GE Power Generation Engineering Materials and Processes Engineering Schenectady, NY 12345	PROCESS SPECIFICATION P3K-AL-0333-A01

BOARD TEST SPECIFICATION 24 VDC GROUND DETECTION CIRCUIT 1P2-G001

DOCUMENT REVISION STATUS: DETERMINED BY THE LAST ENTRY IN THE "REV" AND "DATE" COLUMN

REV.	AN NO.	DESCRIPTION	SIGNATURE	REV. DATE
A	YA00096	SPECIFICATION LISTED IN STEAM TURBINE/GENERATOR INDEX AS "INACTIVE" HAS BEEN FORMALLY REVISED AS "INACTIVE FOR NEW DESIGN". (PR BUDKA)	C.R. Trupp	DEC 02 1991

INACTIVE FOR NEW DESIGN

AS OF 12/02/91

PREPARED BY:	P.R. BUDKA
ORIG. ISSUE DATE:	--

REV NO. Ø 1A

P3K-AL-0333-A01
CONT ON SHEET 3 SH NO. 2

TITLE

BOARD TEST SPECIFICATION - 125 VDC GROUND DETECTION CIRCUIT - 1P2-G001 - SCHEMATIC 173B6512

FIRST MADE FOR

REVISIONS

1. PURPOSE

   A. The purpose of this specification is to convey the proper information needed to test the referenced circuit board for its correct function.

   B. To enable the skilled Test Engineer to produce the detailed Test Procedure for the referenced circuit board.

2. DOCUMENTS PERTAINING TO THIS SPECIFICATION

   A. 125 VDC Ground Detection - 117D9915

   B. AC/DC Power Ground System - 117D7762

   C.

3. EQUIPMENT NEEDED FOR TEST

   A. DC Power Supply - 125 VDC nominal; 1 ampere output.

   B. DC Power Supply - 24 VDC nominal; 1 ampere output.

   C. Switch - SPST 24 VDC nominal - 1 ampere rating.

   D. Switch - SPST 150 VDC nominal - 1 ampere rating.

   E. Three (3) indicating devices - 24 VDC nominal, 80 ma current rating.

4. CIRCUIT DESCRIPTION

This card consists of two 125 VDC relays connected in series across a 125 VDC source, with their common point brought out. The normally-closed contacts of these relays are brought out and diode - gated to a third output.

5. CIRCUIT INTEGRATION

The 125 VDC control voltage system has no common ground, so a method must be used to indicate when one side or the other of this voltage has grounded to the common ground of the other systems.

Two 125 VDC relays are series-connected, with their series point connected to the common ground. When energized, both relays open the normally-closed contacts, extinguishing the indicators. No signal is sent to the Electrical Malfunction Bus.

If one line of the 125 VDC system should contact the common ground, the relay connected between that line and the series-connected point will de-energize. Its contacts will close, energizing the indicating device and signalling the Electrical Malfunction Buss.

273-3/4
273-12
273-5
273-13
273-71
PRINTS TO

TITLE
BOARD TEST SPECIFICATION - 125 VDC GROUND DETECTION CIRCUIT - 1P2-G001 - SCHEMATIC 173B6512

FIRST MADE FOR

REVISIONS

6. TEST SPECIFICATIONS

A. Connect the board as shown in Figure.

B. Set S2 to position 2.

C. Set S1 to position 2. Neither indicator shall indicate.

D. Short together pins 29 and 18. Indicators 1 and 2 shall indicate, indicator 3 shall not.

E. Unshort pins 29 and 18. Indicators 1 and 2 shall cease indicating, indicator 3 shall not indicate.

F. Short together pins 33 and 29. Indicators 1 and 3 shall indicate, indicator 2 shall not.

G. Unshort pins 33 and 29. Indicators 1 and 3 shall cease indicating, indicator 2 shall not indicate.

H. Set S2 to position 1. Indicators 1, 2, and 3 shall indicate.

I. Set S1 to position 1.

7. REPORT SHEET

1. OPERATION	INDICATOR	YES	NO
S2 to pos. 2			
S1 to pos. 2			
29 short to 18	1,2		
29 short to 33	1,3		
S2 to pos. 1	1,2,3		

8. NOTES

If any indicator does not indicate as described, the board shall be rejected.

