O_5: UGPD_N O_6:SPD0_R O_7: TPD1 O_8:TTPD_R	 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V	 0V 0V 0V 0V 0V 0V 0V 0V	
3A-1-A.22	Click on Read All command in Digital Readout column	OK	OK	
3A-1-A.23	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: TPD3 to O_8 CMD: TTPD_R From O_1 Status: TPD3 to O_8 Status: TTPD_R	 **NOK** OK ON **OFF**	 **NOK** OK ON **OFF**	
3A-1-A.24	Set the CAN BUS board address to 30	30	30	
3A-1-A.25	Select "CAN BUS I/F Side" to A	A	A	
3A-1-A.26	Click on Read All command in Digital Readout column	OK	OK	
3A-1-A.27	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: TPD3 to O_8 CMD: TTPD_R From O_1 Status: TPD3 to O_8 Status: TTPD_R	 **NOK** OK ON **OFF**	 **NOK** OK ON **OFF**	
3A-1-A.28	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-1-A.29	Set ON in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-1-A.30	Click on Read All command in Digital Readout column	OK	OK	
3A-1-A.31	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: TPD3 to O_8 CMD: TTPD_R From O_1 Status: TPD3 to O_8 Status: TTPD_R	 **OK** OK ON **ON**	 **OK** OK ON **ON**	
3A-1-A.32	Set the CAN BUS board address to 31	31	31	
3A-1-A.33	Select "CAN BUS I/F Side" to B	B	B	
3A-1-A.34	Click on Read All command in Digital Readout column	OK	OK	
3A-1-A.35	Verify the status of the following flags: BOARD STATUS	**OK**	**OK**	

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	OVT Alarm From O_1 CMD: TPD3 to O_8 CMD: TTPD_R From O_1 Status: TPD3 to O_8 Status: TTPD_R	OK ON **ON**	OK ON **ON**	
3A-1-A.36	Using board telemetries set to 2A current absorption all the outlets: From O_1: TPD3 to O_8: TTPD_R	OK	OK	Set active loads to constant current mode. Set current on display with 100mA above the desired value with the exception of out8 that is correct.
3A-1-A.37	Push on Read All button in Analog Readout column	OK	OK	
3A-1-A.38	Verify the telemetries: O_1 Current: TPD3 O_2 Current: TPD3 O_3 Current: JPD_N O_4 Current: SPD1_N O_5 Current: UGPD_N O_6 Current: SPD0_R O_7 Current: TPD1 O_8 Current: TTPD_R Temperature Analog Ref. 3.0V	2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,00A±0,45A -40°C<T<80C° 3,000V±250mV	2,07A 2,156A 2,115A 2,093A 2,031A 2,13A 2,051A 2,001A 31,2°C 3,033V	
3A-1-A.39	Set the CAN BUS board address to 30	30	30	
3A-1-A.40	Select "CAN BUS I/F Side" to A	A	A	
3A-1-A.41	Push on Read All button in Analog Readout column	OK	OK	
3A-1-A.42	Verify the telemetries: O_1 Current: TPD3 O_2 Current: TPD3 O_3 Current: JPD_N O_4 Current: SPD1_N O_5 Current: UGPD_N O_6 Current: SPD0_R O_7 Current: TPD1 O_8 Current: TTPD_R Temperature Analog Ref. 3.0V	2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,00A±0,45A -40°C<T<80C° 3,000V±250mV	2,116A 2,137A 2,06A 2,094A 2,008A 2,082A 2,063A 2,163ª 33,9C 2,92V	
3A-1-A.43	Set to 0A current absorption all the outlets: From O_1: TPD3 to O_8: TTPD_R	OK	OK	
3A-1-A.44	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-1-A.45	Click on Raed all to in Digital readout column	OK	OK	
3A-1-A.46	Verify from digital readout column that all outlets are OFF	OK	OK	

