



GE Energy

Functional Testing Specification

Parts & Repair Services
Louisville, KY

LOU-GED-IS200DRLY

Test Procedure for an IS200DRLY Simplex Relay Output Board

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REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	F. Howard	9-13-2011
B	Identified common of relays on TB connector	F. Howard	7-30-2012
C			

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PREPARED BY F. Howard	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL <i>Charlie Wade</i>
DATE 9-13-2011	DATE	DATE	DATE 9/13/2011

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1. SCOPE

1.1 This is a functional testing procedure for a Simplex Relay Output Board

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		+28VDC Power Supply
1		Fluke 87 Multimeter or equivalent

6. Modifications/Upgrades

6.1 Check Orange Book for any modifications or upgrades.

7. Testing Process

7.1 Setup

The card is a simple relay output card. In the test you will apply +28VDC operating voltage, ground certain pins of the 37 pin JR1 connector and verify good closure of relay contacts output on the 72 pin TB1 connector. There are LEDs to indicate when power is on and relays are energized.

7.2 Testing Procedure

7.2.1 Apply +28VDC to JR1-1 (+) and JR1-2 (-) and verify green LED DS13 is on. Turn off power and move leads to JR1-18 (+) and JR1-17 or 21 (-). Apply power and verify green LED DS13 is on. Leave +28V connected to these points.

7.2.2 To test relay operation, ground the appropriate pin of JR1 for that relay and verify contact action on TB connector. Only the N.O and COM contacts are used so you will be checking to verify closure of the contact and LED illumination. Follow the chart below to achieve desired results. The contacts should show an open when relay is off and less than one ohm when energized.

7.2.3	<u>RELAY</u>	<u>GROUND PIN</u>	<u>Com</u>	<u>NC</u>	<u>NO</u>	<u>LED</u>
	K1	JR1 – 3	TB1-3	1	5	DS1
	K2	JR1 – 4	TB1-9	7	11	DS2
	K3	JR1 – 5	TB1-15	13	17	DS3
	K4	JR1 – 6	TB1-21	19	23	DS4
	K5	JR1 – 7	TB1-27	25	29	DS5
	K6	JR1 – 8	TB1-33	31	35	DS6
	K7	JR1 – 9	TB1-39	37	41	DS7
	K8	JR1 – 10	TB1-45	43	47	DS8
	K9	JR1 – 11	TB1-51	49	53	DS9
	K10	JR1 – 12	TB1-57	55	59	DS10
	K11	JR1 – 13	TB1-63	61	65	DS11
	K12	JR1 – 14	TB1-69	67	71	DS12

7.2.4 Verify a less than 1 ohm resistance between TB2-1 and TB2-2.

7.3 ***TEST COMPLETE***

8. Notes

8.1 None at this time.

9. Attachments

9.1 None at this time.