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GE Energy

Functional Testing Specification*Inspection & Repair Services
Louisville, KY***LOU-GEF
3N2100PS104A1****Test Procedure for 3N2100PS104A1 Power Supply****DOCUMENT REVISION STATUS:** Determined by the last entry in the "REV" and "DATE" column


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Functional test procedure for 3N2100PS104A1 Power Supply.

1. **SCOPE**

- 1.1 This specification provides the Engineering Requirements for testing 3N2100PS104A1 Power Supply.

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.

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| <p>3.1.1 GEK-45605</p> <p>3.1.2 44C283832</p> | <p>PWM Model II Drives & Power Supplies</p> <p>Connection and Installation Diagram</p> |
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4. **ENGINEERING REQUIREMENTS**

4.1 Description


- 4.1.1 PWM Model II drives are used in conjunction with GE controls to provide power and control for their complement DC motors. There are generally two power boards and one control board use with each drive. The control board in each drive interprets the signals from the control and applies them to the power board that then applies the correct power and direction to the DC motor.

4.2 Equipment Cleaning

- 4.2.1 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.

4.3 Equipment Inspection

- 4.3.1 Equipment should be visually inspected for any defects prior to applying power. This inspection should include the following as a minimum:
- 4.3.1.1 Wires broken or cracked
 - 4.3.1.2 Terminal strips / connectors broken or cracked
 - 4.3.1.3 Loose wires
 - 4.3.1.4 Components visually damaged
 - 4.3.1.5 Capacitors leaking
 - 4.3.1.6 Solder joints damaged or cold
 - 4.3.1.7 Circuit board burned or de-laminated
 - 4.3.1.8 Printed wire runs burned or damaged

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EQUIPMENT REQUIRED

- 4.4** 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	Variac 115VAC	Adjustable AC Source
1	Fluke 77 or equivalent	Multimeter

5. TESTING PROCESS

5.1 Pre Test Requirement

5.1.1 Visually check Bridge Rectifiers

- 5.1.1.1** Blue wire on (+) terminal & SO-A standoff
- 5.1.1.2** White wire on (-) terminal & SO-B standoff
- 5.1.1.3** Black wire on AC terminal & SO-C standoff
- 5.1.1.4** Red wire on AC terminal & SO-D standoff

5.1.2 TB105 A to B & B to C should be less than 4 ohms

5.1.3 Fan should spin freely when turned by hand.

5.1.4 FU103 should be ½ amp fuse and it should be good

5.1.5 Unit should be labeled correctly.

5.1.6 Test the PWMR2/3 board separately before inserting it into power supply.

5.2 Functionally testing the power supply.

5.2.1 Install the previously tested PWMR2/3 board into power supply, if you have not so already.

5.2.2 Hookup 115VAC to TB105 A & B & connect 8PL to the control board.

5.2.3 Turn on the 115VAC and check for + & - 15VDC on 1PL. Fan should be on & spinning freely. IF OK, turn off 115VAC & disconnect.

5.2.4 Hook up 115VAC Variac to the AC input terminals, should be SO-C & SO-D.

5.2.5 Turn Variac up to 115VAC you should measure approximately 160VDC at the output terminals SO-B & SO-A.

- 5.2.5.1** It is important that the leads from each rectifier block be the same length so that they share the load since they are all hooked in parallel.

5.3 *TEST COMPLETE*****

6. REFERENCES