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10.3.1.5.5 PB2-2 SIDE A

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
PB2-2-A.1	Connect AI_120V and AI_120V_RTN power supply signals	OK	OK	
PB2-2-A.2	Verify that all the cables of the section are connected	OK	OK	
PB2-2-A.3	Launch the PDS controller software	Program open	Program open	
PB2-2-A.4	Set to "FM" the window Model	OK	OK	
PB2-2-A.5	Select "PDS Side" to A	A	A	
PB2-2-A.6	Set the CAN BUS board address to 30	30	30	
PB2-2-A.7	Select JMDC = 0	0	0	
PB2-2-A.8	Select TX = A	A	A	
PB2-2-A.9	Select RX = A	A	A	
PB2-2-A.10	Select "CAN BUS I/F Side" to A	A	A	
PB2-2-A.11	Set input bus voltage to 120V	120V±1V	120V	
PB2-2-A.12	Set input bus current limitation to ~~15A~~ 27,5A	27,5A ~~15A~~±1A	27,5A	See PVS-02
PB2-2-A.13	Enable power supply output	enabled	enabled	
PB2-2-A.14	Verify that green led of "power switch box" is lighted	Green led ligthed	Green led ligthed	
PB2-2-A.15	Switch ON the "power switch "of "power switch box"	Switch ON	Switch ON	
PB2-2-A.16	Verify that red led of "power switch box" is lighted	Red led ligthed	Red led ligthed	
PB2-2-A.17	Take note of power supply output current	1,1A±0,5A	1,1A	
PB2-2-A.18	Click on Run flash button	OK	OK	
PB2-2-A.19	Set the CAN BUS board address to 31	31	31	
PB2-2-A.20	Select "CAN BUS I/F Side" to B	B	B	
PB2-2-A.21	Click on Run flash button	OK	OK	
PB2-2-A.22	Set the CAN BUS board address to 30	30	30	
PB2-2-A.23	Select "CAN BUS I/F Side" to A	A	A	
PB2-2-A.24	Click on PB2-2 button	OK	OK	This board is default OFF
PB2-2-A.25	Set Digital I/F Test logic value = 1 in "Commanding" column	1	1	Button located on left side of software window
PB2-2-A.26	Click on letter "W" on the right of the "1" value	OK	OK	
PB2-2-A.27	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-2-A.28	Verify that in the column Digital Readout under the voice Digital I/F Test appears "1"	1	1	
PB2-2-A.29	Set Digital I/F Test logic value = 0 in "Commanding" column	0	0	
PB2-2-A.30	Click on letter "W" on the right of the "0" value	OK	OK	
PB2-2-A.31	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-2-A.32	Verify that in the column Digital Readout under the voice Digital I/F Test appears "0"	0	0	
PB2-2-A.33	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-2-A.34	Verify the status of the following flags:			

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UUT DATA : **Model** **PFM** **Item** **AMS02 POWER DISTRIBUTION SYSTEM** **C.I.** **PDS 18** **S/N** **FM01**

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	BOARD STATUS OVT ALARM Input OVC Alarm DCDC ON/OFF 27V UV 29V Trip DCDC OFF/ON CMD	OK OK OK **OFF** OK OK **OFF**	OK OK OK **OFF** OK OK **OFF**	
PB2-2-A.35	Click on the command READ ALL under the column Analog Readout	OK	OK	
PB2-2-A.36	Verify the value of the following telemetries: Temperature Analog Ref. 2.0V	-40°C<T<80C° 2,000V±150mV	29,64°C 1,965V	
PB2-2-A.37	Set the CAN BUS board address to 31	31	31	
PB2-2-A.38	Select "CAN BUS I/F Side" to B	B	B	
PB2-2-A.39	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-2-A.40	Verify the status of the following flags: BOARD STATUS OVT ALARM Input OVC Alarm DCDC ON/OFF 27V UNV 29V Trip DCDC OFF/ON CMD	OK OK OK **OFF** OK OK **OFF**	OK OK OK **OFF** OK OK **OFF**	
PB2-2-A.41	Set ON on DCDC OFF/ON command window and send the command	OK	OK	Power cell ON
PB2-2-A.42	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-2-A.43	Verify the status of the following flags: BOARD STATUS OVT ALARM Input OVC Alarm DCDC ON/OFF 27V UNV 29V Trip DCDC OFF/ON CMD	OK OK OK **ON** OK OK **ON**	OK OK OK **ON** OK OK **ON**	
PB2-2-A.44	Click on ESEM 3A-2 button	OK	OK	
PB2-2-A.45	Set ON in the window "O_1: ER1_N" and push the relative "W" command	OK	OK	
PB2-2-A.46	Read on display the voltage on ESEM 3-A 2 out 1 (Check that load is not connected)	28,00V±1,00V	28V	V1
PB2-2-A.47	Click on PB2-2 button	OK	OK	
PB2-2-A.48	Click on the command READ ALL under the column Analog Readout	OK	OK	
PB2-2-A.49	Verify the value of the following telemetry:			Click on relative Rbutton

