g GE Industrial Systems	**Functional Testing Specification**
Renewal Services ***Louisville, KY***	**LOU–GED-44C331887**

Test Procedure for a Card

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	P. Kelley	7/10/01
B	Put into new format and reviewed.	D. Laemmle	07/18/02
C	Added instruction on BJ1 jumper and cleared up some ambiguities in the other instructions.	P. Kelley	05/27/04
D	Added Note to step 6.1.16, to turn pot slowly and wait –delay	G. Chandler	5/3/2010

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
P. Kelley	D. Laemmle		Robert Duvall
DATE	**DATE**	**DATE**	**DATE**
07/10/01	07/18/02		08/09/02

Functional test procedure for a Field Temperature Sensor Card

1. SCOPE

1.1 This is a functional testing procedure for a 44C331887-G0x Field temp Sens. 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 277A3784**
- **3.1.2 EDC331887-G01**

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)
3		30VDC power supplies

6. TESTING PROCESS

6.1 Testing Procedure

6.1.1 Set-up per drawing

6.1.2 Put the BJ1 jumper to the IN position.

6.1.3 Alarm Lockout on front panel should be down.

6.1.4 Short pin 28 to pin 27.

6.1.5 Pin 3 is common for the following measurements and voltage inputs.

6.1.6 Adjust pot 12P for 0 mV on 5TP.

6.1.7 Put a jumper between 4TP and 6TP to short out diode 3D.

6.1.8 Short pin 29 to pin 30.

6.1.9 Adjust 13P for 0 mV on 4TP.

6.1.10 Remove 4TP to 6TP short.

6.1.11 Remove pins 30 to 29 short (leave pin 29 connected to ground).

6.1.12 Remove pins 28 to 27 short (leave pin 27 connected to ground).

6.1.13 Read the frequency on 7TP. Adjust 2P for 53.19HZ.

6.1.14 Apply -5.0 volts to pin 30 and -5.75 to pin 28.

6.1.15 Turn 1P to the fully CCW position.

6.1.16 Monitor 8TP while adjusting 1P. Adjust 1P slowly to the point that 8TP goes high. This should happen when the absolute voltages at 6TP and 5TP are approx. equal. Note: Turn slow and wait – delay.

6.1.17 Reduce voltage on pin 28 to -3.5 volts.

6.1.18 Adjust 3P for 0 volts on 9TP.

6.1.19 Adjust 4P for 2 volts on pin 13 (allow voltage to settle).

6.1.20 Adjust 9P for2 volts on pin 11.

6.1.21 Increase voltage on pin 28 to -5.75 volts.

6.1.22 Adjust 5P for 10 volts on pin 13 (allow voltage to settle).

6.1.23 Adjust 7P for 10 volts on 2TP (out) on the front panel.

6.1.24 Adjust 10P for 10 volts on pin 11.

6.1.25 Adjust 6P for 1 volt on pin 25.

6.1.26 Adjust the voltages on pins 28 and 30, both to -5 volts.

6.1.27 2TP (out) on the front panel should read approx. 6.67 volts.

6.1.28 Reduce the voltage on pin 28 and 30 to -1 volt.

6.1.29 Adjust 11P to read 6.67 volts on 2TP (out) on the front panel. (It may take a few seconds to settle).

6.1.30 Adjust 8P for 7.66 volts on TP3 on front panel (sets over temp at 115C).

6.1.31 Adjust voltages on pins 28 and 30 for 5.00 volts.

6.1.32 Monitor voltage on pin 17 until it settles.

6.1.33 Press reset button on front panel, OT LED on front panel should be off and pin 22 should be less than 1 volt.

6.1.34 Increase voltage on pin 28 to -5.50 volts.

6.1.35 OT LED on front panel should come on within 30 seconds and pin 22 should go to 24 volts.

6.1.36 Flip the Alarm Lockout switch on the front panel to the up position. The voltage on pin 22 should go to 0 volts.

6.1.37 Return the Alarm Lockout switch to the down position.

6.1.38 Return the voltage on pin 28 to -5.00 volts.

6.1.39 Wait for 1 minute.

6.1.40 The OT LED should still be on.

6.1.41 Press the RESET button on the front panel.

6.1.42 The LED should go out and pin 22 should go to less than 1 volt.

6.1.43 Move the 1 K resistor between pins 22 and 7 to pins 22 and 23.

6.1.44 You should read 0 volts between pins 22 and 23.

6.1.45 Flip Alarm Lockout switch to the up position.

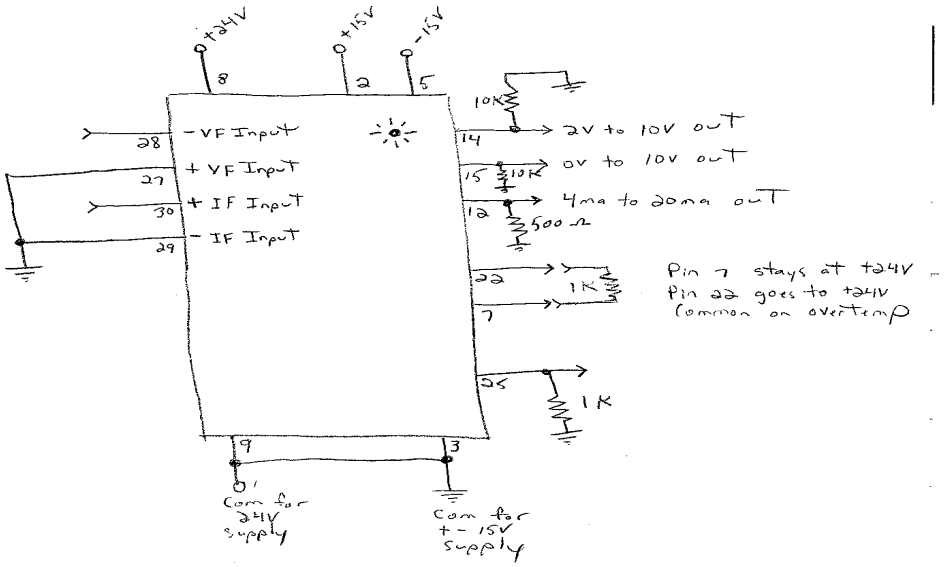
6.1.46 Pins 22 and 23 should now have 24 volts between them.

6.2 ***TEST COMPLETE ***

7. NOTES

8- 9-02; 9:02AM;GE INDSYS ;502 493 0640 # 3/ 3

44C 331887 G01



8. Oscilloscope Verification Examples:

8.1 None at this time.