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GE Industrial Systems

Functional Testing Specification

*Renewal Services
Louisville, KY*

LOU-GED-DS3820PMMx

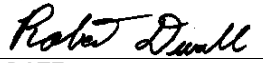
Test Procedure for a PMM Field Exciter

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A	Initial release	David Bush	01 NOV 02
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DATE 01NOV02	DATE 15 NOV 02	DATE	DATE 11-15-02

Functional test procedure for a PMM Field Exciter

1. SCOPE

1.1 This is a functional testing procedure for a 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 **DS3820PMM Shop Binder**

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
1		Fluke 85 DMM (or Equivalent)
1	H033722	Field Exciter Test Station
1	H033814 or H033963	Grey or Blue Inductive Load Cart

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6. TESTING PROCESS

6.1 Determining which PMM

6.1.1 Must first determine what FORM of DS3820PMM--- is to be tested



Note: Form A=Reversing ½ Wave (multi-motor loss)

Form B=Non-Reversing Full Wave (multi-motor loss)

Form C=Non-Reversing Full Wave (single motor loss)

Form D=Reversing ½ Wave (multi-motor loss)

Form E=Non-Reversing Full Wave (multi-motor loss)

Form F=Non-Reversing Full Wave (multi-motor loss)

6.2 Testing Procedure

6.2.1 Disassemble unit and determine if any outdated electrolytic caps or glass bead diodes need replacement, and perform the replacements necessary. Also determine if from visual inspection any other components need replacement. Each individual card should be tested according to the test procedure listed for that card before re-assembling PMM. This ensures a better confirmation of overall reliability of the whole assembly.

6.2.2 Firmware: On units equipped with the NMEC card, its firmware must be upgraded to the PSP3800NMEC01AB revision, due to a problem found in the AA revision. For all other NMEx cards, unless it is for Carol Stream, go with what it came in with. If the unit is for Carol Stream, research the correct latest revision firmware for that card and use that for testing and that will be what goes out with the unit.

6.2.3 Refer to the light blue three ring binder labeled “DS3820PMM” for correct jumper settings, resistor values, and strap connections for the power transformer (TBB terminal) for the particular unit under test. This is critical for proper functioning of the unit.

6.2.4 DMEC card: Traditionally, we have used the shop test card in place of the customer’s DMEC to simplify adjustment during testing. This is fine as long as the customer’s DMEC is component tested to ensure it is good to go and jumpers on that card are set to where the data in the binder says they should be for final shipping after testing.

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6.2.5 Connection to test fixture H033722 is as follows: Individual white wires connected to TB1 of fixture, labeled FREF, CDC2, CDC1, MN, SHN, & SHM are to be disconnected from TB1 and connected to TBA of unit under test using the same designations as on TB1. Larger wires (housed in a single cable) connected to FN & FPOS of TB1 on fixture are also to be transferred to TBA of unit under test. The other end of this cable goes to the load cart, with FPOS going to the red pos. jack and FN going to the 36-ohm jack. The power wires (housed in a single cable) attached to the fuses at the top left of fixture are not labeled. Transfer them to the fuse holder of the unit under test. The white cable attached to the middle left front of fixture, labeled JH1, is to be connected to the JH connector of the NMEx card on unit under test.

6.2.6 Jumper settings on TBB of unit under test: Regardless of what the binder says for this setting, and with all PMM's, you must jumper 1 to 4 and 3 to 6 for the proper voltage level. This is because it sets the voltage on the power transformer to 230 volts for the fixture and load used in our test. You must be sure to set the jumper back to the correct setting listed in the binder once you are finished, before you ship the unit.

6.2.7 Plug 110Vac power cord into outlet, making sure red e-stop button is in on the fixture. Now turn power on at the e-stop. Wait for the field to come on-you can see this by connecting a multimeter to the FPOS and FN connections at the load. Once it comes on, several LED's on the DMEC will light up and flash. Push the reset button on the fixture, and all LED's should go out. There should be no faults showing.

6.2.8 You are finished. Return all connections to fixture as you found them, and if you were using the shop test DMEC, return it to the fixture as well. Be sure to have tested customer's DMEC before you ship unit. Also be sure to affix a serial # label and record it in the system and on the WIP tag if there is no such label on the unit already.

6.3 *TEST COMPLETE*****

7. NOTES

7.1 None needed at this time.