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UUT DATA : **Model** **PFM** **Item** **AMS02 POWER DISTRIBUTION SYSTEM** **C.I.** **PDS 18** **S/N** **FM01**

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	Output Voltage	V1±1.092V	28,47V	
PB2-2-A.50	Set the CAN BUS board address to 30	30	30	
PB2-2-A.51	Select "CAN BUS I/F Side" to A	A	A	
PB2-2-A.52	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-2-A.53	Verify the status of the following flags: BOARD STATUS OVT ALARM Input OVC Alarm DCDC ON/OFF 27V UNV 29V Trip DCDC OFF/ON CMD	 OK OK OK **ON** OK OK **ON**	 OK OK OK **ON** OK OK **ON**	

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UUT DATA : Model PFM Item AMS02 POWER DISTRIBUTION SYSTEM C.I. PDS 18 S/N FM01

10.3.1.5.6 ESEM 3A-2 SIDE A

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-2-A.1	Click on ESEM3-A-2 button	OK	OK	Button located on left side of software window
3A-2-A.2	Connect to active loads outlet 1, 2, 3, 4, 5, 6, 7 and 8.	OK	OK	
3A-2-A.3	Verify that loads are set to 0A current absorption	OK	OK	
3A-2-A.4	Set Digital I/F Test logic value = 1 in "Commanding" column	1	1	
3A-2-A.5	Click on letter "W" on the right of the "1" value	OK	OK	
3A-2-A.6	Click on the command READ ALL under the column Digital Readout	OK	OK	
3A-2-A.7	Verify that in the column Digital Readout under the voice Digital I/F Test appears "1"	1	1	
3A-2-A.8	Set Digital I/F Test logic value = 0 in "Commanding" column	0	0	
3A-2-A.9	Click on letter "W" on the right of the "0" value	OK	OK	
3A-2-A.10	Click on the command READ ALL under the column Digital Readout	OK	OK	
3A-2-A.11	Verify that in the column Digital Readout under the voice Digital I/F Test appears "0"	0	0	
3A-2-A.12	Set ON in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-2-A.13	Read on display the voltage on this ESEM 3-A loads: O_1: ER1_N O_2: TPD2 O_3: TPD6 O_4: SPD3_N O_5: MPD_N O_6: UPD1 O_7: SPD2_N O_8: CAB_R	 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V	 28V 28V 28V 28V 28V 28V 28V 28V	
3A-2-A.14	Click on Read All command in Digital Readout column	OK	OK	
3A-2-A.15	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: ER1_N to O_8 CMD: CAB_R From O_1 Status: ER1_N to O_8 Status: CAB_R	 OK OK ON ON	 OK OK ON ON	
3A-2-A.16	Set the CAN BUS board address to 31	31	31	
3A-2-A.17	Select "CAN BUS I/F Side" to B	B	B	
3A-2-A.18	Click on Read All command in Digital Readout column	OK	OK	
3A-2-A.19	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: ER1_N to O_8 CMD: CAB_R From O_1 Status: ER1_N to O_8 Status: CAB_R	 OK OK ON ON	 OK OK ON ON	

