g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-DS3800NUVA**

Test Procedure for a Under Voltage Relay Card

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Transferred from hand written procedure to this format	C. Wade	5/13/2009
B	Corrected steps	Steve Pharris	1/31/2011
C			

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
J. Wychulis	S. Pharris	S. Pharris	Charlie Wade
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1. SCOPE

1.1 This is a functional testing procedure for a Under Voltage Relay 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 None at this time

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, 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		Rainbow Box
1		DS3800 Connector Box H033767
1		DS3800 Power Supply Box H033772
1		DS3800NUVA Test Box H188553
1		Variac

6. TESTING PROCESS

6.1 Setup

6.1.1 Connect DS3800 connector box and power supply box to the rainbow box.

6.1.2 Connect PA38 to PA3.

6.1.3 Connect cable from DS3800NUVA test box to UUT (Unit Under Test).

6.1.4 Connect ground jumper assembly to rainbow box as marked on jacks.

6.1.5 Connect jack 26 on the test box to jack 26 on the rainbow box.

6.1.6 Connect jack 58 on the test box to jack 58 on the rainbow box.

6.1.7 Connect jack 1 to jack 41 on the rainbow box.

6.1.8 Connect common and P5 on test box to common and 5V on the power supply box.

6.2 Power Up

6.2.1 Power box up

6.2.2 Close all switches except for “A11”.

6.2.3 Plug Variac to jacks on DS3800NUVA test box and power up to 115VAC. Only OM light is “ON” at this time.

6.2.4 Open A10 – UVA and UVY lights come “ON”.

6.2.5 PFT – AC1 (I/O Terminal Point 1 to 5)

6.2.5.1 With A10 Open reads 30V +/- 3 volts

6.2.5.2 With A10 Closed reads 45V +/- 3 volts

6.2.6 UVX – COM (Common 41 to I/O 16) is 5 Volts with A10 open.

6.2.7 OUX – COM (Common 41 to PA20) is 0 Volts with A10 open.

6.2.8 Open A8 and lights stay “ON”.

6.2.9 Open A9 and lights stay “ON”.

6.2.10 Close A10, UVA and UVY are “OFF”.

6.2.11 Open A10 and Close A9, UVA is “ON”.

6.2.12 PA74 (Rainbow Box 74) 0 Volts.

6.2.13 Take 76 to common and PA74 should now be 24 Volts. **Remove jumper before continuing.**

6.2.14 Close all switches but A11.

6.2.15 Apply 80V RMS (Variac), Rainbow Box 66 reads 5.0 Volts

6.2.16 Close A11, Rainbow Box 66 should go to under .2 Volts.

6.2.17 Close all switches except A11 and A10.

6.2.18 Adjust Variac to 150VAC, OM, UVA, UVY will now be “ON”.

6.2.18.1 Open A1, UVY will be “OFF” and FTI will be “ON”.

6.2.18.2 Close A1, UVY will be “ON” and FT1 will be “OFF”.

6.2.18.3 Repeat this procedure for switches A2 thru A7.

6.2.19 Close A10, UVA and UVY will go out.

6.2.20 Adjust Variac to 100VAC RMS and open A10.

6.2.21 Open A1 thru A5 and UVY will be “OFF” and FT1 thru FT5 will be “ON”.

6.2.22 Close A1 and A2, open A6 and A7, and FT3-7 will be “ON”.

6.2.23 Close all switches but A11.

6.2.24 Adjust Variac to 80VAC RMS, open A10, UVA and UVY will be “ON”.

6.2.25 Adjust Variac to 75VAC RMS lights should stay on.

6.3 ***TEST COMPLETE ***

7. NOTES

7.1 None at this time

8. ATTACHMENTS

8.1 None at this time