| g GE Energy Services<br><br>*Inspection & Repair Services*<br>*Louisville, KY* | **Functional Testing Specification**<br><br>**LOU–GED-IC3600SPSV-A** |
|---|---|

**Test Procedure for a IC3600SPSV Power Supply Monitor Card**

**DOCUMENT REVISION STATUS: Determined by the last entry in the "REV" and "DATE" column**

| REV. | DESCRIPTION | SIGNATURE | REV. DATE |
|---|---|---|---|
| A | Initial release | Dan Laemmle | |
| B | | | |
| C | | | |



| PREPARED BY | REVIEWED BY | REVIEWED BY | QUALITY APPROVAL |
|---|---|---|---|
| Dan Laemmle | | | Charlie Wade |
| **DATE** | **DATE** | **DATE** | **DATE** |
| 6/15/05 | | | 7/31/2006 |

**Functional test procedure for a Power Supply Monitor Card**

## 1. SCOPE

**1.1** This is a functional testing procedure for a IC3600SPSV Card.

## 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 Shop Documentation.**
**3.1.2**

## 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 the local documented procedures 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 or cracked
**4.2.1.2** Terminal strips / connectors broken or cracked
**4.2.1.3** Loose wires
**4.2.1.4** Components visually damaged
**4.2.1.5** Capacitors leaking
**4.2.1.6** Solder joints damaged or cold
**4.2.1.7** Circuit board burned or de-laminated
**4.2.1.8** Printed wire runs 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 |
|---|---|---|
| 2 | | Fluke 85 DMM (or Equivalent) |
| 2 | | Variable DC Supplies |
| 1 | | 1K 1/2W Resistor |
| | | |
| | | |

## 6. TESTING PROCESS

**6.1** Setup

**6.1.1**

**Note: This card consists of 2 sections, tested separately.**

**6.2** Testing Procedure

**6.2.1** **Regulator Section.** Connect Pins 7 and 17 with a jumper. Connect a 1K resistor Pin 9 to Pin 3. Connect a fixed 15v DC supply (+) to Pin 3, (-) to Pin 7. Connect a variable 0-15v DC supply, set to 0v, (+) to Pin 11, (-) to Pin 7.

**6.2.2** Apply power and monitor Pin 9 and Pin 11 with voltmeters. As the variable supply at Pin 11 is slowly raised and reaches +12v, Pin 9 should switch from 15v to near 0v. Lowering the input below 12v should cause Pin 9 to switch back to 15v. Adjust R51 so this occurs. Connections can be left or removed to test next section.

**6.2.3** **Bus Monitor Section.** Jumper Pin 29 to Pin 43 and jumper Pin 25 to Pin 41. Connect a variable 0-60v DC supply (+) to Pin 29, (-) to Pin 41. Connect an ohmmeter from Pin 31 to Pin 49 (Should read continuity with no power applied). Preset R59 (high limit) full CW and R58 (lower limit) CCW.

**6.2.4** Turn on DC supply and set to 50v. Relay should pick up and ohmmeter should read infinity. Lower supply volts to 47.2 and adjust lower limit R58 CW slowly until relay drops out (continuity on ohmmeter). Adjust power supply for 52.8v. The relay should pick back up. Adjust R59 upper limit CCW until the relay again drops out. Slowly adjust power supply up and down through upper and lower limits and check for correct action of relay touching up as necessary. Move ohmmeter to pins 31 and 47 and check other set of contacts for opposite operation from Pins 31 and 49 as voltage is adjusted through the limits. Remove power before removing card from test socket.

***6.3 ***TEST COMPLETE ******

## 7. NOTES

**If the regulation section fails, see shop documentation on replacing Q9, which requires modification of card.**