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-2-A.20	Generate a short circuit on the passive load keyboards: From O_1: ER1_N to O_8: CAB_R	OK	OK	
3A-2-A.21	Read on display the voltage on this ESEM 3-A loads: O_1: ER1_N O_2: TPD2 O_3: TPD6 O_4: SPD3_N O_5: MPD_N O_6: UPD1 O_7: SPD2_N O_8: CAB_R	 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V	 0V 0V 0V 0V 0V 0V 0V 0V	
3A-2-A.22	Click on Read All command in Digital Readout column	OK	OK	
3A-2-A.23	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: ER1_N to O_8 CMD: CAB_R From O_1 Status: ER1_N to O_8 Status: CAB_R	 **NOK** OK ON **OFF**	 **NOK** OK ON **OFF**	
3A-2-A.24	Set the CAN BUS board address to 30	30	30	
3A-2-A.25	Select "CAN BUS I/F Side" to A	A	A	
3A-2-A.26	Click on Read All command in Digital Readout column	OK	OK	
3A-2-A.27	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: ER1_N to O_8 CMD: CAB_R From O_1 Status: ER1_N to O_8 Status: CAB_R	 **NOK** OK ON **OFF**	 **NOK** OK ON **OFF**	
3A-2-A.28	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-2-A.29	Set ON in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-2-A.30	Click on Read All command in Digital Readout column	OK	OK	
3A-2-A.31	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: ER1_N to O_8 CMD: CAB_R From O_1 Status: ER1_N to O_8 Status: CAB_R	 **OK** OK ON **ON**	 **OK** OK ON **ON**	
3A-2-A.32	Set the CAN BUS board address to 31	31	31	
3A-2-A.33	Select "CAN BUS I/F Side" to B	B	B	
3A-2-A.34	Click on Read All command in Digital Readout column	OK	OK	
3A-2-A.35	Verify the status of the following flags: BOARD STATUS	**OK**	**OK**	

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	OVT Alarm From O_1 CMD: ER1_N to O_8 CMD: CAB_R From O_1 Status: ER1_N to O_8 Status: CAB_R	OK ON **ON**	OK ON **ON**	
3A-2-A.36	Using board telemetries set to 2A current absorption all the outlets: From O_1: ER1_N to O_8: CAB_R	OK	OK	Set active loads to constant current mode. Set current on display with 100mA above the desired value with the exception of out8 that is correct.
3A-2-A.37	Push on Read All button in Analog Readout column	OK	OK	
3A-2-A.38	Verify the telemetries: O_1 Current: ER1_N O_2 Current: TPD2 O_3 Current: TPD6 O_4 Current: SPD3_N O_5 Current: MPD_N O_6 Current: UPD1 O_7 Current: SPD2_N O_8 Current: CAB_R Temperature Analog Ref. 3.0V	2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,00A±0,45A -40°C<T<80C° 3,000V±250mV	2,05A 2,043A 2,09A 2,054A 2,092A 2,147A 2,154A 2,134A 30,35°C 2,997V	
3A-2-A.39	Set the CAN BUS board address to 30	30	30	
3A-2-A.40	Select "CAN BUS I/F Side" to A	A	A	
3A-2-A.41	Push on Read All button in Analog Readout column	OK	OK	
3A-2-A.42	Verify the telemetries: O_1 Current: ER1_N O_2 Current: TPD2 O_3 Current: TPD6 O_4 Current: SPD3_N O_5 Current: MPD_N O_6 Current: UPD1 O_7 Current: SPD2_N O_8 Current: CAB_R Temperature Analog Ref. 3.0V	2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,00A±0,45A -40°C<T<80C° 3,000V±250mV	2,037A 2,086A 2,1A 2,056A 2,11A 2,232A 2,14A 2,26A 31,3°C 2,976V	
3A-2-A.43	Set to 0A current absorption all the outlets: From O_1: TPD3 to O_8: TTPD_R	OK	OK	
3A-2-A.44	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-2-A.45	Click on Raed all to in Digital readout column	OK	OK	
3A-2-A.46	Verify from digital readout column that all outlets are OFF	OK	OK	

