



GE Energy

Functional Testing Specification

Parts & Repair Services
Louisville, KY

LOU-GED-DS200SVMAG1

Test Procedure for a Source Voltage Monitor Card

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	Steve Pharris	10/08/09
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PREPARED BY Steve Pharris	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL <i>Charlie Wade</i>
DATE 10/08/09	DATE	DATE	DATE 10/9/2009

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1. SCOPE

1.1 This is a functional testing procedure for a DS200SVMAG1A.

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 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 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		Fluke 87 DMM (or Equivalent)
1		Tenma Dual Power Supply
1		O-Scope

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6. TESTING PROCESS

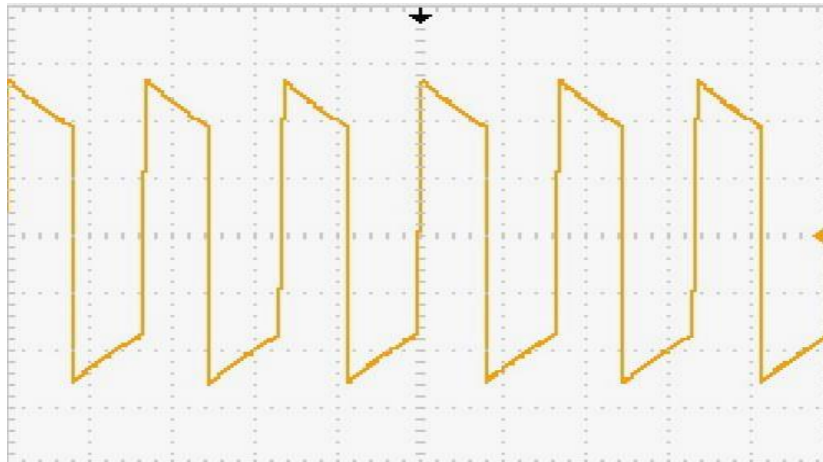
6.1 Setup

- 6.1.1 Set power supply 1 for 24VDC
- 6.1.2 Connect to JX-12 (+) and JX-9 (-)
- 6.1.3 Connect com from DMM to negative output of power supply 1

6.2 Testing Procedure

- 6.2.1 Apply power to card.
- 6.2.2 Verify the following voltages (+/-5%) are present: TP7=5VDC; TP9=P15VDC;
TP10=N15VDC (these voltages are required for the remainder of the test)
- 6.2.3 Verify TP1=5VDC
- 6.2.4 Apply 3 phase 480VAC to PT1, PT2, and PT3.
- 6.2.5 Verify TP1=0VDC
- 6.2.6 Power down 3 phase AC
- 6.2.7 Disconnect PT1 and reapply power
- 6.2.8 Verify TP1=5VDC
- 6.2.9 Power down 3 phase AC
- 6.2.10 Reconnect PT1 and disconnect PT2
- 6.2.11 Apply 3 phase 480VAC
- 6.2.12 Verify TP1=5VDC
- 6.2.13 Power down 3 phase AC
- 6.2.14 Reconnect PT2 and disconnect PT3
- 6.2.15 Apply 3 phase 480VAC
- 6.2.16 Verify TP1=5VDC
- 6.2.17 Power down 3 phase AC and reconnect PT3
- 6.2.18 Apply 3 phase 480VAC

6.2.19 Verify following waveform at TP2.



- 6.2.20** Verify approx. 280VAC at PT8, PT9, and PT10
- 6.2.21** Power down 3 phase AC and disconnect PT1, PT2, and PT3
- 6.2.22** Verify TP3=5VDC
- 6.2.23** Apply 120VAC to FCPL-1 and FCPL-2
- 6.2.24** Verify TP3=0VDC
- 6.2.25** Remove 120VAC and verify that TP3=5VDC
- 6.2.26** Connect power supply 2 across C10 observing proper polarity leaving it set at 0VDC
- 6.2.27** Verify TP4=5VDC
- 6.2.28** Apply power from power supply 2 by slowly turning voltage knob
- 6.2.29** Verify that TP4=0VDC when power supply 2 is approx 5VDC
- 6.2.30** Remove connections across C10
- 6.2.31** Connect + lead from power supply 2 to R73 (side closest to center of card) and – lead to R77 (side closest to center of card)
- 6.2.32** Set current knob on power supply 2 to approx 8 o'clock position and turn voltage down completely. **(Too much current will blow CR5, Proceed carefully)**
- 6.2.33** Verify TP5=5VDC
- 6.2.34** Slowly increase voltage on power supply 2
- 6.2.35** Verify that TP5=approx 0VDC when power supply 2 is approx for 12VDC (if done correctly the power supply current setting will cause the power supply to trip if you go much higher preventing the destruction of CR5)
- 6.2.36** Remove all power from card

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6.2.37 Static check the following components

R67	8.3K
R68	8.3K
R69	8.3K
R70	8.3K
R72	47K
R73	47K
R76	47K
R77	47K
R140-143	332K
R15	150K
R19-20	150K
R24-25	150K
R29	150K
R30	10K
R31-33	150K
R40	150K
R43	150K
C140-141	Approx. 645K
C19	Approx. 6.0M

6.3 *TEST COMPLETE*****

7. NOTES

7.1 None at this time.

8. ATTACHMENTS

8.1 None at this time.