



GE Energy

Functional Testing Specification

Parts & Repair Services
Louisville, KY

LOU-GED-DS200CTBAG1AD

Test Procedure for a DS200CTBAG1AD Transition Module "C".

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C			

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PREPARED BY G. Chandler	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL <i>Charlie Wade</i>
DATE 8/17/2011	DATE	DATE	DATE 8/18/2011

LOU-GED-DS200CTBAG1AD REV. B	 GE Energy <i>Parts & Repair Services</i> <i>Louisville, KY</i>	Page 2 of 7
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1. SCOPE

1.1 This is a functional testing procedure for a DS200CTBAG1A transition module.

2. STANDARDS OF QUALITY

2.1 Refer to the current revision of the IPC-A-610 standard for workmanship standards.

3. APPLICABLE DOCUMENTS

3.1 The following document(s) shall form part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue shall apply.

3.1.1 Check board's electronic folder for more information

4. ENGINEERING REQUIREMENTS

4.1 Equipment Cleaning

4.1.1 Equipment should be clean and free of debris prior to applying power unless performing an initial check. Refer to site specific SRA's for cleaning guidelines.

4.2 Equipment Inspection

4.2.1 Equipment should be visually inspected for any defects prior to applying power. This inspection should include the following as a minimum:

4.2.1.1 Wires - broken, cracked, or loosely connected

4.2.1.2 Terminal strips / connectors - broken or cracked

4.2.1.3 Components - visually damaged

4.2.1.4 Capacitors - bloated or leaking

4.2.1.5 Solder joints - damaged or cold

4.2.1.6 Circuit board - burned or de-laminated

4.2.1.7 Printed wire runs / Traces - burned or damaged

5. EQUIPMENT REQUIRED

5.1 The following equipment is required to perform the process requirements. Equipment may be substituted provided that all accuracy's and test ratios are equivalent or better.

Qty	Reference #	Description
1		Sencore LCR-103
1		30VDC Power Supply
1		Fluke 85 Multimeter or Equivalent

6. Modifications/Upgrades

6.1 Check Orange Book for any modifications or upgrades.

7. Testing Process

7.1 Setup

7.1.1 Place jumper all jumpers to the "IN" position.

7.2 Testing Procedure

7.2.1 With the Sencore LCR-103 capacitor analyzer test the capacitor arrays CN1 thru CN6 in the following manor.

7.2.2 Using pin-1 of the array as common, pin-3 thru pin-10 of the CN1-3 will measure 0.2uf (+-10%)

7.2.3 Pin-3 thru pin-9 of the CN4 will measure 0.13uf (+-10%)

7.2.4 Pin-3 thru pin-10 of the CN5 & CN6 will measure 0.1uf (+-10%)

7.2.5 Capacitor C1 will measure 1uf (+- 10%).

7.2.6 Physically inspect MOVs MV1 thru MV17, MV19, MV21 thru MV23, and MV25 for any physical deformity, (cracks, burns, discoloration). Replace as needed.

7.2.7 Using an ohmmeter check all MOVs for shorts. All the MOVs should have a resistance >5M ohms in circuit.

7.2.8 Apply +28VDC to connector JBB-29 with common connected to JBB-30 (DCOM).

7.2.8.1 The following terminals will measure +24VDC (+-5%) with reference to JBB-30 (DCOM).

TB1-39	TB1-51	TB1-63	TB1-75
TB1-40	TB1-52	TB1-64	TB1-76
TB1-45	TB1-57	TB1-69	
TB1-46	TB1-58	TB1-70	

7.2.8.2 Disconnect +28VDC.

7.2.9 Apply +5VDC to connector JPD-7 with common connected to JPD-8.

7.2.10 Measure the +DVC at the following connector with common connected to JPD-8.

7.2.10.1 JX-1 = +3.34VDC (+- 5%).

7.2.10.2 JX-2 = +1.68VDC (+- 5%).

7.2.11 Verify the following are < 1 ohm resistance.

7.2.11.1 Center conductor of JAI to JEE-2

7.2.11.2 Center conductor of JAJ to JEE-4

7.2.11.3 Ground conductor of JAI to JEE-1

7.2.11.4 Ground conductor of JAJ to JEE-3

7.2.11.5 Remove 5VDC power and verify <1 ohm resistance.

7.2.11.5.1 Center conductor of JAI to JEE-4

7.2.11.5.2 Center conductor of JAJ to JEE-4

7.2.11.5.3 Ground conductor of JAI to JEE-1

7.2.11.5.4 Ground conductor of JAJ to JEE-1

7.2.11.6 JX-1 to 8PL-1 < 1 ohm

7.2.11.7 JX-2 to 8PL-2 < 1 ohm

7.2.11.8 JX-3 to chassis ground < 1 ohm

7.2.12 Verify the following points are < 1 ohm resistance.

From	To	To	To
JRS-2	6PL-32	8PL-12	
JRS-3	6PL-31	8PL-5	
JRS-4	6PL-34	8PL-8	JRS-7
JRS-5	JBB-30		

7.2.13 Verify 3.32k ohms (+- 1%) from the following points.

From	To	To	Result
JAA-33	6PL-33	8PL-6	3.32K

7.2.14 Verify < 1 ohm resistance from the following points.

From	To	Result
JPD-1	8PL-13	< 1 ohm
JPD-2	8PL-14	< 1 ohm
JPD-3	8PL-15	< 1 ohm
JPD-4	8PL-16	< 1 ohm
JPD-5	8PL-17	< 1 ohm
JPD-6	8PL-18	< 1 ohm
JPD-9	8PL-19	< 1 ohm