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10.3.1.5.7 PB2-3 SIDE A

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
PB2-3-A.1	Connect AI_120V and AI_120V_RTN power supply signals	OK	OK	
PB2-3-A.2	Verify that all the cables of the section are connected	OK	OK	
PB2-3-A.3	Launch the PDS controller software	Program open	Program open	
PB2-3-A.4	Set to "FM" the window Model	OK	OK	
PB2-3-A.5	Select "PDS Side" to A	A	A	
PB2-3-A.6	Set the CAN BUS board address to 30	30	30	
PB2-3-A.7	Select JMDC = 0	0	0	
PB2-3-A.8	Select TX = A	A	A	
PB2-3-A.9	Select RX = A	A	A	
PB2-3-A.10	Select "CAN BUS I/F Side" to A	A	A	
PB2-3-A.11	Set input bus voltage to 120V	120V±1V	120V	
PB2-3-A.12	Set input bus current limitation to ~~15A~~ 27,5A	27,5A ~~15A~~±1A	27,5A	See PVS-02
PB2-3-A.13	Enable power supply output	enabled	enabled	
PB2-3-A.14	Verify that green led of "power switch box" is lighted	Green led ligthed	Green led ligthed	
PB2-3-A.15	Switch ON the "power switch "of "power switch box"	Switch ON	Switch ON	
PB2-3-A.16	Verify that red led of "power switch box" is lighted	Red led ligthed	Red led ligthed	
PB2-3-A.17	Take note of power supply output current	1,1A±0,5A	1,1A	
PB2-3-A.18	Click on Run flash button	OK	OK	
PB2-3-A.19	Set the CAN BUS board address to 31	31	31	
PB2-3-A.20	Select "CAN BUS I/F Side" to B	B	B	
PB2-3-A.21	Click on Run flash button	OK	OK	
PB2-3-A.22	Set the CAN BUS board address to 30	30	30	
PB2-3-A.23	Select "CAN BUS I/F Side" to A	A	A	
PB2-3-A.24	Click on PB2-3 button	OK	OK	This board is default OFF
PB2-3-A.25	Set Digital I/F Test logic value = 1 in "Commanding" column	1	1	Button located on left side of software window
PB2-3-A.26	Click on letter "W" on the right of the "1" value	OK	OK	
PB2-3-A.27	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-3-A.28	Verify that in the column Digital Readout under the voice Digital I/F Test appears "1"	1	1	
PB2-3-A.29	Set Digital I/F Test logic value = 0 in "Commanding" column	0	0	
PB2-3-A.30	Click on letter "W" on the right of the "0" value	OK	OK	
PB2-3-A.31	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-3-A.32	Verify that in the column Digital Readout under the voice Digital I/F Test appears "0"	0	0	
PB2-3-A.33	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-3-A.34	Verify the status of the following flags:			

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UUT DATA : Model **PFM** Item **AMS02 POWER DISTRIBUTION SYSTEM** C.I. **PDS 18** S/N **FM01**

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	BOARD STATUS	OK	OK	
	OVT ALARM	OK	OK	
	Input OVC Alarm	OK	OK	
	DCDC ON/OFF	**OFF**	**OFF**	
	27V UV	OK	OK	
	29V Trip	OK	OK	
	DCDC OFF/ON CMD	**OFF**	**OFF**	
PB2-3-A.35	Click on the command READ ALL under the column Analog Readout	OK	OK	
PB2-3-A.36	Verify the value of the following telemetries: Temperature Analog Ref. 2.0V	 -40°C<T<80C° 2,000V±150mV	 28,29°C 2,01V	
PB2-3-A.37	Set the CAN BUS board address to 31	31	31	
PB2-3-A.38	Select "CAN BUS I/F Side" to B	B	B	
PB2-3-A.39	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-3-A.40	Verify the status of the following flags: BOARD STATUS OVT ALARM Input OVC Alarm DCDC ON/OFF 27V UNV 29V Trip DCDC OFF/ON CMD	 OK OK OK **OFF** OK OK **OFF**	 OK OK OK **OFF** OK OK **OFF**	
PB2-3-A.41	Set ON on DCDC OFF/ON command window and send the command	OK	OK	Power cell ON
PB2-3-A.42	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-3-A.43	Verify the status of the following flags: BOARD STATUS OVT ALARM Input OVC Alarm DCDC ON/OFF 27V UNV 29V Trip DCDC OFF/ON CMD	 OK OK OK **ON** OK OK **ON**	 OK OK OK **ON** OK OK **ON**	
PB2-3-A.44	Click on ESEM 3A-3 button	OK	OK	
PB2-3-A.45	Set ON in the window "O_1: TPD0" and push the relative "W" command	OK	OK	
PB2-3-A.46	Read on display the voltage on ESEM 3-A 3 out 1 (Check that load is not connected)	28,00V±1,00V	28V	V1
PB2-3-A.47	Click on PB2-3 button	OK	OK	
PB2-3-A.48	Click on the command READ ALL under the column Analog Readout	OK	OK	
PB2-3-A.49	Verify the value of the following telemetry:			Click on relative Rbutton