PRINTS TO

TITLE
BOARD TEST SPECIFICATION - 125 VDC GROUND DETECTION CIRCUIT - 1P2-G001 - SCHEMATIC 173B6512
FIRST MADE FOR

REVISIONS

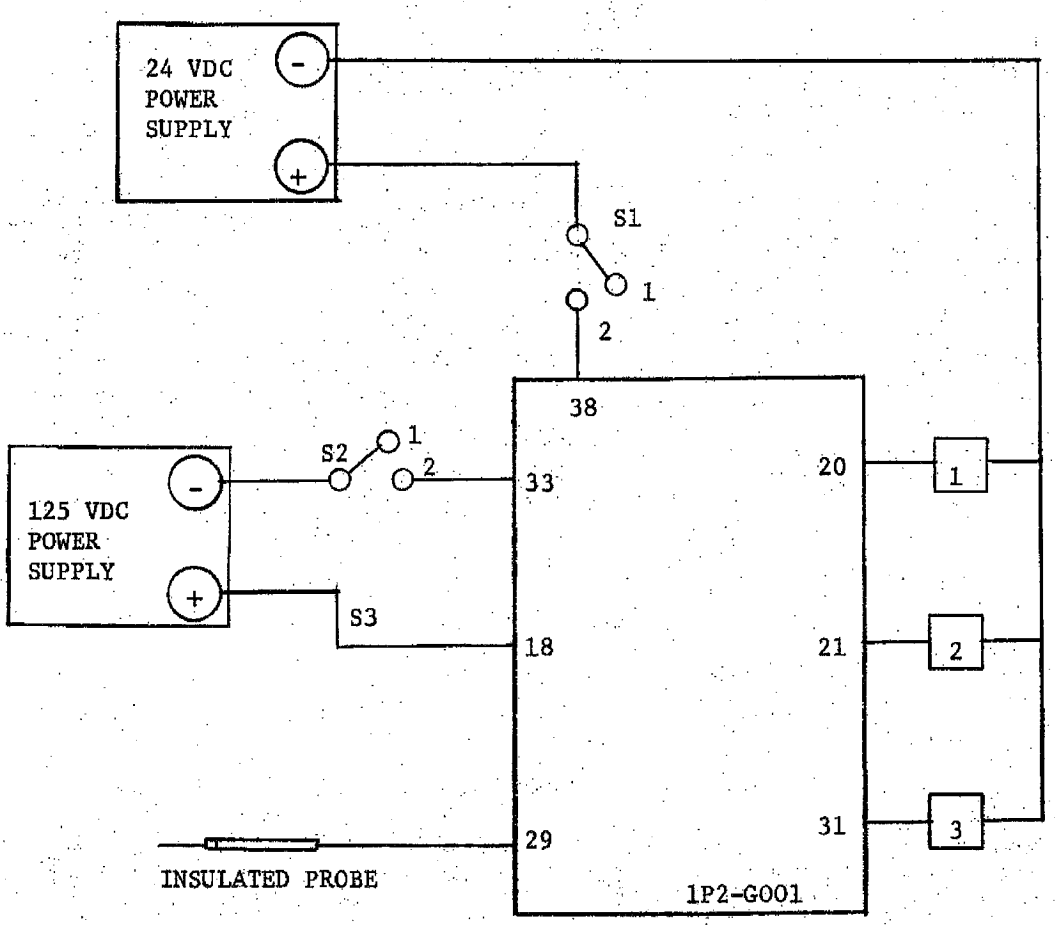


FIGURE #1

PRINTS TO

REV NO. A

P3K-AL-0333-A01

CONT ON SHEET 6 SH NO. 5

TITLE
Board Test Specification - 125 VDC Ground Detection Circuit - 1P2-G001

FIRST MADE FOR

REVISIONS

TEST INSTRUCTIONS 1P2-G001

Assembly 117D9915

Schematic 173B6512

PROCEDURE:

1. Refer to Fig. A for test circuit.
2. The chart which follows outlines the procedure for testing the relay logic of this circuit.

PRINTS TO

GENERAL ELECTRIC

P3K-AL-0333-A01 CONT ON SHEET 7 SH NO. 6

REV NO. A

P3K-AL-0333-A01

CONT ON SHEET 7 SH NO. 6

TITLE

BOARD TEST SPECIFICATION - 125 VDC GROUND DETECTION CIRCUIT - 1P2-G001 - SCHEMATIC 173B6512

FIRST MADE FOR

REVISIONS

	PROCEDURE	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12
1	All switches down												
2	S1 up	X											
3	S1 down												
4													
5	S2 up		X										
6	S2 down												
7													
8													
9	End of Test												

PRINTS TO

MADE BY

ISSUED

APPROVALS

Steam Turbine DIV OR DEPT.

