

<p>REV NO. 0</p> <p>P3K-AL-0332-A01</p> <p>CONT ON SHEET 2 SH NO. 1</p>	<p>TITLE</p> <p>BOARD TEST SPECIFICATION - 24 VDC GROUND DETECTION CIRCUIT - 1P2-FO01 - SCHEMATIC 173B6513 FIRST MADE FOR</p>
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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. 24 VDC Ground Detection - 117D9913
 - B. AC/DC Power Ground System - 117D7762
 - C.
3. EQUIPMENT NEEDED FOR TEST
 - A. DC Power Supply - 24 VDC nominal
 - B. SPST Switch - 24 VDC nominal, 1 ampere rating
 - C. Three (3) indicating devices - 24 VDC nominal, 80 ma rating.
4. CIRCUIT DESCRIPTION

This card consists of two 24 VDC relays connected in series across a 24 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 INTEGRATIONS

The 24 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 24 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 Buss.

If one line of the 24 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.

<p>MADE BY D.Mone June 11, 1973</p> <p>ISSUED JUN 12 1973</p>	<p>APPROVALS</p>	<p>Steam Turbine</p> <p>Schenectady, N.Y.</p>	<p>DIV OR DEPT.</p> <p>LOCATION</p>	<p>P3K-AL-0332-A01</p> <p>CONT ON SHEET 2 SH NO. 1</p>
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TITLE
BOARD TEST SPECIFICATION - 24 VDC GROUND
DETECTION CIRCUIT - 1P2-FOO1 - SCHEMATIC 173B6513
FIRST MADE FOR

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6. TEST SPECIFICATION

- A. Set the Power Supply to 24 VDC.
- B. Close S1. Indicators 1, 2, and 3 may briefly indicate but should de-indicate ~~in~~ less than one second.
- C. Short pins 30 and 38 together. Indicators 2 and 3 shall indicate, indicator 1 shall not.
- D. Unshort pins 30 and 38 and short pins 30 and 40 together. Indicators 1 and 2 shall indicate, indicates 3 shall not.
- E. Unshort pins 30 and 40. Open S1.

7. REPORT

1. <u>OPERATION</u>	<u>INDICATOR</u>	<u>YES</u>	<u>NO</u>
Close S1	1,2,3, briefly		
Short 30 to 38	2,3		
Short 30 to 40	1,2		

8. NOTES

If any indicator fails to indicate as described, the board shall be rejected.

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SH NO. 3

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SH NO. 3

BOARD TEST SPECIFICATION - 24 VDC GROUND
DETECTION CIRCUIT - 1P2-F001 - SCHEMATIC 173B6513
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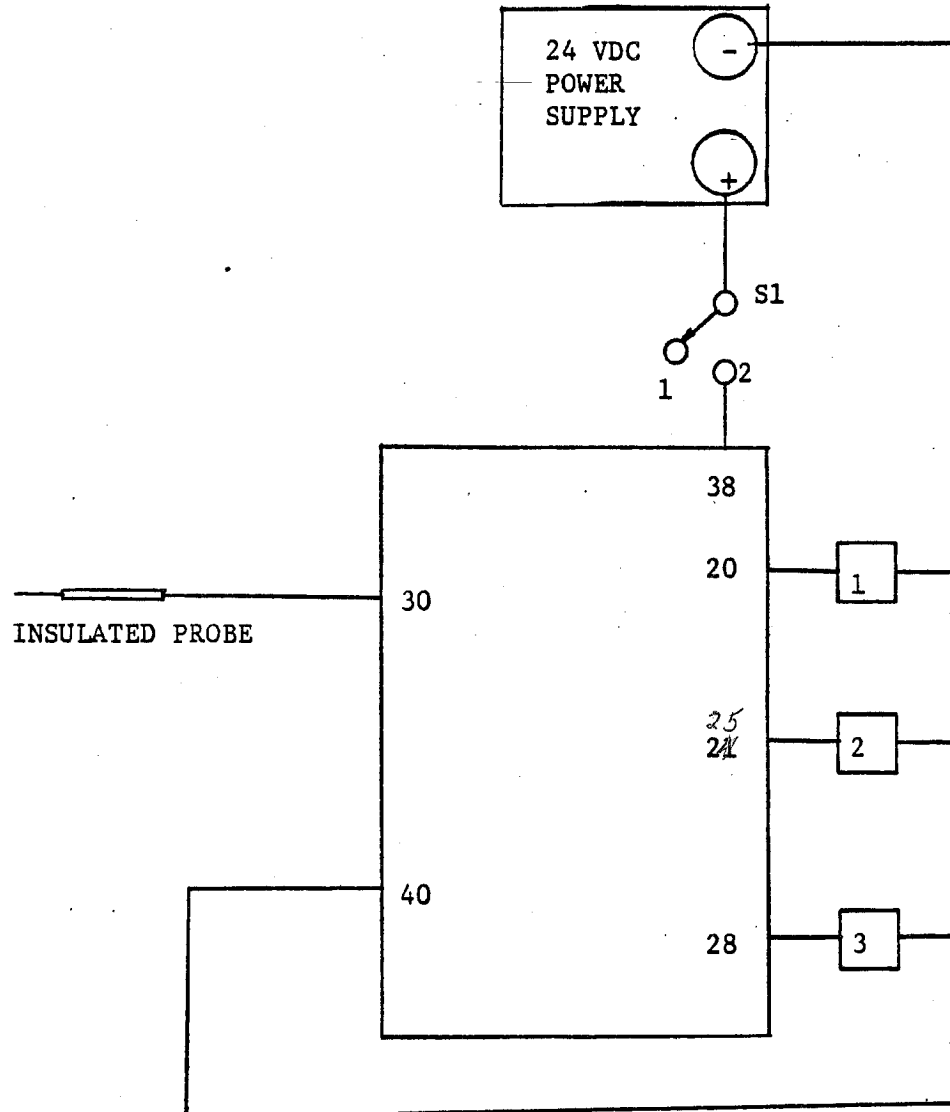