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	Output Voltage	V1±1.092V	28,18V	
PB2-3-A.50	Set the CAN BUS board address to 30	30	30	
PB2-3-A.51	Select "CAN BUS I/F Side" to A	A	A	
PB2-3-A.52	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-3-A.53	Verify the status of the following flags:			
	BOARD STATUS	OK	OK	
	OVT ALARM	OK	OK	
	Input OVC Alarm	OK	OK	
	DCDC ON/OFF	**ON**	**ON**	
	27V UNV	OK	OK	
	29V Trip	OK	OK	
	DCDC OFF/ON CMD	**ON**	**ON**	

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10.3.1.5.8 ESEM 3A-3 SIDE A

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-3-A.1	Click on ESEM3-A-3 button	OK	OK	Button located on left side of software window
3A-3-A.2	Connect to active loads outlet 1, 2, 3, 4, 5, 6, 7 and 8.	OK	OK	
3A-3-A.3	Verify that loads are set to 0A current absorption	OK	OK	
3A-3-A.4	Set Digital I/F Test logic value = 1 in "Commanding" column	1	1	
3A-3-A.5	Click on letter "W" on the right of the "1" value	OK	OK	
3A-3-A.6	Click on the command READ ALL under the column Digital Readout	OK	OK	
3A-3-A.7	Verify that in the column Digital Readout under the voice Digital I/F Test appears "1"	1	1	
3A-3-A.8	Set Digital I/F Test logic value = 0 in "Commanding" column	0	0	
3A-3-A.9	Click on letter "W" on the right of the "0" value	OK	OK	
3A-3-A.10	Click on the command READ ALL under the column Digital Readout	OK	OK	
3A-3-A.11	Verify that in the column Digital Readout under the voice Digital I/F Test appears "0"	0	0	
3A-3-A.12	Set ON in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-3-A.13	Read on display the voltage on this ESEM 3-A loads: O_1: TPD0 O_2: TPD4 O_3: ER0_N O_4: MPD_R O_5: SPD3_R O_6: UGPD_R O_7: SPD2_R O_8: CAB_N	 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V 28,00V±1,00V	 28V 28V 28V 28V 28V 28V 28V 28V	
3A-3-A.14	Click on Read All command in Digital Readout column	OK	OK	
3A-3-A.15	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: TPD0 to O_8 CMD: CAB_N From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK ON ON	 OK OK ON ON	
3A-3-A.16	Set the CAN BUS board address to 31	31	31	
3A-3-A.17	Select "CAN BUS I/F Side" to B	B	B	
3A-3-A.18	Click on Read All command in Digital Readout column	OK	OK	
3A-3-A.19	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: TPD0 to O_8 CMD: CAB_N From O_1 Status: TPD0 to O_8 Status: CAB_N	 OK OK ON ON	 OK OK ON ON	

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
3A-3-A.20	Generate a short circuit on the passive load keyboards: From O_1: TPD0 to O_8: CAB_N	OK	OK	
3A-3-A.21	Read on display the voltage on this ESEM 3-A loads: O_1: TPD0 O_2: TPD4 O_3: ER0_N O_4: MPD_R O_5: SPD3_R O_6: UGPD_R O_7: SPD2_R O_8: CAB_N	 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V 0,00V<V<1,00V	 0V 0V 0V 0V 0V 0V 0V 0V	
3A-3-A.22	Click on Read All command in Digital Readout column	OK	OK	
3A-3-A.23	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: TPD0 to O_8 CMD: CAB_N From O_1 Status: TPD0 to O_8 Status: CAB_N	 **NOK** OK ON **OFF**	 **NOK** OK ON **OFF**	
3A-3-A.24	Set the CAN BUS board address to 30	30	30	
3A-3-A.25	Select "CAN BUS I/F Side" to A	A	A	
3A-3-A.26	Click on Read All command in Digital Readout column	OK	OK	
3A-3-A.27	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: TPD0 to O_8 CMD: CAB_N From O_1 Status: TPD0 to O_8 Status: CAB_N	 **NOK** OK ON **OFF**	 **NOK** OK ON **OFF**	
3A-3-A.28	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-3-A.29	Set ON in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-3-A.30	Click on Read All command in Digital Readout column	OK	OK	
3A-3-A.31	Verify the status of the following flags: BOARD STATUS OVT Alarm From O_1 CMD: TPD0 to O_8 CMD: CAB_N From O_1 Status: TPD0 to O_8 Status: CAB_N	 **OK** OK ON **ON**	 **OK** OK ON **ON**	
3A-3-A.32	Set the CAN BUS board address to 31	31	31	
3A-3-A.33	Select "CAN BUS I/F Side" to B	B	B	
3A-3-A.34	Click on Read All command in Digital Readout column	OK	OK	
3A-3-A.35	Verify the status of the following flags: BOARD STATUS	**OK**	**OK**	