Schenectady LOCATION

P3K-AL-0333-A01 CONT ON SHEET 8 SH NO. 6

GENERAL ELECTRIC

P3K-AL-0333-A01
CONT ON SHEET 8 SH NO. 7

REV NO. A

P3K-AL-0333-A01
CONT ON SHEET 8 SH NO. 7

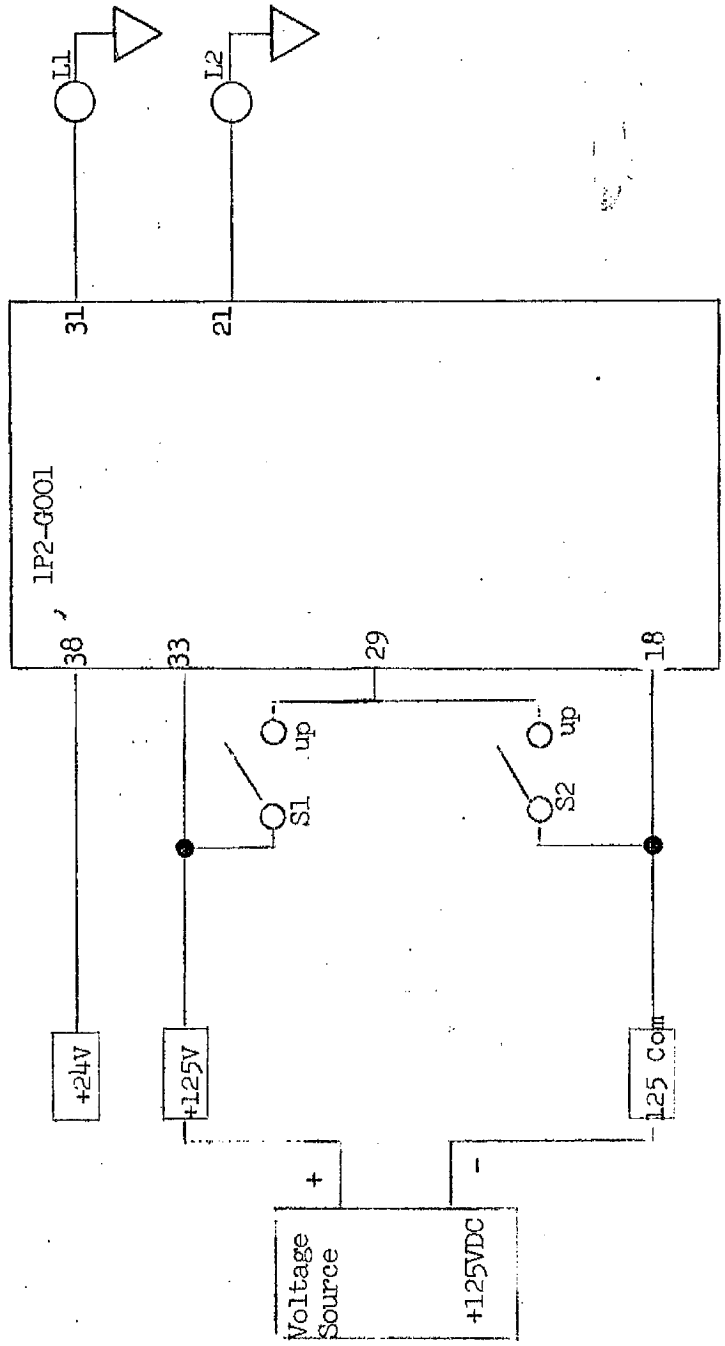
TITLE

BOARD TEST SPECIFICATION - 125 VDC GROUND DETECTION CIRCUIT - 1P2-G001 - SCHEMATIC 173B6512

FIRST MADE FOR

REVISIONS

FIG. A



PRINTS TO

MADE BY

ISSUED

APPROVALS

Steam Turbine DIV OR DEPT.
Schenectady LOCATION

P3K-AL-0333-A01
CONT ON SHEET 8 SH NO. 7

CODE IDENT NO.

GENERAL ELECTRIC

P3K-AL-0333-A01
CONT ON SHEET — SH NO. 8

REV NO. Ø A

P3K-AL-0333-A01
CONT ON SHEET — SH NO. 8

TITLE
BOARD TEST SPECIFICATION - 125 VDC GROUND DETECTION CIRCUIT - 1P2-G001 - SCHEMATIC 173B6512

FIRST MADE FOR

REVISIONS

PREPARED BY C.J. Barrigher DATE 2/28/73

C.J. Barrigher
EHC DESIGN ENGINEERING

APPROVED BY P.C. Callan DATE 6-4-73

P.C. Callan - MANAGER
EHC DESIGN ENGINEERING

TEST PROCEDURE PREPARED BY C. Bugg DATE 5/15/73

C. Bugg
EHC TEST ENGINEER

TEST PROCEDURE APPROVED BY C.J. Barrigher DATE 5/29/73

C.J. Barrigher
EHC DESIGN ENGINEERING

PRINTS TO

MADE BY D. Moore June 11, 1973	APPROVALS	Steam Turbine DIV OR DEPT.	P3K-AL-0333-A01
ISSUED JUN 12 1973		Schenectady, N.Y. LOCATION	CONT ON SHEET — SH NO. 8

CODE IDENT NO.

FF-803-WA (11-72)
PRINTED IN U.S.A.