7.2.15 Verify < 1 ohm resistance from the following points.

From	To	Result		From	To	Result
TB1-1	JAA-1	< 1 ohm		TB1-20	JAA-20	< 1 ohm
TB1-2	JAA-2	< 1 ohm		TB1-21	JAA-21	< 1 ohm
TB1-3	JAA-3	< 1 ohm		TB1-22	JAA-22	< 1 ohm
TB1-4	JAA-4	< 1 ohm		TB1-23	JAA-23	< 1 ohm
TB1-5	JAA-5	< 1 ohm		TB1-24	JAA-24	< 1 ohm
TB1-6	JAA-6	< 1 ohm		TB1-25	JAA-25	< 1 ohm
TB1-7	JAA-7	< 1 ohm		TB1-26	JAA-26	< 1 ohm
TB1-8	JAA-8	< 1 ohm		TB1-27	JAA-27	< 1 ohm
TB1-9	JAA-9	< 1 ohm		TB1-28	JAA-28	< 1 ohm
TB1-10	JAA-10	< 1 ohm		TB1-29	JAA-29	< 1 ohm
TB1-11	JAA-11	< 1 ohm		TB1-30	JAA-30	< 1 ohm
TB1-12	JAA-12	< 1 ohm		TB1-31	JAA-31	< 1 ohm
TB1-13	JAA-13	< 1 ohm		TB1-32	JAA-32	< 1 ohm
TB1-14	JAA-14	< 1 ohm		TB1-35	8PL-10	< 1 ohm
TB1-15	JAA-15	< 1 ohm		TB1-36	8PL-11	< 1 ohm
TB1-16	JAA-16	< 1 ohm		TB1-79	JBB-31	< 1 ohm
TB1-17	JAA-17	< 1 ohm		TB1-80	JBB-32	< 1 ohm
TB1-18	JAA-18	< 1 ohm		TB1-81	JBB-33	< 1 ohm
TB1-19	JAA-19	< 1 ohm		TB1-82	JBB-34	< 1 ohm

7.2.16 Verify < 1 ohm resistance from the following points.

From	To	Result		From	To	Result
TB1-37	JBB-1	< 1 ohm		TB1-59	JBB-15	< 1 ohm
TB1-38	JBB-2	< 1 ohm		TB1-60	JBB-16	< 1 ohm
TB1-41	JBB-3	< 1 ohm		TB1-61	JBB-17	< 1 ohm
TB1-42	JBB-4	< 1 ohm		TB1-62	JBB-18	< 1 ohm
TB1-43	JBB-5	< 1 ohm		TB1-65	JBB-19	< 1 ohm
TB1-44	JBB-6	< 1 ohm		TB1-66	JBB-20	< 1 ohm
TB1-47	JBB-7	< 1 ohm		TB1-67	JBB-21	< 1 ohm
TB1-48	JBB-8	< 1 ohm		TB1-68	JBB-22	< 1 ohm
TB1-49	JBB-9	< 1 ohm		TB1-71	JBB-23	< 1 ohm
TB1-50	JBB-10	< 1 ohm		TB1-72	JBB-24	< 1 ohm
TB1-53	JBB-11	< 1 ohm		TB1-73	JBB-25	< 1 ohm
TB1-54	JBB-12	< 1 ohm		TB1-74	JBB-26	< 1 ohm
TB1-55	JBB-13	< 1 ohm		TB1-77	JBB-27	< 1 ohm
TB1-56	JBB-14	< 1 ohm		TB1-78	JBB-28	< 1 ohm

7.2.17 Verify 100 (+-1%) ohm resistance from connector JPD-8 to the following points.

TB1-37
TB1-41
TB1-43
TB1-47
TB1-49
TB1-53
TB1-55
TB1-59
TB1-61
TB1-65
TB1-67
TB1-71
TB1-73
TB1-77

<p>LOU-GED-DS200CTBAG1AD REV. B</p>	<p>g</p> <p>GE Energy <i>Parts & Repair Services</i> <i>Louisville, KY</i></p>	<p>Page 7 of 7</p>
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7.3 Burning in card.

- 7.3.1** Connect +27vdc to JBB-29 with common to JBB-30.
- 7.3.2** Connect a 470 ohm 2w resistor from common to the following points.
- 7.3.3** TB1-39, TB1-45, TB1-51, TB1-57, TB1-63, TB1-69 and TB1-75.
- 7.3.4** Verify +24vdc +/- 1vdc at each of the TB1 connections
- 7.3.5** Normal repairs; Burn card in for 3 hours and verify +24vdc +/- 1vdc at each of the TB1 connections.
- 7.3.6** **All Revitalization Cards shall be burned-in for three hours, check text box in SAP to determine if they fall into this category.**

7.4 *TEST COMPLETE *****

8. Attachments

- 8.1** None at this time.