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
	OVT Alarm From O_1 CMD: TPD0 to O_8 CMD: CAB_N From O_1 Status: TPD0 to O_8 Status: CAB_N	OK ON **ON**	OK ON **ON**	
3A-3-A.36	Using board telemetries set to 2A current absorption all the outlets: From O_1: TPD0 to O_8: CAB_N	OK	OK	Set active loads to constant current mode. Set current on display with 100mA above the desired value with the exception of out8 that is correct.
3A-3-A.37	Push on Read All button in Analog Readout column	OK	OK	
3A-3-A.38	Verify the telemetries: O_1 Current: TPD0 O_2 Current: TPD4 O_3 Current: ER0_N O_4 Current: MPD_R O_5 Current: SPD3_R O_6 Current: UGPD_R O_7 Current: SPD2_R O_8 Current: CAB_N Temperature Analog Ref. 3.0V	2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,00A±0,45A -40°C<T<80C° 3,000V±250mV	2,13A 2,186A 2,087A 2,05A 2,128A 2,021A 2,106A 2,065A 31,05°C 3,013V	
3A-3-A.39	Set the CAN BUS board address to 30	30	30	
3A-3-A.40	Select "CAN BUS I/F Side" to A	A	A	
3A-3-A.41	Push on Read All button in Analog Readout column	OK	OK	
3A-3-A.42	Verify the telemetries: O_1 Current: TPD0 O_2 Current: TPD4 O_3 Current: ER0_N O_4 Current: MPD_R O_5 Current: SPD3_R O_6 Current: UGPD_R O_7 Current: SPD2_R O_8 Current: CAB_N Temperature Analog Ref. 3.0V	2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,000A±0,225A 2,00A±0,45A -40°C<T<80C° 3,000V±250mV	2,139A 2,154A 2,072A 2,042A 2,137A 2,178A 2,137A 2,331A 33,64°C 3,015V	
3A-3-A.43	Set to 0A current absorption all the outlets: From O_1: TPD0 to O_8: CAB_N	OK	OK	
3A-3-A.44	Set OFF in the window All Outlets ON/OFF and push the relative "W" command	OK	OK	
3A-3-A.45	Click on Raed all to in Digital readout column	OK	OK	
3A-3-A.46	Verify from digital readout column that all outlets are OFF	OK	OK	

