



GE Energy

## Functional Testing Specification

*Parts & Repair Services  
Louisville, KY*

**LOU-GED-DS3800NBID**

### Test Procedure for a DS3800NBID

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	Steve Pharris	01/6/2010
B	Improve Continuity of Test and Reduce Testing Time	Steve Pharris	06/02/2015
C			

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<b>DATE</b> 1/6/2010	<b>DATE</b>	<b>DATE</b>	<b>DATE</b> 6-2-2015

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## 1. SCOPE

1.1 This is a functional testing procedure for a DS3800NBID.

## 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		Fluke 87 DMM (or Equivalent)
1		DS3800 Power Supply
1		DS3800 Connector Box
1		Rainbow Box
1		Fluke 5500A Calibrator
1		O-Scope

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## 6. TESTING PROCESS

### 6.1 Setup

#### 6.1.1 Make the following connections

PA1-PA9

PA2-PA1

PA4-PA1

PA6-PA1

PA8-PA1

PA10-PA1

PA13-PA1

PA15-PA1

PA16-PA1

PA18-PA1

#### 6.1.2 Set all jumpers to “on”

### 6.2 Testing Procedure

#### 6.2.1 Apply Power

#### 6.2.2 Verify PA20 is approx 0VDC.

#### 6.2.3 Remove PA6.

#### 6.2.4 Using Fluke Calibrator apply –159.6mVDC to PA6.

#### 6.2.5 Verify PA20 is approx 5VDC.

#### 6.2.6 Remove input voltage from PA6 and reconnect to PA1.

#### 6.2.7 Continue applying –159.6mVDC to the following points and verify that PA20 is approx. 5VDC.

PA2

PA13

PA18

**6.2.8** Verify –15VDC between the following points and Common.

PA11

PA12

PA19

PA21

PA22

PA25

PA26

PA28

**6.2.9** Remove PA10 from PA1.

**6.2.10** Apply –5VDC to PA10.

**6.2.11** Verify PA17 is approx. 6.2VDC.

**6.2.12** Remove all connections except PA1-PA9.

**6.2.13** Using Fluke Calibrator apply 12Vp-p 10Khz square wave to PA47.

**6.2.14** Connect PA27 to Common from Fluke Calibrator.

**6.2.15** Verify PA76 is 5V 10Khz square wave.

**6.2.16** Connect PA70 to PA1.

**6.2.17** Verify signal at PA76 disappears.

**6.2.18** Remove PA70.

**6.2.19** Continue repeating steps 6.2.13-6.2.18 using table below for reference. NOTE: The disable pin moves from PA70. Just follow the Chart

Signal from Fluke	Common from Fluke	Output Point	Disable
PA27	PA30	PA78	PA70
PA30	PA46	PA80	PA70
PA46	PA47	PA72	PA70
PA32	PA49	PA68	PA60
PA49	PA50	PA71	PA60
PA50	PA29	PA67	PA60
PA29	PA32	PA74	PA60
PA52	PA31	PA61	PA65
PA31	PA38	PA62	PA65
PA38	PA51	PA64	PA65

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PA51	PA52	PA66	PA65
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**6.2.20** Connect PA63 to SW81.

**6.2.21** Verify IMOK LED toggles with SW81.

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

**7. NOTES**

**7.1** None at this time

**8. ATTACHMENTS**

**8.1** None at this time