FIGURE 1

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SH NO. 4

BOARD TEST SPECIFICATION - 24 VDC GROUND DETECTION
CIRCUIT - 1P2-FO01- SCHEMATIC 173B6513
FIRST MADE FOR

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Assm. 117D9913

Sch. 173B6513

Patchboard No. _____

PCR _____

Test Procedure

1. Patched program is as shown in Fig. A.
2. All switches down.
3. Procedure:

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BOARD TEST SPECIFICATION - 24 VDC GROUND DETECTION
CIRCUIT - 1P2-FOOL - SCHEMATIC 173B0513
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5

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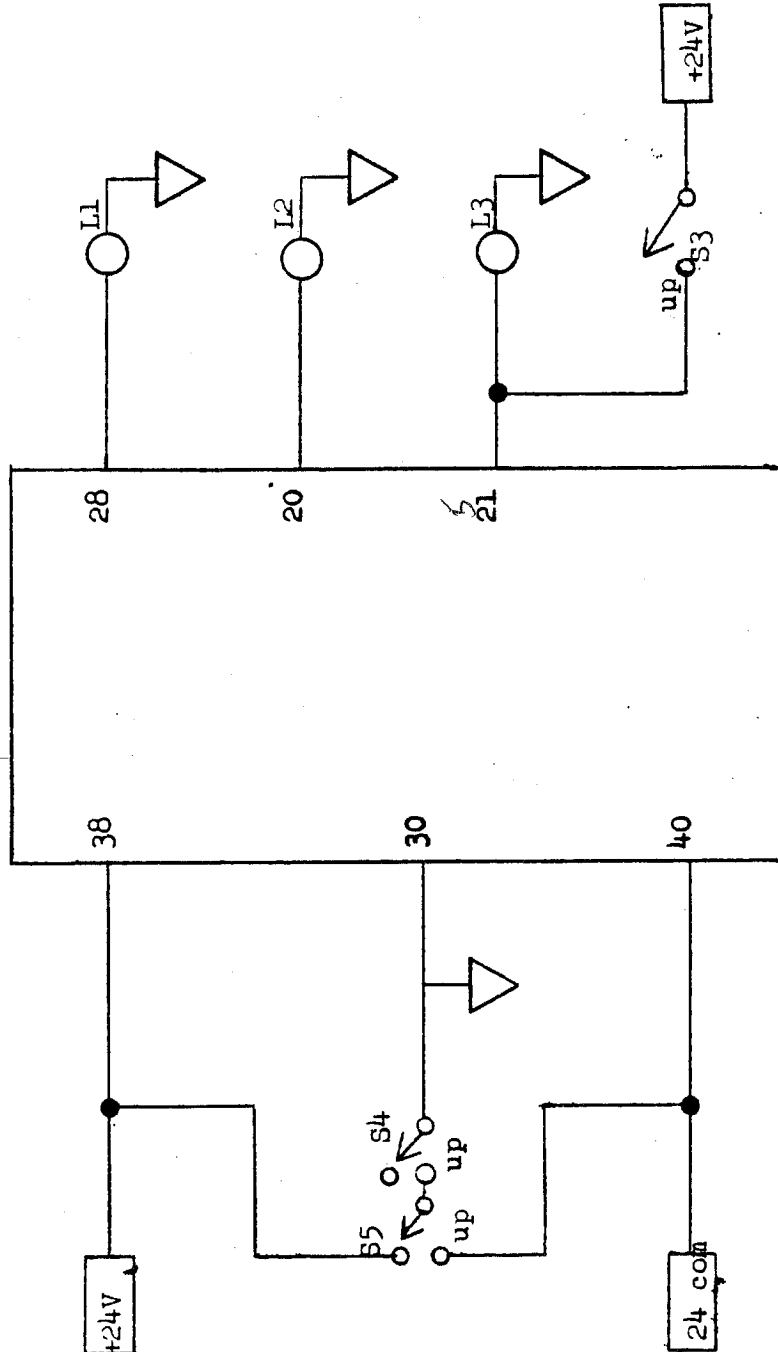
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BOARD TEST SPECIFICATION - 24 VDC GROUND DETECTION
CIRCUIT - 1P2-F001 - SCHEMATIC 173B0513
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Patchboard

FIGURE A

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BOARD TEST SPECIFICATION - 24 VDC GROUND
DETECTION CIRCUIT - 1P2-FO01 - SCHEMATIC 173B6513
FIRST MADE FOR

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REVISION

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

5/20/73

C.J. Barrigher
EHC DESIGN ENGINEERING

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