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10.3.1.5.9 PB2-4 SIDE A

STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
PB2-4-A.1	Connect AI_120V and AI_120V_RTN power supply signals	OK	OK	
PB2-4-A.2	Verify that all the cables of the section are connected	OK	OK	
PB2-4-A.3	Launch the PDS controller software	Program open	Program open	
PB2-4-A.4	Set to "FM" the window Model	OK	OK	
PB2-4-A.5	Select "PDS Side" to A	A	A	
PB2-4-A.6	Set the CAN BUS board address to 30	30	30	
PB2-4-A.7	Select JMDC = 0	0	0	
PB2-4-A.8	Select TX = A	A	A	
PB2-4-A.9	Select RX = A	A	A	
PB2-4-A.10	Select "CAN BUS I/F Side" to A	A	A	
PB2-4-A.11	Set input bus voltage to 120V	120V±1V	120V	
PB2-4-A.12	Set input bus current limitation to ~~15A~~ 27,5A	27,5A ~~15A~~±1A	27,5A	**See PVS-02**
PB2-4-A.13	Enable power supply output	enabled	enabled	
PB2-4-A.14	Verify that green led of "power switch box" is lighted	Green led ligthed	Green led ligthed	
PB2-4-A.15	Switch ON the "power switch "of "power switch box"	Switch ON	Switch ON	
PB2-4-A.16	Verify that red led of "power switch box" is lighted	Red led ligthed	Red led ligthed	
PB2-4-A.17	Take note of power supply output current	1,1A±0,5A	1,1A	
PB2-4-A.18	Click on Run flash button	OK	OK	
PB2-4-A.19	Set the CAN BUS board address to 31	31	31	
PB2-4-A.20	Select "CAN BUS I/F Side" to B	B	B	
PB2-4-A.21	Click on Run flash button	OK	OK	
PB2-4-A.22	Set the CAN BUS board address to 30	~~31~~ 30	30	**See PVS-10**
PB2-4-A.23	Select "CAN BUS I/F Side" to A	A	A	
PB2-4-A.24	Click on PB2-4 button	OK	OK	This board is default ON
PB2-4-A.25	Set Digital I/F Test logic value = 1 in "Commanding" column	1	1	Button located on left side of software window
PB2-4-A.26	Click on letter "W" on the right of the "1" value	OK	OK	
PB2-4-A.27	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-4-A.28	Verify that in the column Digital Readout under the voice Digital I/F Test appears "1"	1	1	
PB2-4-A.29	Set Digital I/F Test logic value = 0 in "Commanding" column	0	0	
PB2-4-A.30	Click on letter "W" on the right of the "0" value	OK	OK	
PB2-4-A.31	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-4-A.32	Verify that in the column Digital Readout under the voice Digital I/F Test appears "0"	0	0	
PB2-4-A.33	Click on the command READ ALL under the column Analog Readout	OK	OK	

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STEP n°	TEST SEQUENCE	EXPECTED VALUE	MEASURED VALUE	REMARKS
PB2-4-A.34	Verify the status of the following flags: BOARD STATUS OVT ALARM Input OVC Alarm DCDC ON/OFF 27V UV 29V Trip DCDC OFF/ON CMD	 OK OK OK **ON** OK OK **ON**	 OK OK OK **ON** OK OK **ON**	
PB2-4-A.35	Click on the command READ ALL under the column Analog Readout	OK	OK	
PB2-4-A.36	Verify the value of the following telemetries: Temperature Analog Ref. 2.0V	 N.A. ~~-40°C<T<80C°~~ N.A. ~~2,000V±150mV~~	 N.A. N.A.	See PVS-05
PB2-4-A.37	Read on display the voltage on ESEM 3A-4 out 1 (Check that load is not connected)	28,00V±1,00V	28,1V	V1
PB2-4-A.38	Verify the value of the following telemetry: Output Voltage	V1±1.092V	28,06V	
PB2-4-A.39	Set OFF on DCDC ON /OFF command window and send the command	OK	OK	
PB2-4-A.40	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-4-A.41	Verify the status of the following flags: BOARD STATUS OVT ALARM Input OVC Alarm DCDC ON/OFF 27V UNV 29V Trip DCDC OFF/ON CMD	 OK OK OK **OFF** OK OK **OFF**	 OK OK OK **OFF** OK OK **OFF**	
PB2-4-A.42	Click on the command READ ALL under the column Analog Readout	OK	Ok	
PB2-4-A.43	Verify the value of the following telemetries: Temperature Analog Ref. 2.0V	 -40°C<T<80C° 2,000V±150mV	 36,55°C 2,031V	
PB2-4-A.44	Verify the following analog monitor: Output Voltage	0,00V±1.092V	0,009V	
PB2-4-A.45	Read on display the voltage on ESEM 3A-4 out 1 (Check that load is not connected)	0,00V±0,10V	0V	
PB2-4-A.46	Set the CAN BUS board address to ~~30~~ 31	~~30~~ 31	31	See PVS-11
PB2-4-A.47	Select "CAN BUS I/F Side" to A B	A B	B	See PVS-12
PB2-4-A.48	Click on the command READ ALL under the column Digital Readout	OK	OK	
PB2-4-A.49	Verify the status of the following flags: BOARD STATUS OVT ALARM	 OK OK	 OK OK	

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